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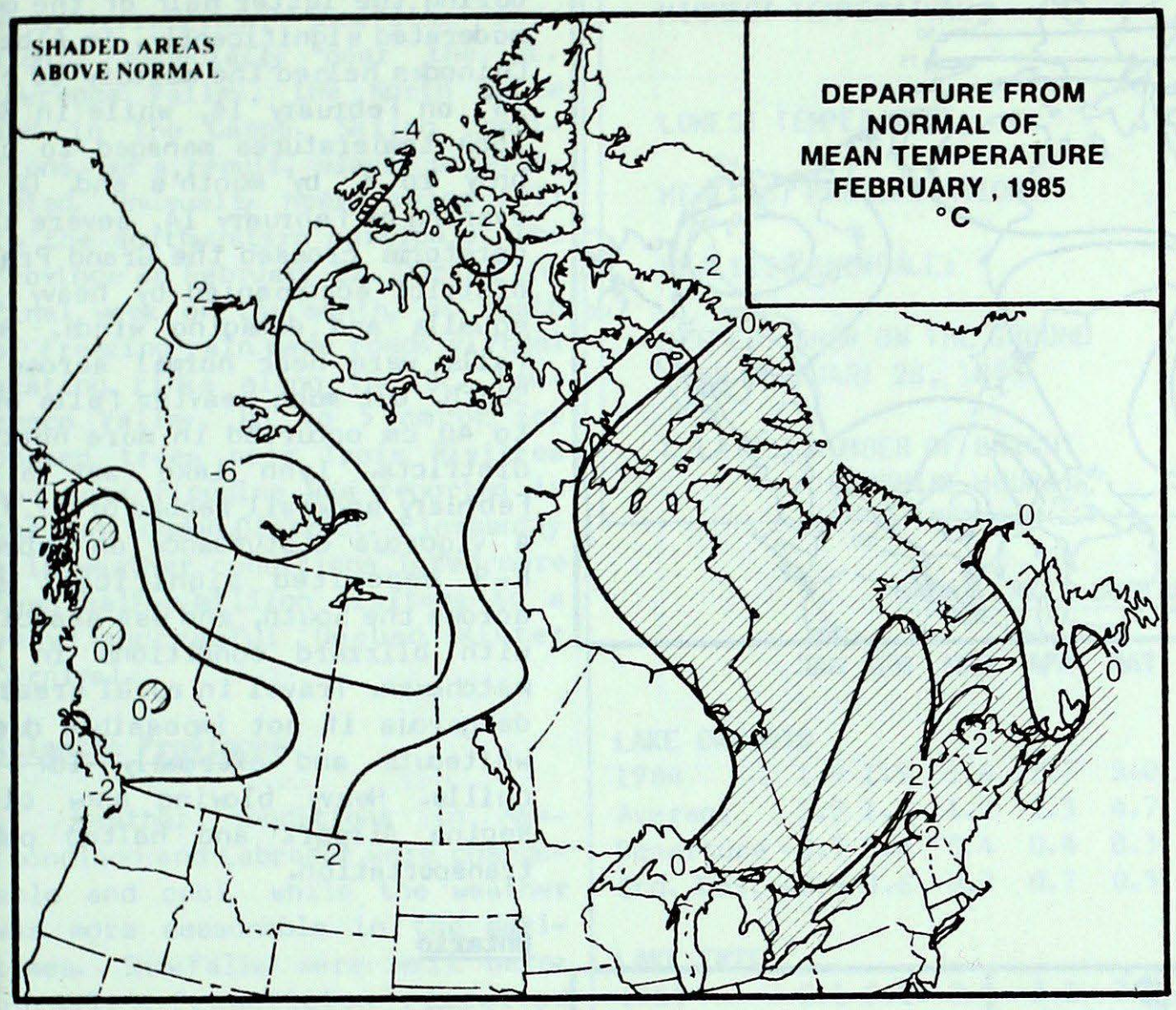
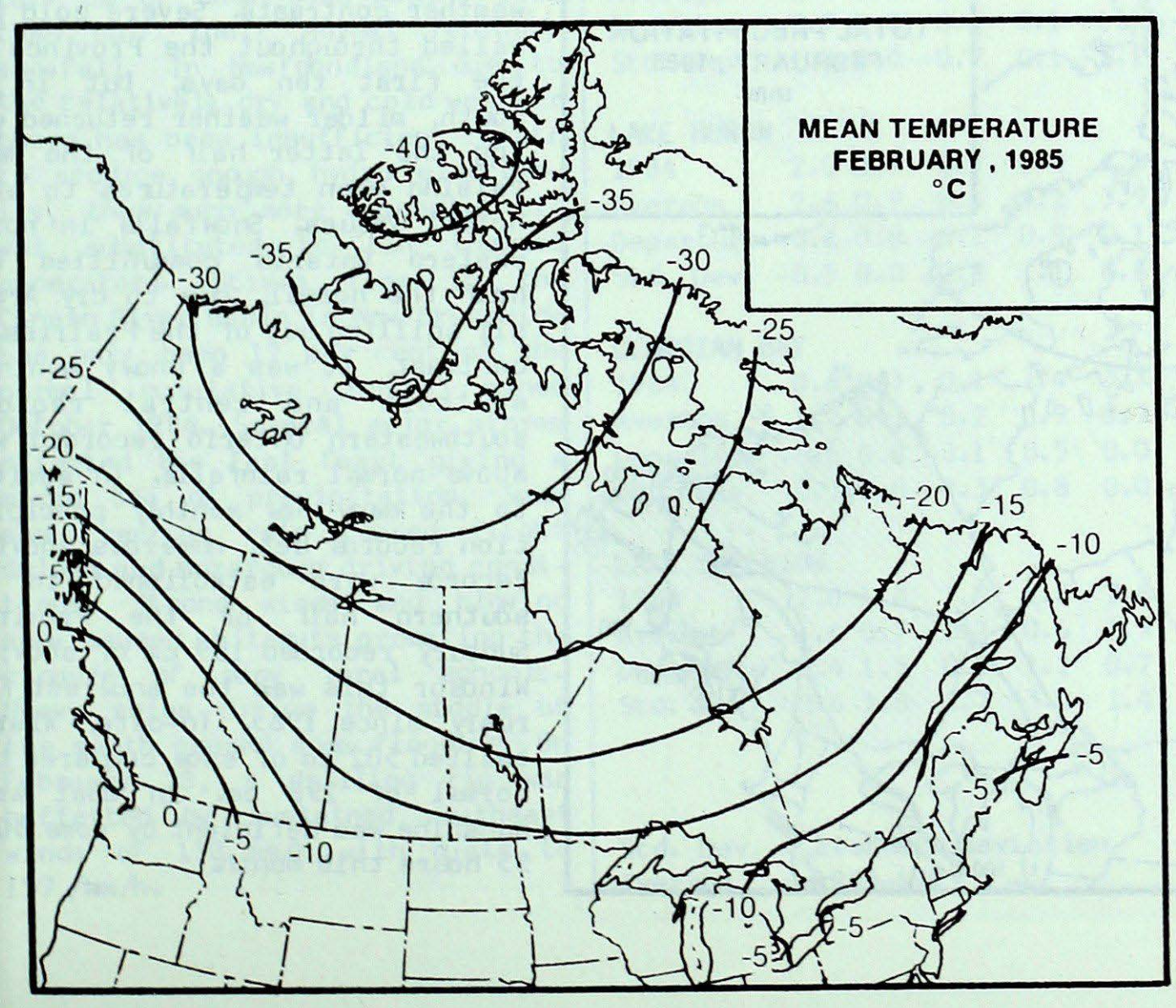
dian Climate Centre

Climatic Perspectives

MONTHLY SUPPLEMENT

Vol.7 February, 1985





ACROSS THE COUNTRY

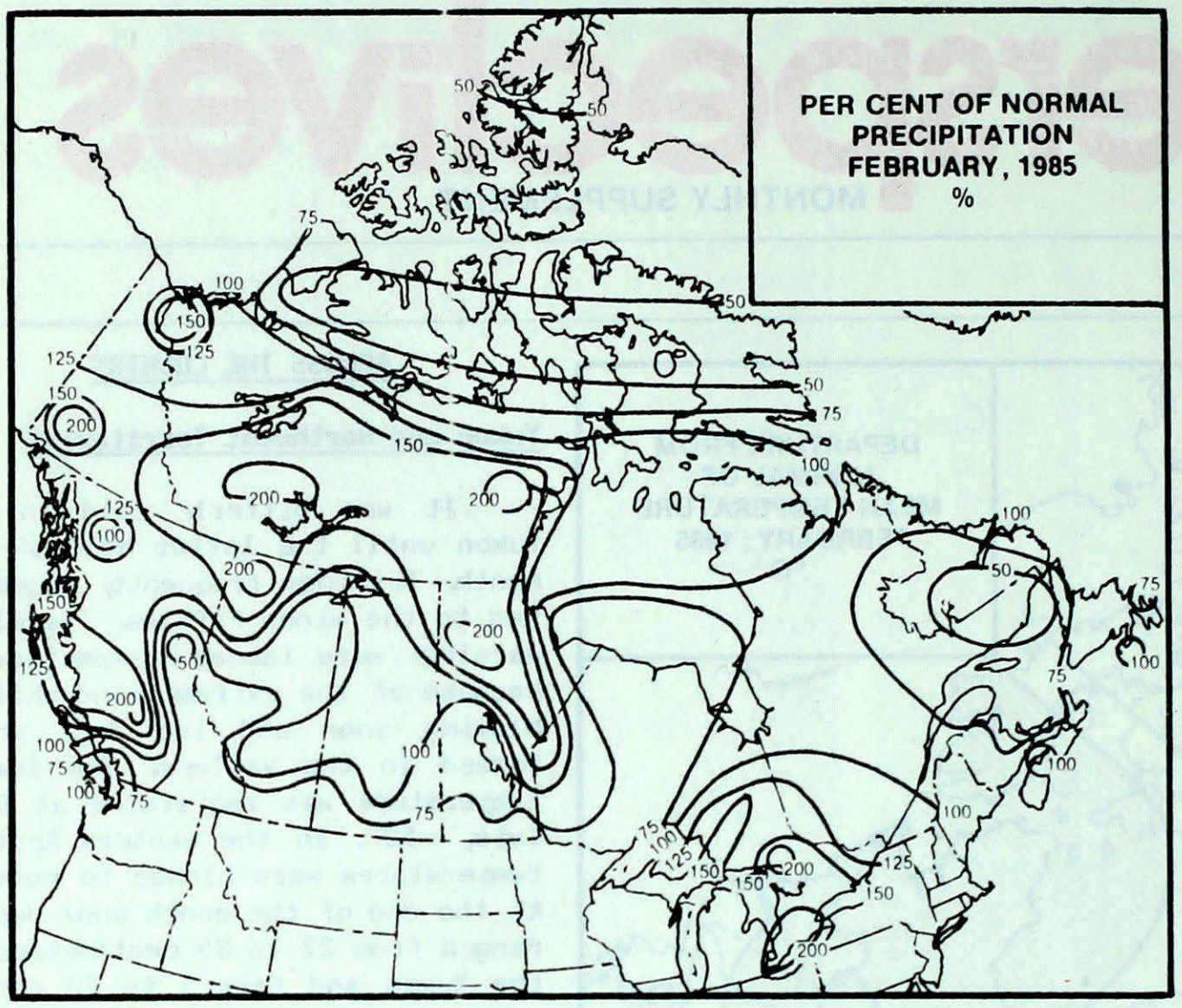
Yukon and Northwest Territories

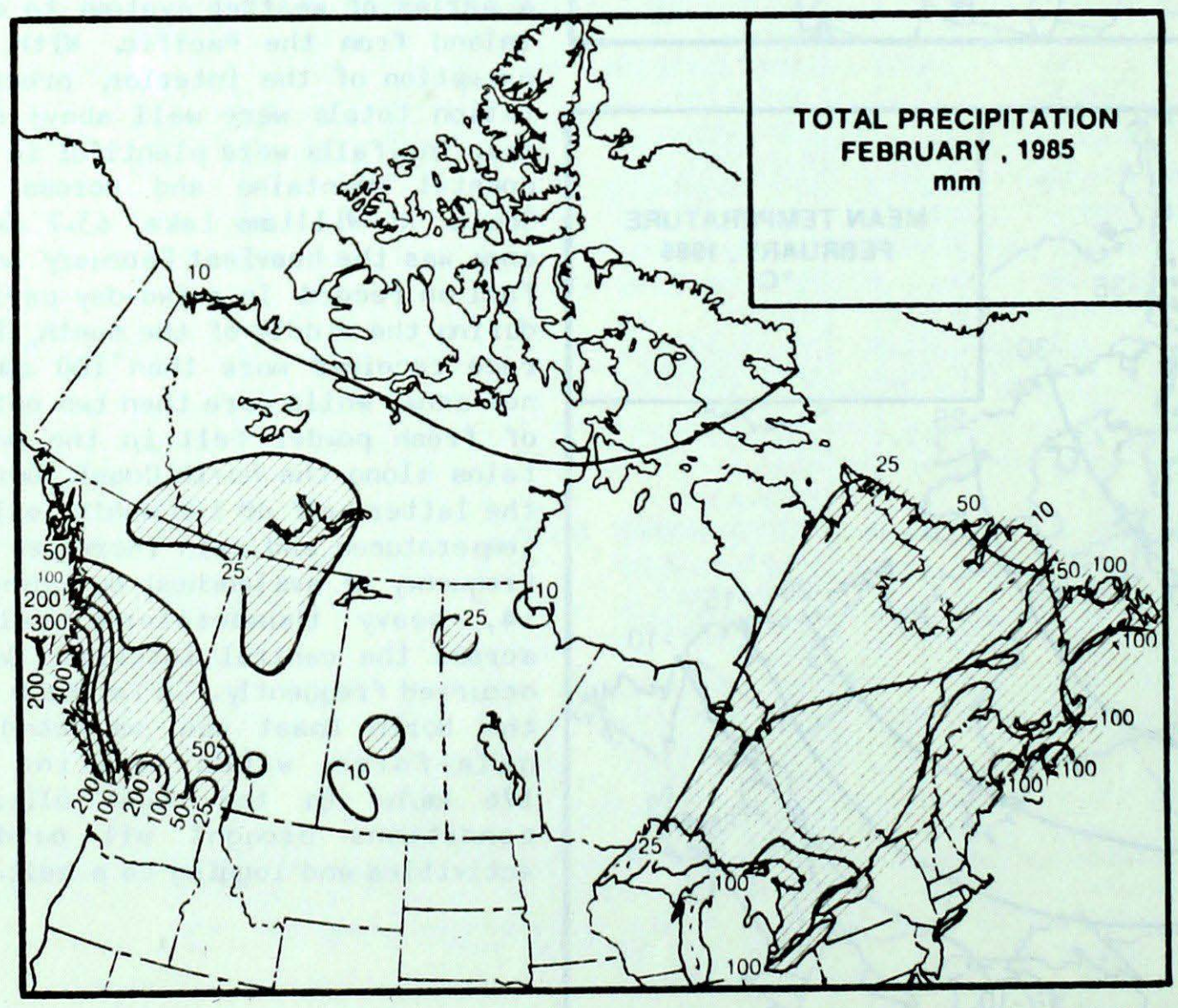
It was bitterly cold in the Yukon until the latter half of the month. Readings frequently plummetted to the minus fifties. Traveller warnings were issued systematically because of the extreme wind chills, blowing snow and ice fog, which formed in the valleys. The lowest temperature was registered at Ogilvie, -52°. In the eastern Arctic, temperatures were closer to normal. At the end of the month snow depths ranged from 22 to 85 centimetres in the Yukon and from 5 to 70 centimetres in the Northwest Territories.

British Columbia

A modified Arctic airmass gradually retreated northwards allowing a series of weather systems to move inland from the Pacific. With the exception of the interior, precipitation totals were well above normal. Snowfalls were plentiful in the coastal mountains and across the South. At Williams Lake, 63.7 cm of snow was the heaviest February snowfall on record. In a two-day period, during the middle of the month, Terrace received more than 100 cm of new snow, while more than two metres of fresh powder fell in the mountains along the North Coast. During the latter half of the month, milder temperatures and rain increased the frequency of avalanches. On February 14, heavy thunderstorms rolled across the central interior. Gales occurred frequently. On February 11, the North Coast was subjected to gale-force winds gusting to 176 km/h. On the coast blizzard conditions brought all outdoor activities and logging to a halt.

Canada





Prairie Provinces

Very cold conditions ensued a the beginning of the month, wit readings frequently dropping dow to the mid minus forties, settin many new minimum temperature re cords. In contrast, temperature during the latter half of the mont moderated significantly. In Alberta Chinooks helped the mercury to reac 16° on February 14, while in Mani toba temperatures managed to clim only to 8° by month's end. On th evening of February 14, severe thun derstorms crossed the Grand Prairi district accompanied by heavy sno squalls and damaging winds. Snow falls were near normal across th South, but much heavier falls of 3 to 40 cm occurred in more northe districts. Lynn Lake set a ne February snowfall record of 37.9 cm A vigorous disturbance on Februa 8-9 deposited significant sno across the South, and was associat with blizzard conditions in Sas katchewan. Travel in rural areas wa dangerous if not impossible due t whiteouts and extremely low wi chills. Heavy blowing snow clos Regina Airport and halted publ transportation.

Ontario

This was a month of sha weather contrasts. Severe cold pr vailed throughout the Province f the first ten days, but in th South, milder weather returned du ing the latter half of the mon raising mean temperatures to abo normal values. Snowfalls in nort western Ontario communities we half the normal, due to dry Arct air spilling out of the Prairies. I contrast, it was a snowy month i southern and central regions southwestern Ontario recorded we above normal rainfalls. In additi to the many new monthly precipit tion records set, numerous snowfa records were established in th southern half of the Provinc Sudbury recorded 109 cm of snow; a Windsor this was the snowiest Feb ruary since 1965. To-date, Wiart tallied 502 cm of snow compared to normal of 298 cm. In most area sunshine was deficient by some 30 t 55 hours this month.

Quebec

A southerly circulation allowed a much milder airmass to penetrate northward, and overall it was a relatively serene but cloudy month. Mean temperatures in the South were well above normal, with daytime readings frequently above freezing. Snowfalls were light, especially near the St. Lawrence Valley, the North Shore and in the Gaspé. Skiing conditions, as a result, slowly deteriorated. Unusually heavy rains fell in the southwestern portion of the Province on February 22. During the final week of the month, a swath of freezing rain made roads virtual skating rinks along the St. Lawrence Valley. Up to 5 cm of ice coated trees near Trois Rivières and some flooding was reported in the Huntingdon District. Pleasantly mild weather conditions lured more than half-a-million visitors to a very successful Quebec Winter Carnival.

Atlantic Provinces

Weather conditions in Newfoundland and Labrador were changeable and cool, while the weather was more seasonable in the Maritimes. Snowfalls were well below normal. Fredericton received 20.5 cm of snow this month, less than half their normal February snowfall. In Newfoundland due to the relatively dry and cold weather there has been insufficient runoff to produce enough hydro electricity, thus much more expensive oil was substituted to run thermal generators. Stream flow in the Canaan River Basin in New Brunswick has only been 19 per cent of the normal cumulative runoff since October 1984. Several major storms affected the East Coast giving a mixed bag of precipitation. Snow and freezing rain caused flight delays and hazardous driving conditions. Strong winds and blowing snow caused whiteouts prompting the closure of many rural schools. Heavy rains during the middle of the month caused some flooding. On February 28, a drilling rig was buffetted by sustained southeast winds of 130 km/h with gusts to 157 /km/h.

CLIMATIC EXTREMES IN CANADA - FEBRUARY 1985

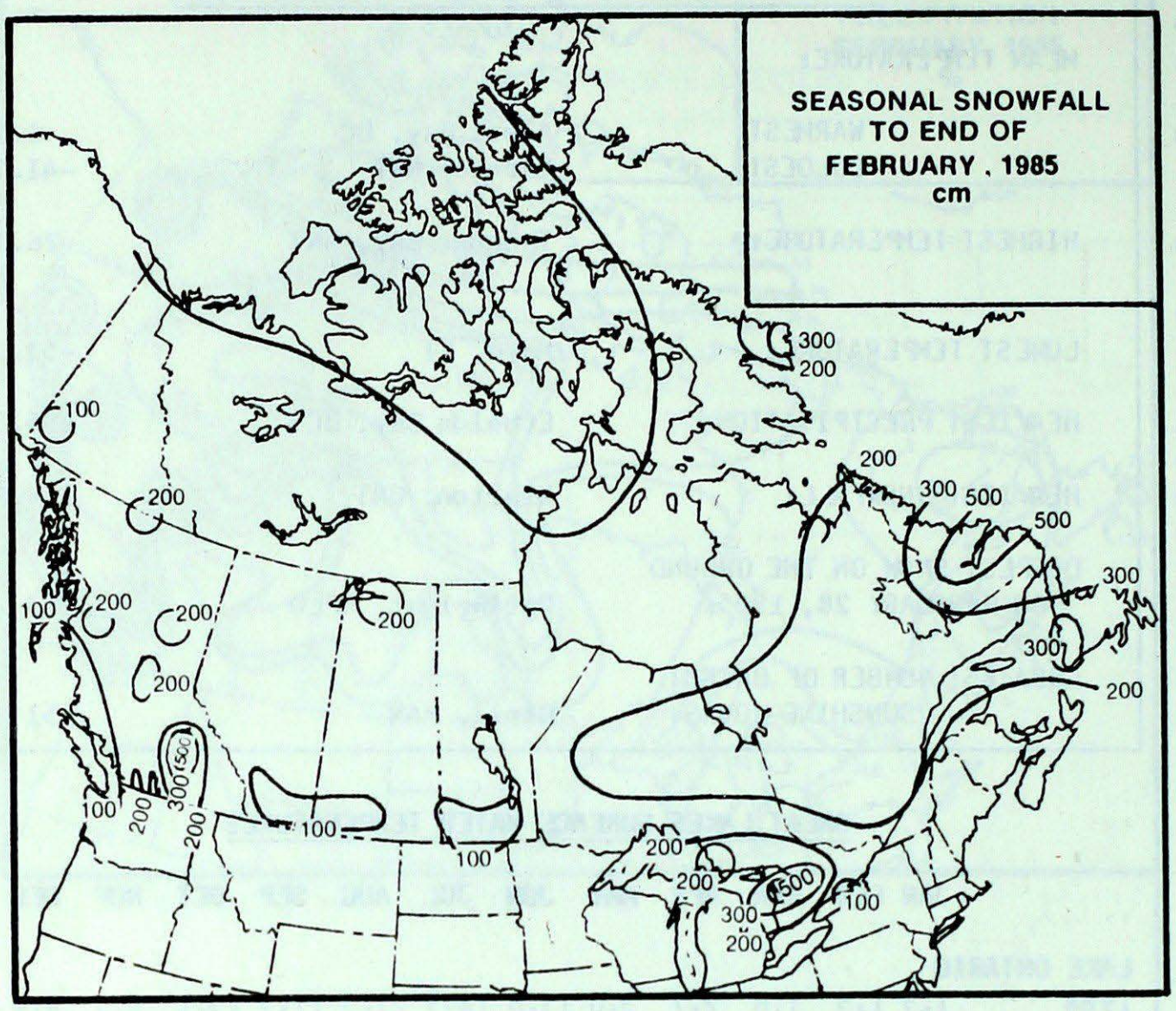
MEAN TEMPERATURE:			
	WARMEST	Alert Bay, BC	6.0°
	COLDEST	Eureka, NWT	-41.5°
HIGHEST TEMPERATURE:		Thunder Bay, ONT	16.3°
LOWEST TEMPERATURE:		Mayo, YT	-51.1°
HEAVIEST PRECIPITATION:		Ethelda Bay, BC	495.2 mm
HEAVIEST SNOWFALL:		Wiarton, ONT	129.6 cm
DEEPEST SNOW ON THE GROUND ON FEBRUARY 28, 1985:		Cartwright, NFLD	283 cm
GREATEST NUMBER OF BRIGHT SUNSHINE HOURS:		Gimli, MAN	151 hrs

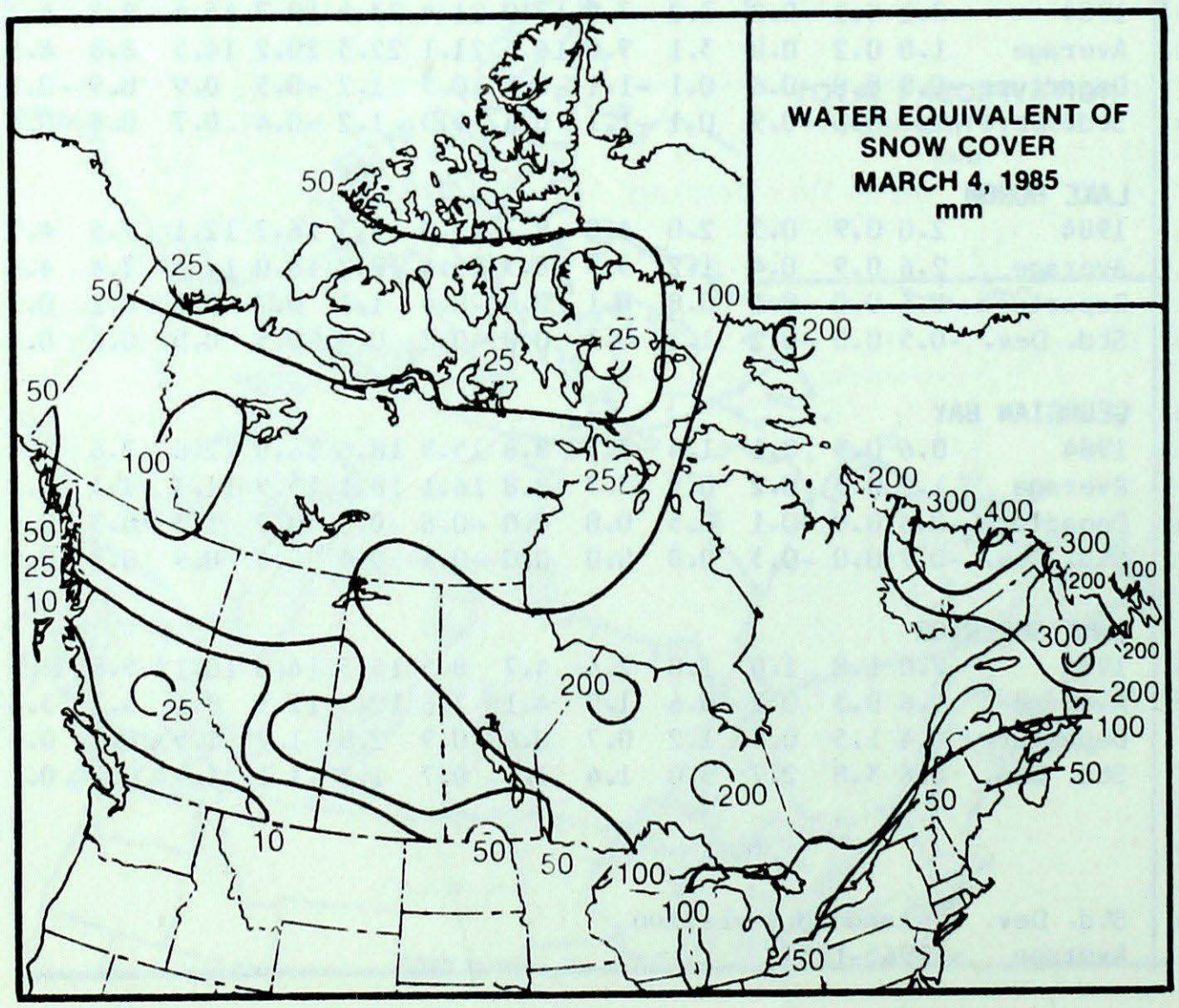
GREAT LAKES SURFACE WATER TEMPERATURES

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
LAKE ONTARIO													
1984	1.5	1.5	1.6	2.7	5.0	11.5	16.9	21.3	17.5	13.1	8.3	4.4	8.8
Average	2.2	1.1	1.2	2.3	4.7	11.0	17.9	19.9	17.4	12.3	7.5	4.4	8.5
Departure	-0.7	0.4	0.4	0.4	0.3	0.5	-1.0	1.4	0.1	0.8	0.8	0.0	0.3
Std. Dev.	-0.9	0.6	0.7	0.7	0.5	0.3	-0.6	0.9	0.1	0.6	1.0	0.0	0.4
LAKE ERIE													
1984	0.1	0.2	0.2	3.2	7.9	17.0	21.4	23.5	19.7	15.4	9.7	4.3	10.2
Average	1.0	0.2	0.8	3.1	9.0	16.5	21.1	22.3	20.2	14.5	8.8	4.5	10.1
Departure	-0.9	0.0	-0.6	0.1	-1.1	0.5	0.3	1.2	-0.5	0.9	0.9	-0.2	0.1
Std. Dev.	-1.3	0.0	-0.9	0.1	-1.1	0.4	0.3	1.2	-0.4	0.7	0.6	-0.1	0.2
LAKE HURON													
1984	2.0	0.9	0.3	2.0	4.0	8.7	15.0	19.3	16.7	12.1	7.5	4.7	7.8
Average	2.6	0.9	0.4	1.2	3.9	8.7	15.4	18.2	16.0	11.5	7.4	4.6	7.6
Departure	-0.6	0.0	-0.1	0.8	0.1	0.0	-0.4	1.1	0.7	0.6	0.1	0.1	0.2
Std. Dev.	-0.5	0.0	-0.2	1.1	0.3	0.0	-0.2	0.8	0.5	0.5	0.1	0.1	0.3
GEORGIAN BAY													
1984	0.6	0.3	0.1	1.4	3.7	8.8	15.5	18.6	16.8	12.6	7.6	4.9	7.6
Average	1.2	0.3	0.2	0.9	3.7	8.8	16.1	18.1	15.9	11.3	7.3	4.1	7.3
Departure	-0.6	0.0	-0.1	0.5	0.0	0.0	-0.6	0.5	0.9	1.3	0.3	0.8	0.3
Std. Dev.	-0.7	0.0	-0.3	0.8	0.0	0.0	-0.5	0.4	0.6	0.9	0.3	0.8	0.5
LAKE SUPERIOR													
1984	2.0	1.8	1.0	1.8	2.6	4.7	8.5	15.3	14.0	10.1	5.8	3.5	5.9
Average	1.6	0.3	0.2	0.6	1.9	4.1	7.6	12.5	12.3	8.6	5.7	3.4	4.9
Departure	0.4	1.5	0.8	1.2	0.7	0.6	0.9	2.8	1.7	1.5	0.1	0.1	1.0
Std. Dev.	0.6	3.8	2.7	3.0	1.4	1.0	0.7	1.3	1.1	1.5	0.1	0.1	1.7

Std. Dev. = standard deviation
Average = 1965-1983

SNOWFALL





SEASONAL SNOWFALL TOTALS (CM)

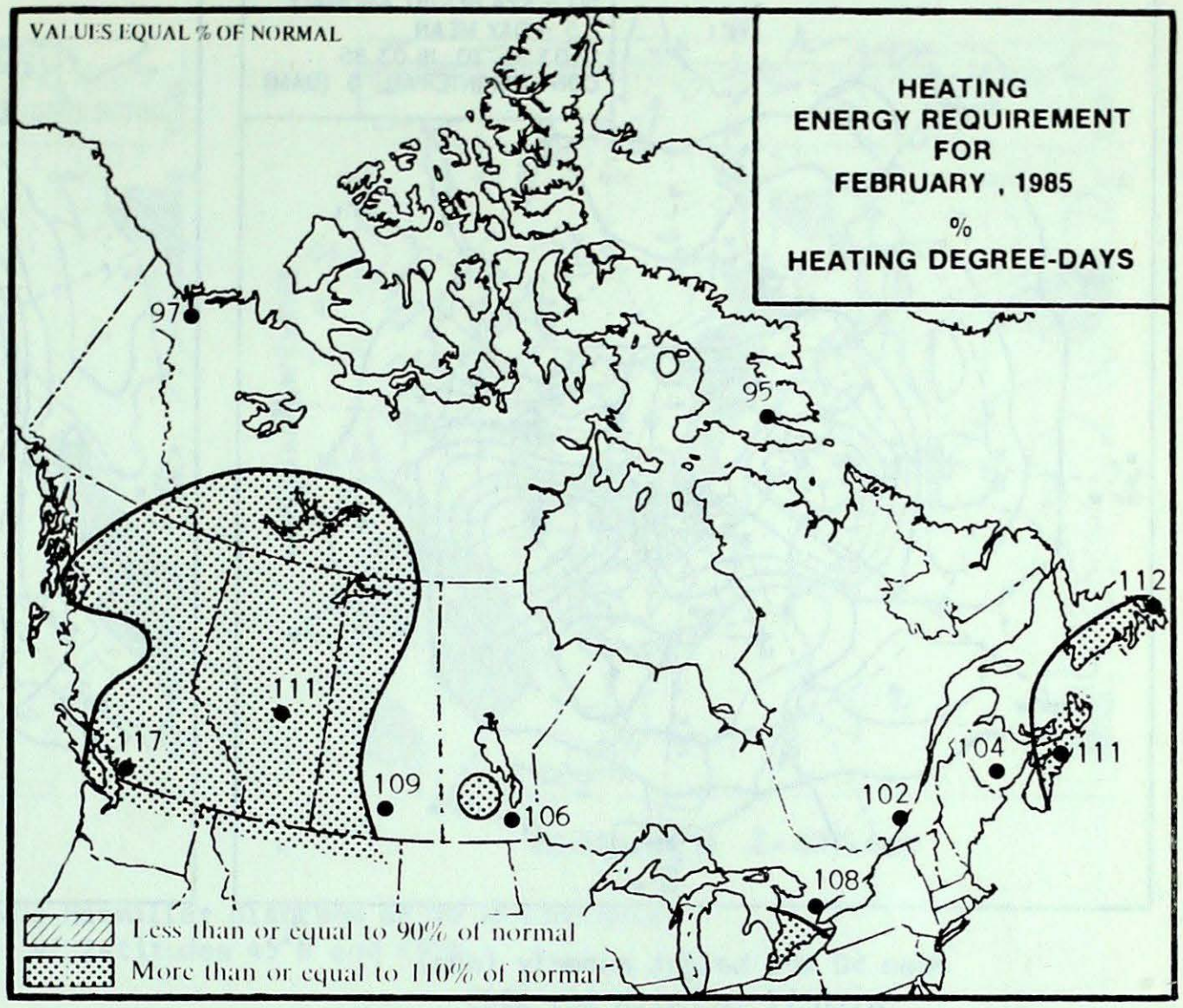
TO END OF FEBRUARY

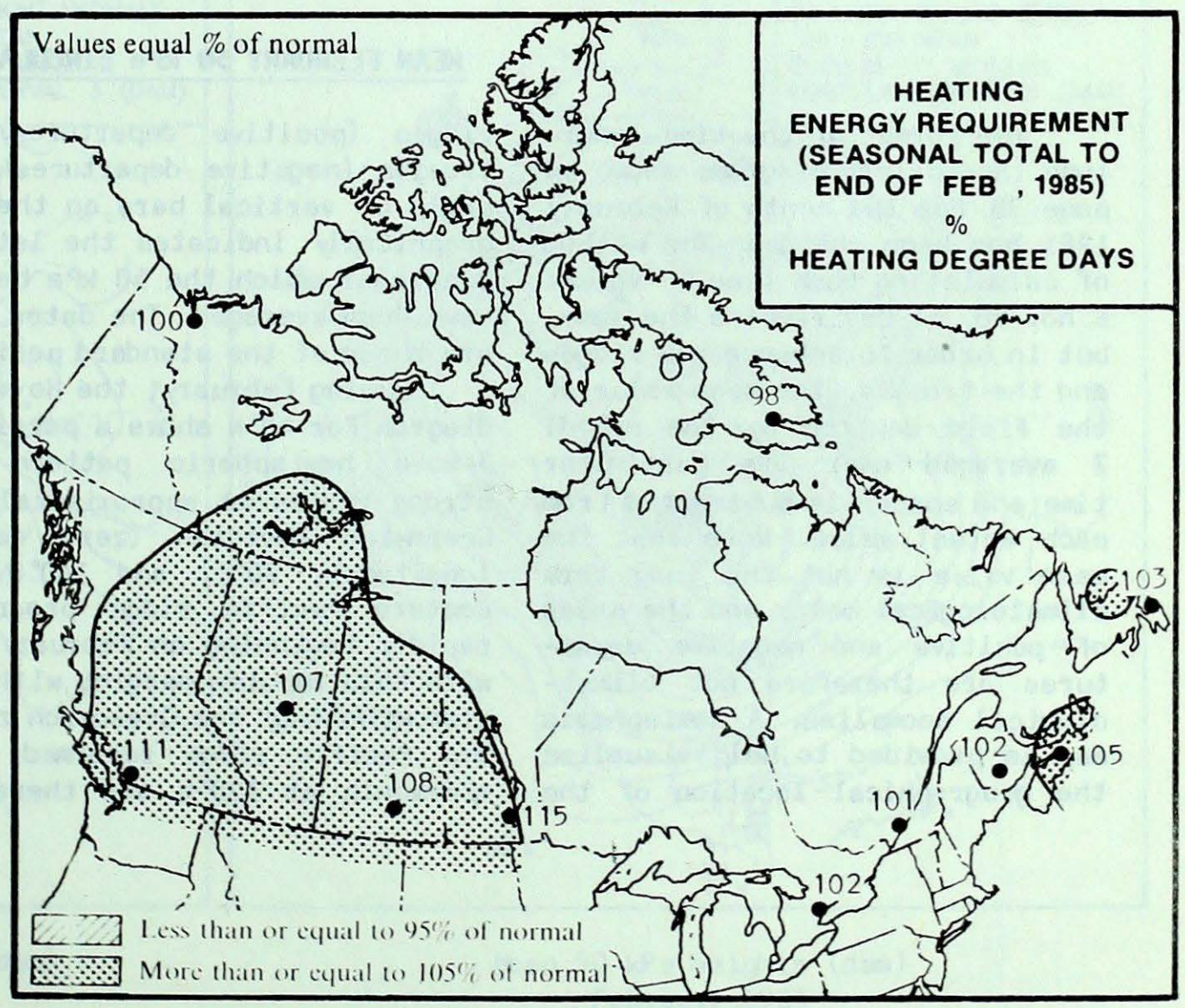
	1985	1984	NORMAL
YUKON TERRITORY			
Whitehorse	162.7	86.4	105.9
NORTHWEST TERRITORIES			
Frobisher Bay	157.4	117.7	168.1
Inuvik	100.6	121.8	129.9
Yellowknife	137.2	131.3	107.3
BRITISH COLUMBIA			
Kamloops	113.5	48.2	86.7
Penticton	68.1	63.5	71.4
Prince George	180.1	122.8	199.7
Vancouver	63.3	11.7	53.5
Victoria	73.8	19.3	43.5
ALBERTA			
Calgary	86.3	59.1	96.4
Edmonton Namao	112.6	61.4	99.6
Grande Prairie	130.3	97.0	141.2
SASKATCHEWAN			
Estevan	110.2	45.0	80.7
Regina	121.8	45.2	83.3
Saskatoon	114.9	44.8	83.1
MANITOBA			
Brandon	79.7	38.3	83.7
Churchill	140.8	184.3	131.6
The Pas	139.9	95.6	116.3
Winnipeg	86.2	49.5	90.6
ONTARIO			
Kapuskasing	254.0	180.7	237.3
London	*	217.8	171.5
Ottawa	174.1	238.7	182.2
Sudbury	224.7	228.2	194.4
Thunder Bay	148.6	125.7	158.4
Toronto	105.4	106.0	101.4
Windsor	141.0	101.6	93.2
QUÉBEC			
Baie Comeau	239.4	342.4	283.7
Montréal	160.8	218.6	188.0
Quebec	221.5	284.2	272.1
Sept-Iles	207.2	339.6	317.9
Sherbrooke	190.9	218.3	224.5
Val-d'Or	234.7	201.2	237.4
NEW BRUNSWICK			
Charlo	188.1	*	294.9
Fredericton	117.7	195.9	219.1
Moncton	164.6	209.2	243.0
NOVA SCOTIA			
Halifax	*	121.0	198.0
Sydney	190.1	183.7	223.3
Yarmouth	*	148.8	168.2
PRINCE EDWARD ISLAND			
Charlottetown	176.4	168.1	239.6
NEWFOUNDLAND			
Gander	291.4	293.7	269.9
St. John's	203.8	114.1	246.7

SEASONAL TOTAL OF HEATING DEGREE-DAYS TO END OF FEBRUARY

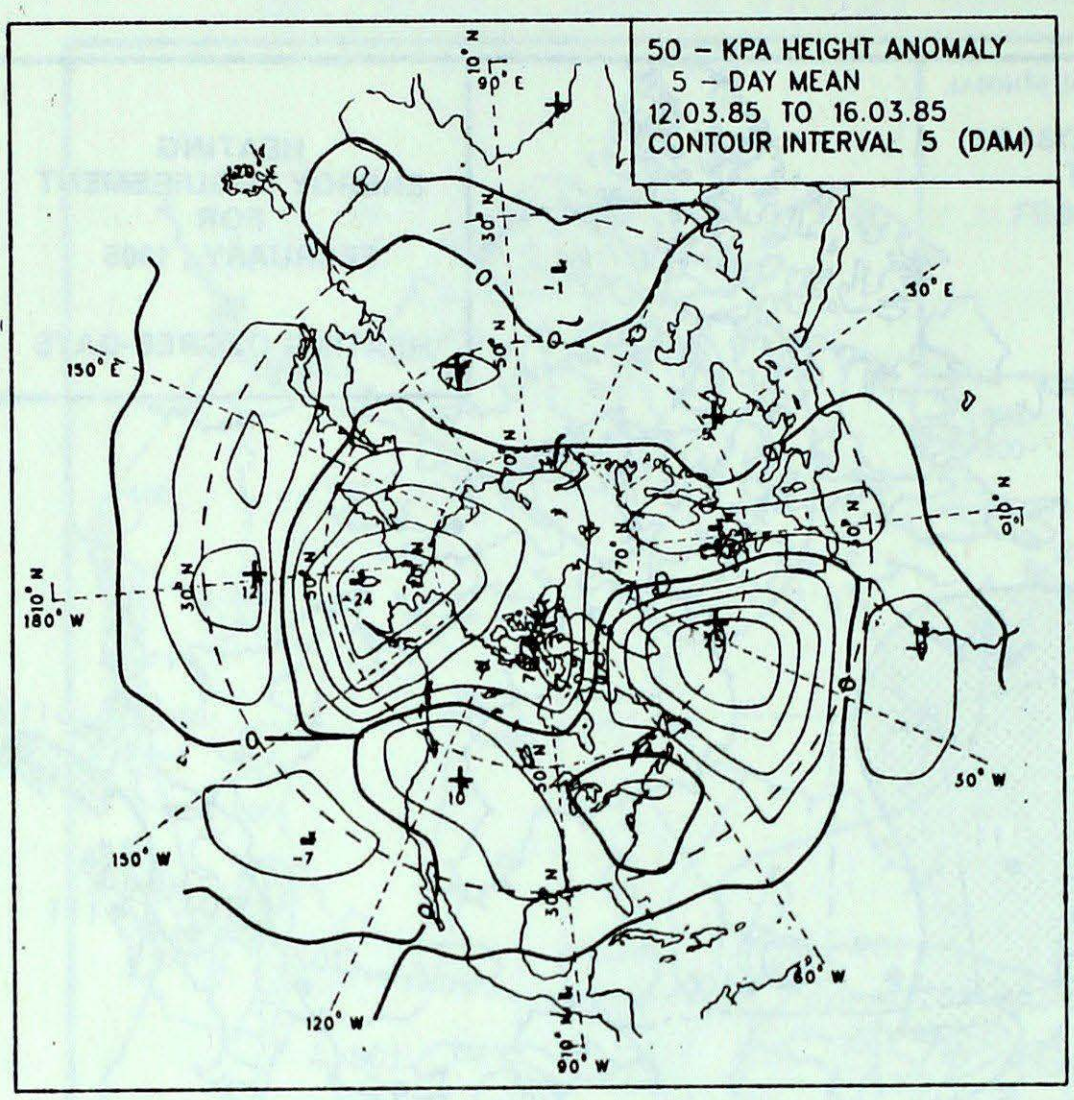
	1985	1984	NORMAL
YUKON TERRITORY			
Whitehorse	5485	5056	5038
NORTHWEST TERRITORIES			
Frobisher Bay	7009	7259	6512
Inuvik	7753	7081	7080
Yellowknife	7132	5722	6100
BRITISH COLUMBIA			
Kamloops	3523	2828	2871
Penticton	3295	2592	2608
Prince George	4609	3722	3933
Vancouver	2561	2080	2103
Victoria	2590	2097	2116
ALBERTA			
Calgary	4523	3608	3804
Edmonton Mun.	4850	3718	4131
Grande Prairie	5477	4136	4521
SASKATCHEWAN			
Estevan	4845	3831	4090
Regina	5256	4059	4369
Saskatoon	5400	4148	4507
MANITOBA			
Brandon	5357	4111	4452
Churchill	6858	5841	6163
The Pas	5767	4479	4963
Winnipeg	5071	4167	4363
ONTARIO			
Kapuskasing	5136	4498	4574
London	3283	2955	2936
Ottawa	3780	3327	3450
Sudbury	4297	3852	3925
Thunder Bay	4620	3974	4121
Toronto	3288	3008	2933
Windsor	2989	3056	3055
QUÉBEC			
Baie Comeau	4663	4130	4152
Montréal	3749	3253	3289
Quebec	4076	3564	3665
Sept-Iles	4739	4351	4267
Sherbrooke	4156	3546	3796
Val-d'Or	4937	4304	4412
NEW BRUNSWICK			
Charlo	4190	3733	3653
Fredericton	3802	3207	3360
Moncton	3741	3139	3271
NOVA SCOTIA			
Halifax	3235	2595	2726
Sydney	3496	2824	2890
Yarmouth	3011	2540	2672
PRINCE EDWARD ISLAND			
Charlottetown	3680	2951	3098
NEWFOUNDLAND			
Gander	3920	3380	3293
St. John's	3525	3034	3037

ENERGY REQUIREMENT

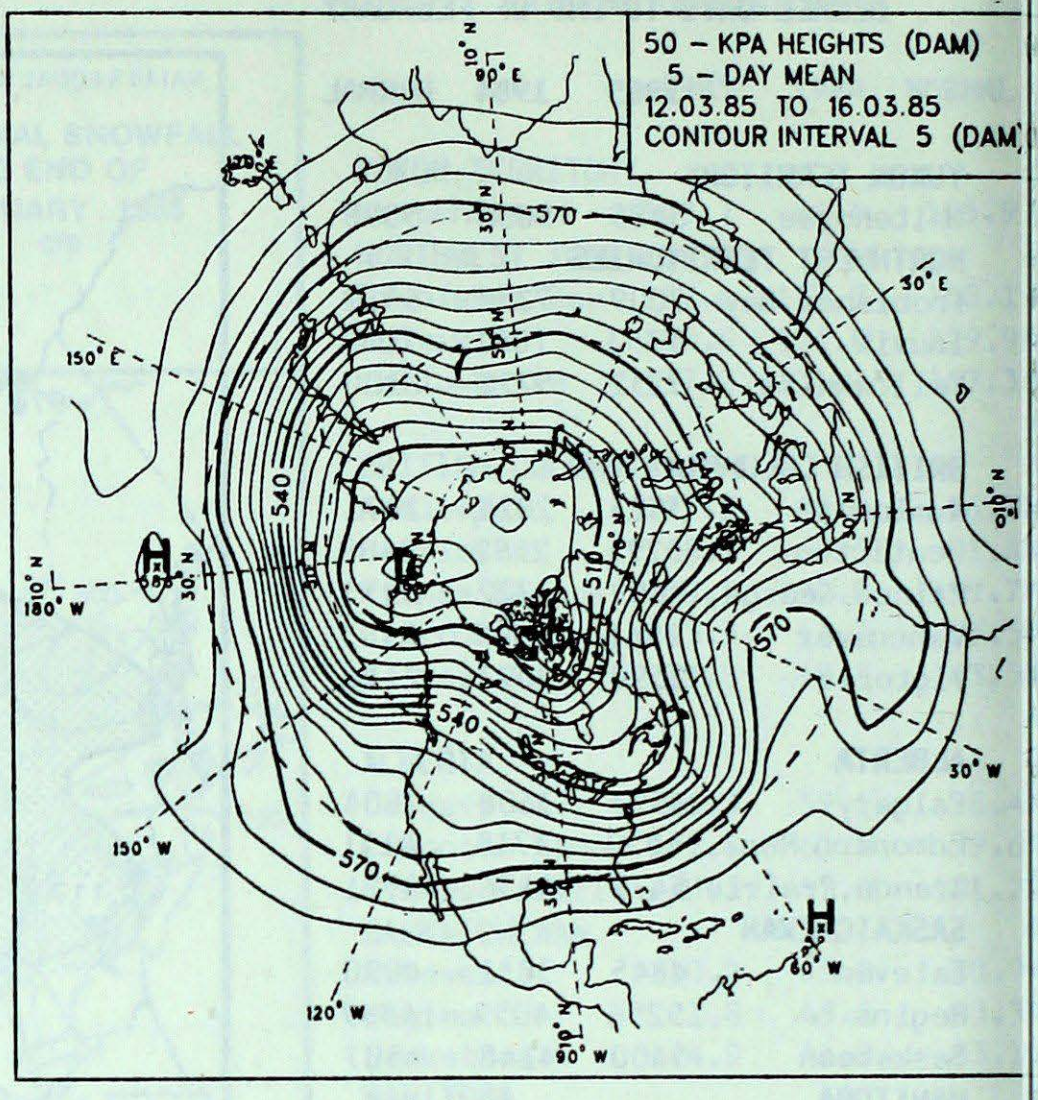




ATMOSPHERIC CIRCULATION



Mean 50 kPa height anomaly (dam)
March 12 to March 16, 1985



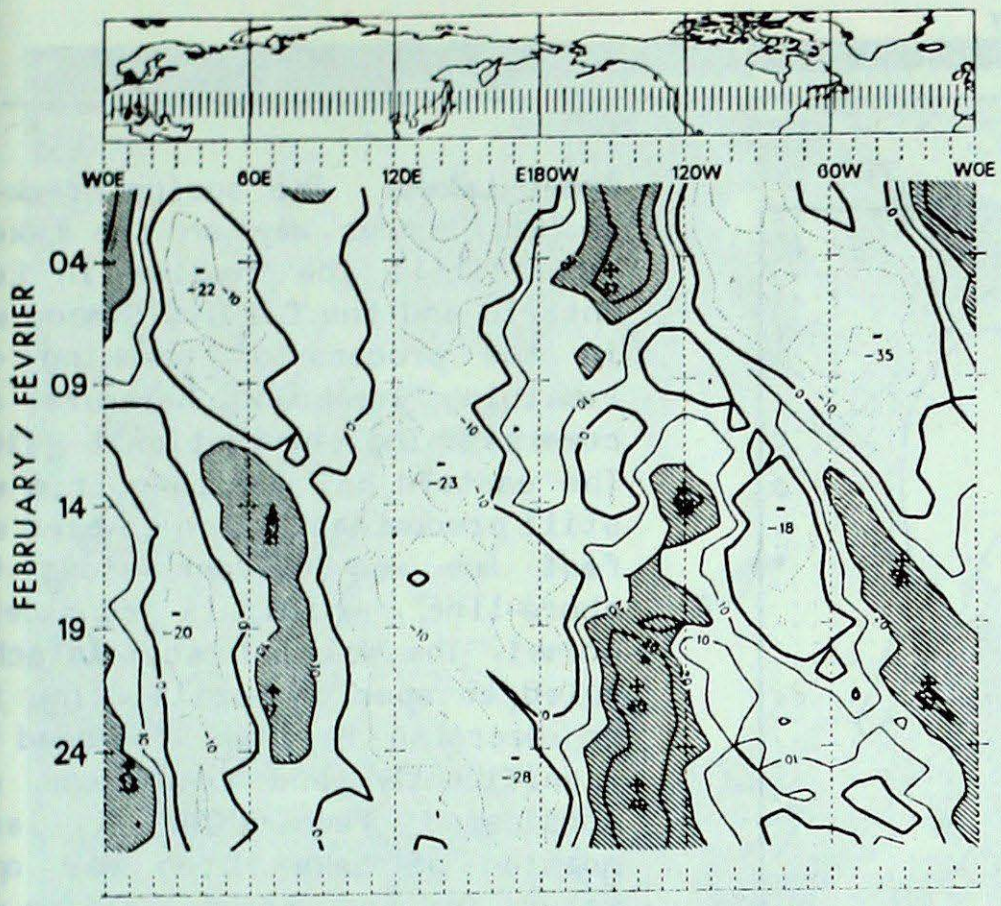
Mean 50 kPa heights (dam)
March 12 to March 16, 1985

MEAN FEBRUARY 50 kPa CIRCULATION

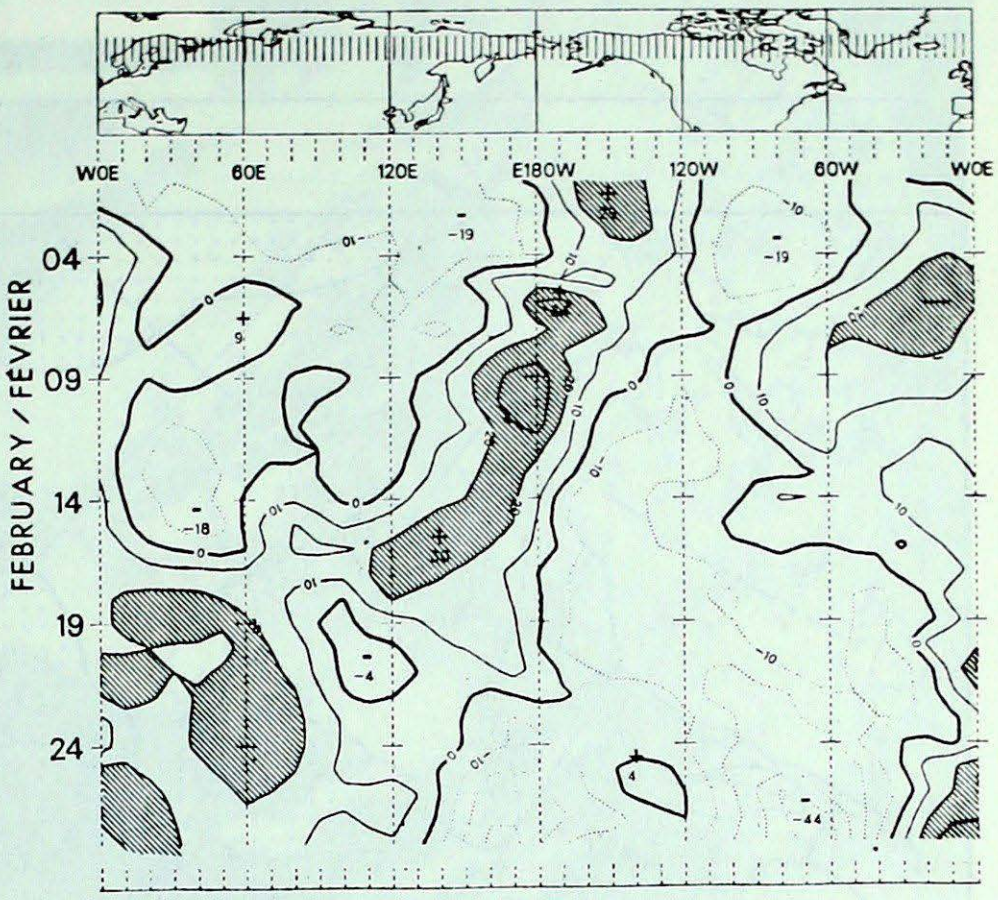
The format of the time-longitude (Hovmöller) diagrams shown on page 7B for the month of February 1985 has been changed. The method of calculating them (see CP volume 6 no. 50, p. CB) remains the same, but in order to enhance the ridges and the troughs, the mean value of the field denoted by the symbol $\bar{z}$ averaged over its particular time and space) is subtracted from each actual value. Note that the mean value is not the long term climatological mean, and the areas of positive and negative departures are therefore not climatological anomalies. A hemispheric map is provided to help visualize the geographical location of the ridges (positive departures) and troughs (negative departures). The strip of vertical bars on the maps graphically indicates the latitude band over which the 50 kPa heights have been averaged. The dates shown are those of the standard pentads.

During February, the Hovmöller diagram for 45°N shows a persistent 3-wave hemispheric pattern with strong ridges at approximately the Greenwich meridian (zero degrees longitude), 70°E, and 140°W. The eastern Pacific ridge progressed rapidly beginning on February 6th, with this impulse merging with, and strengthening, the Greenwich ridge. The Pacific ridge reformed about mid-month at 120°W and thereafter slowly retrogressed. At 65°N, t waves were evident until abo February 7th; following which retrogressing wave number one pr dominated. The mean 50 kPa circul tion maps for the month (page 7 show a bi-polar vortex in the no mal climatological position b with a deeper than normal low ce tred over the Canadian Archipelag The Canadian trough and easte Pacific ridge were both displac westwards from their normal loc tions resulting in an anomaly minus 6 dam over western Canada a positive anomaly of 16 dam over t eastern Pacific.

ATMOSPHERIC CIRCULATION

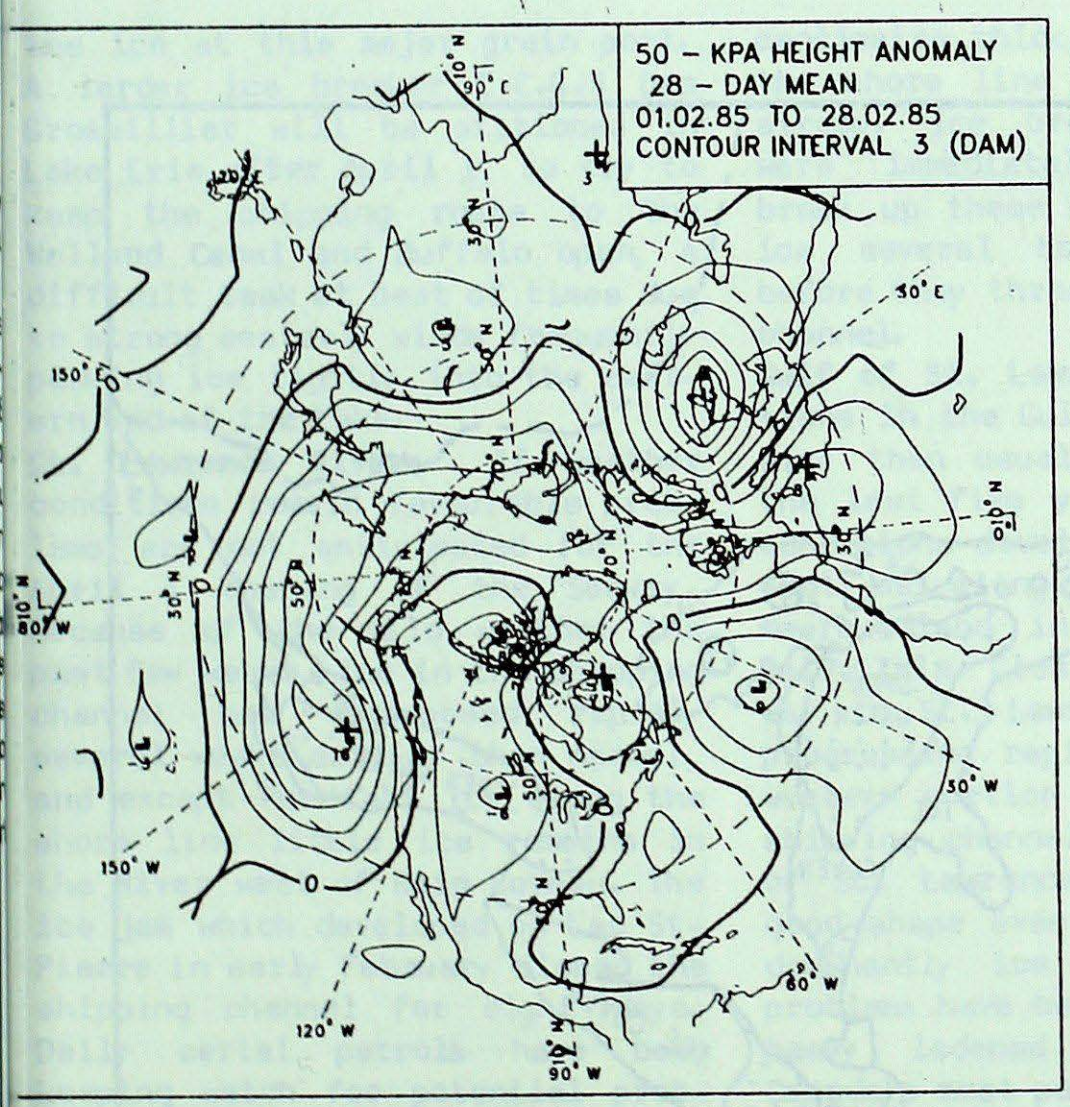


50 kPa 45°N $\bar{Z}$ = 540 dam

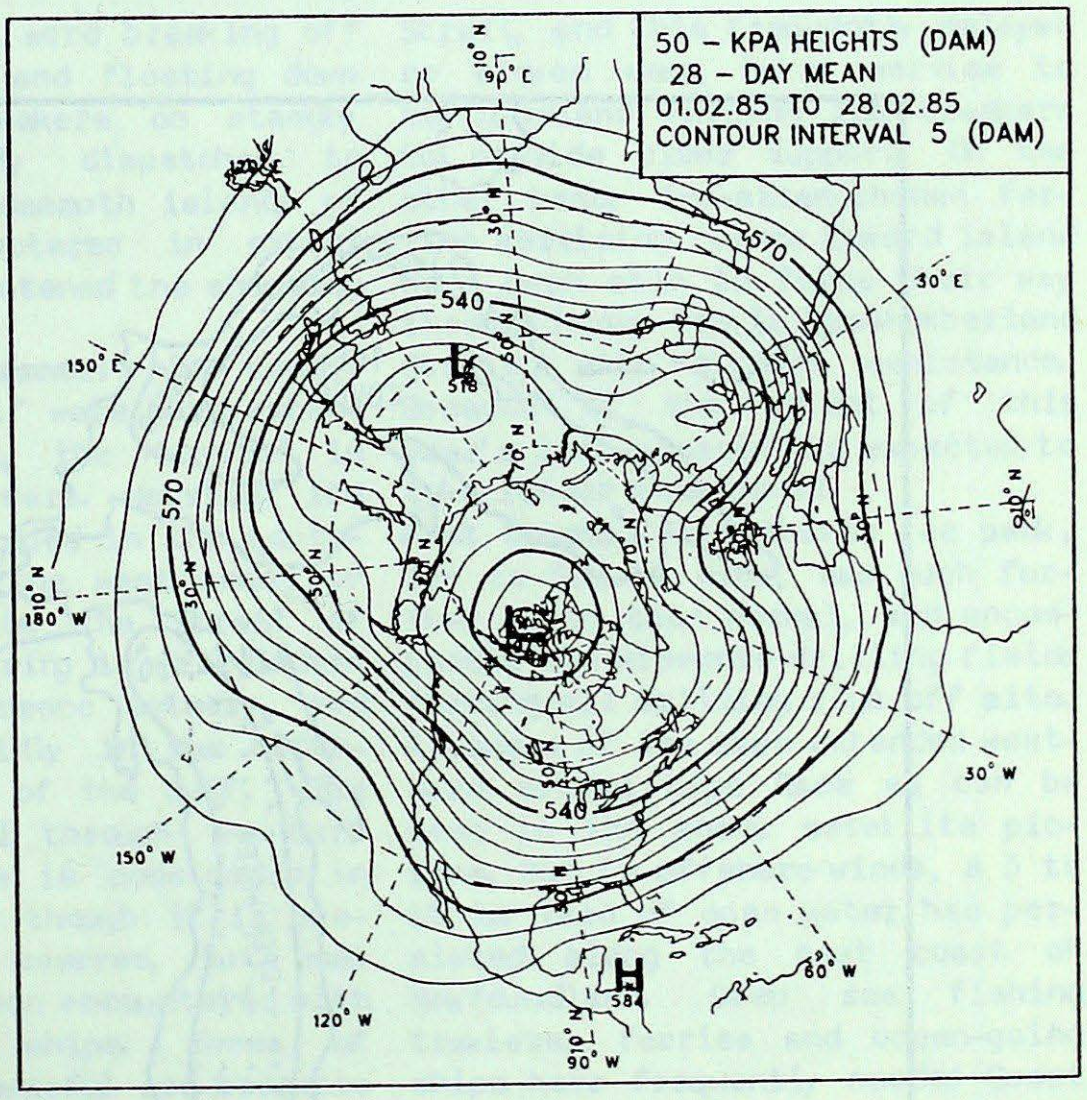


50 kPa 65°N $\bar{Z}$ = 520 dam

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



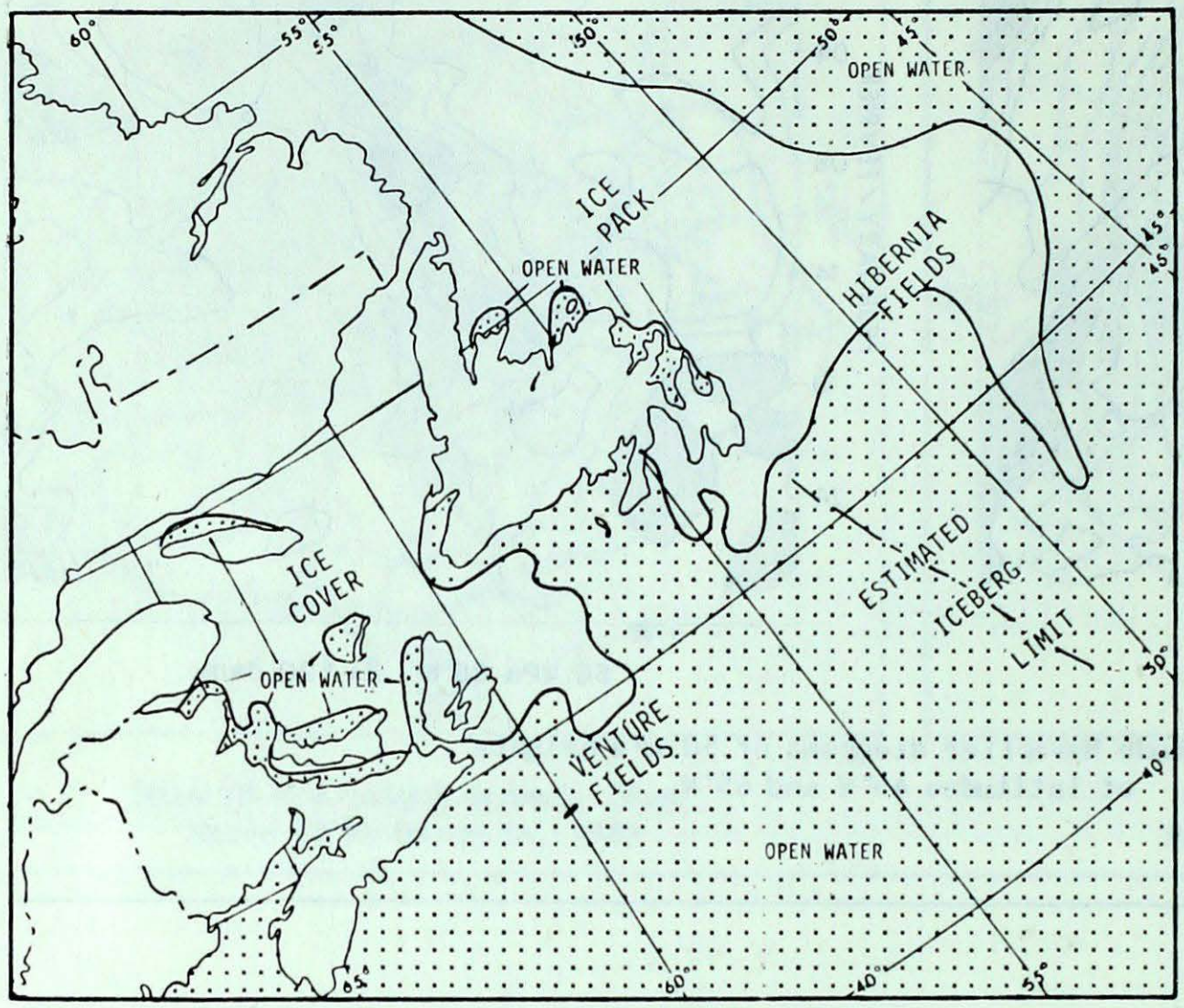
Mean 50 kPa height anomaly (dam)
February 1985



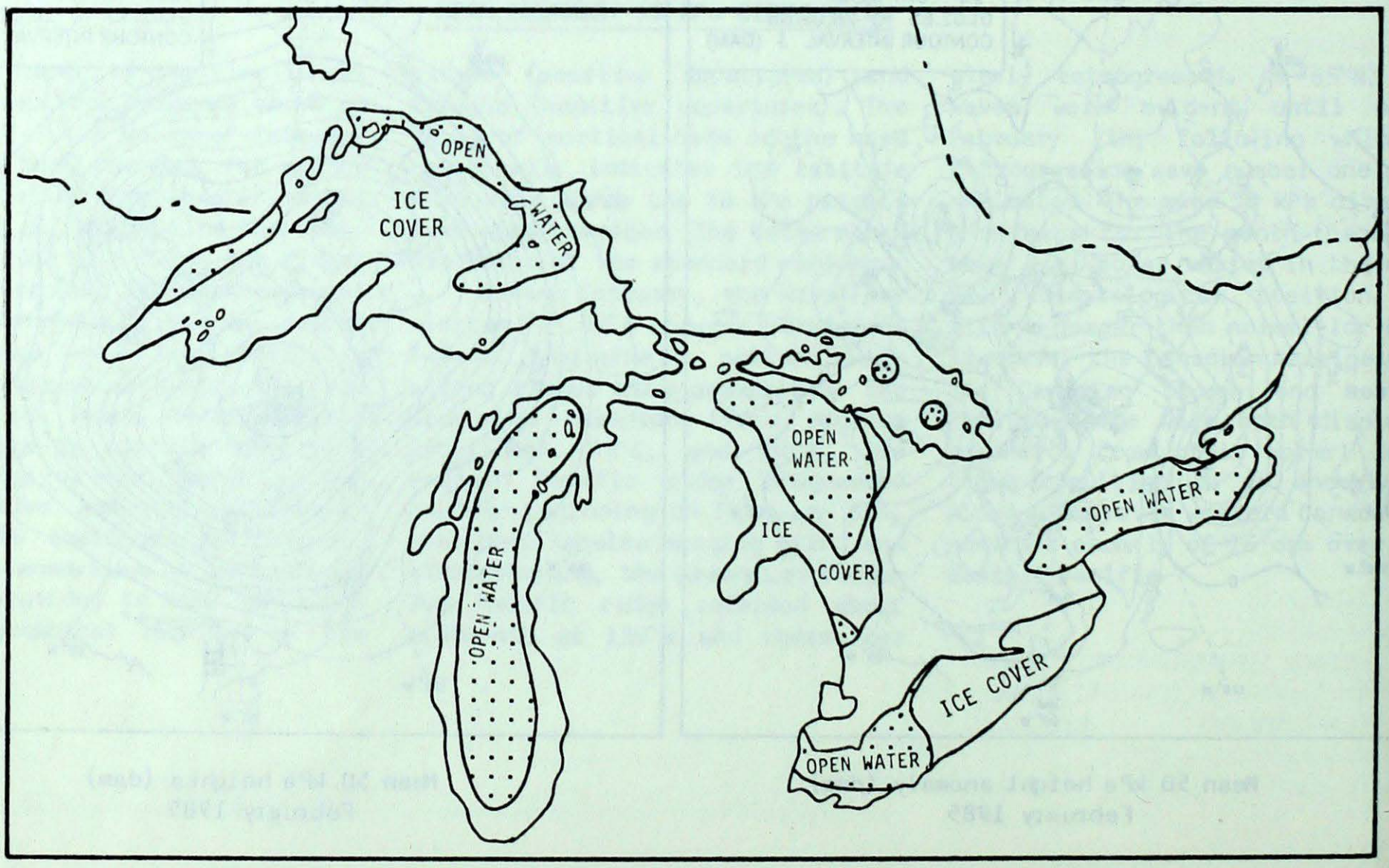
Mean 50 kPa heights (dam)
February 1985

Ice Conditions In Canadian Waters

by
A.K. Radomski



Great Lakes: The spring break-u is well under way on the Lakes Very little ice remains in Lak Ontario and the C.C.G.S Simcoe wa in the process of breaking ou remaining ice-bound harbours ar commissioning navigational aids The eastern half of Lake Erie wa still predominantly ice-covered ar fast ice was evident along th shore-line, which is considere normal. The Welland Canal is sche duled to open on April 1. The ic on Georgian Bay has loosened u significantly and conditions ar considered favourable. A lar portion of Lake Huron was ope water. The ice breaker Griffin wa in the progress of breaking up ic choked harbours in Georgian Ba The Ice cover in Lake Superior wa heavier than normal, but leads open water developed rapidly alo the northern and eastern shorelin The C.C.G.S Griffin was schedul to arrive at Thunder Bay during t latter part of March to break



This NOAA 6 satellite picture taken on March 7, clearly shows the ice in the Gulf of St. Lawrence, and drifting eastward through Cabot Strait. Some areas of open water can be seen developing near the coastline. The Labrador current has pushed the Arctic ice pack southward along Newfoundland coast.

the ice at this major grain port. A larger ice breaker C.C.G.S Des Groseillier will be stationed in Lake Erie after April 1, to try to keep the shipping route to the Welland Canal and Buffalo open, a difficult task at best of times due to strong westerly winds frequently packing ice tightly into the eastern end of the Lake.

St. Lawrence River: If weather conditions remain favourable problems are not anticipated for the April 1 opening of the Seaway. Because of the mild weather the past few weeks, ice in the shipping channel has decomposed rapidly several weeks earlier than normal, and except for fast ice along the shore line little ice remains in the River west of Baie Comeau. The ice jam which developed on Lac St-Pierre in early February closed the shipping channel for eight days. Daily aerial patrols have been keeping watch for potential problems, which frequently lead to ice jams. Very large flows 20 to 80 centimetre thick were breaking off the shore line and floating down stream. Ice breakers on standby were immediately dispatched to break up these mammoth islands of ice several hectares in extent before they threatened the shipping channel.

Gulf of St. Lawrence: Ice conditions in the Gulf were more extensive than usual, the heaviest in the last five years. Heaviest ice conditions developed in the southeast and along the west coast of Newfoundland into the Strait of Belle Isle. Clearing is well underway in St. Lawrence estuary, and progressing rapidly in the northwestern portion of the Gulf. The shipping channel through the Gulf of St. Lawrence is considered in good shape even though it is predominantly ice covered, but some problems have been encountered with heavy ladened ships. Three of Canada's most powerful ice breakers are providing assistance. Heavy ice spilled eastward through Cabot Strait, and this frequently delayed or slowed down ferry service to Newfoundland forcing ice breakers to provide close support. On the other hand, ice-strengthened ferries servicing Prince Edward Island have been able to force their way through heavy ice in Northumberland Strait, with minimal assistance. Because of the extent of this year's ice, clearing is expected to take longer than usual.

East Coast: The Arctic ice pack, 300 to 500 km wide, was much further south than normal, and encompassed the Hibernia drilling fields forcing all drilling rigs off site. A tongue of ice even extended westward around Cape Race as can be seen in the above satellite picture. Due to offshore winds, a 5 to 15 km lead of open water has persisted along the east coast of Newfoundland. Deep sea fishing trawlers, ferries and ocean-going ships have frequently needed Coast Guard assistance to maneouver near the shore or to reach open water.

1984 - The Canadian Climate in Review

by
M.J. Newark

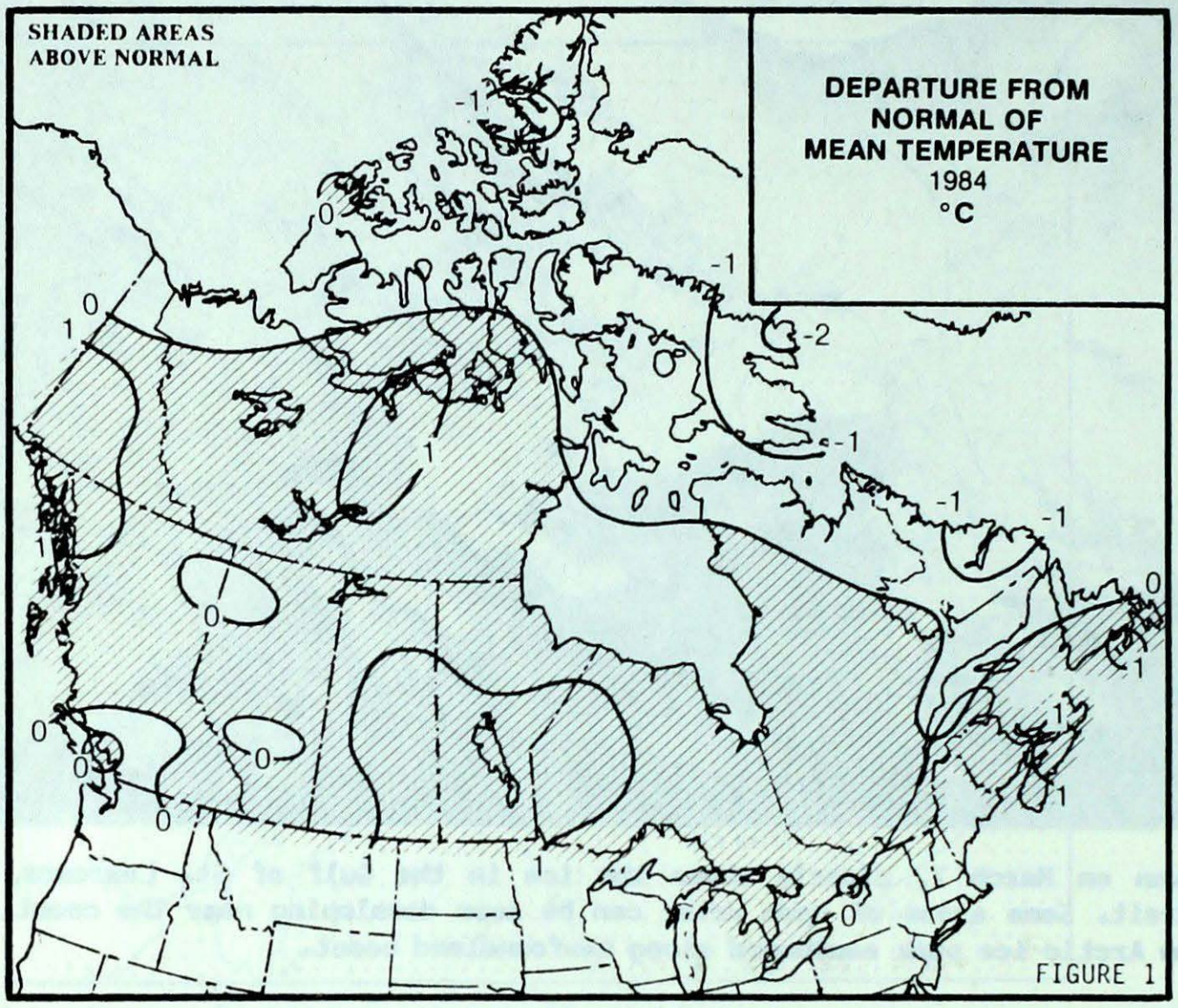


FIGURE 1

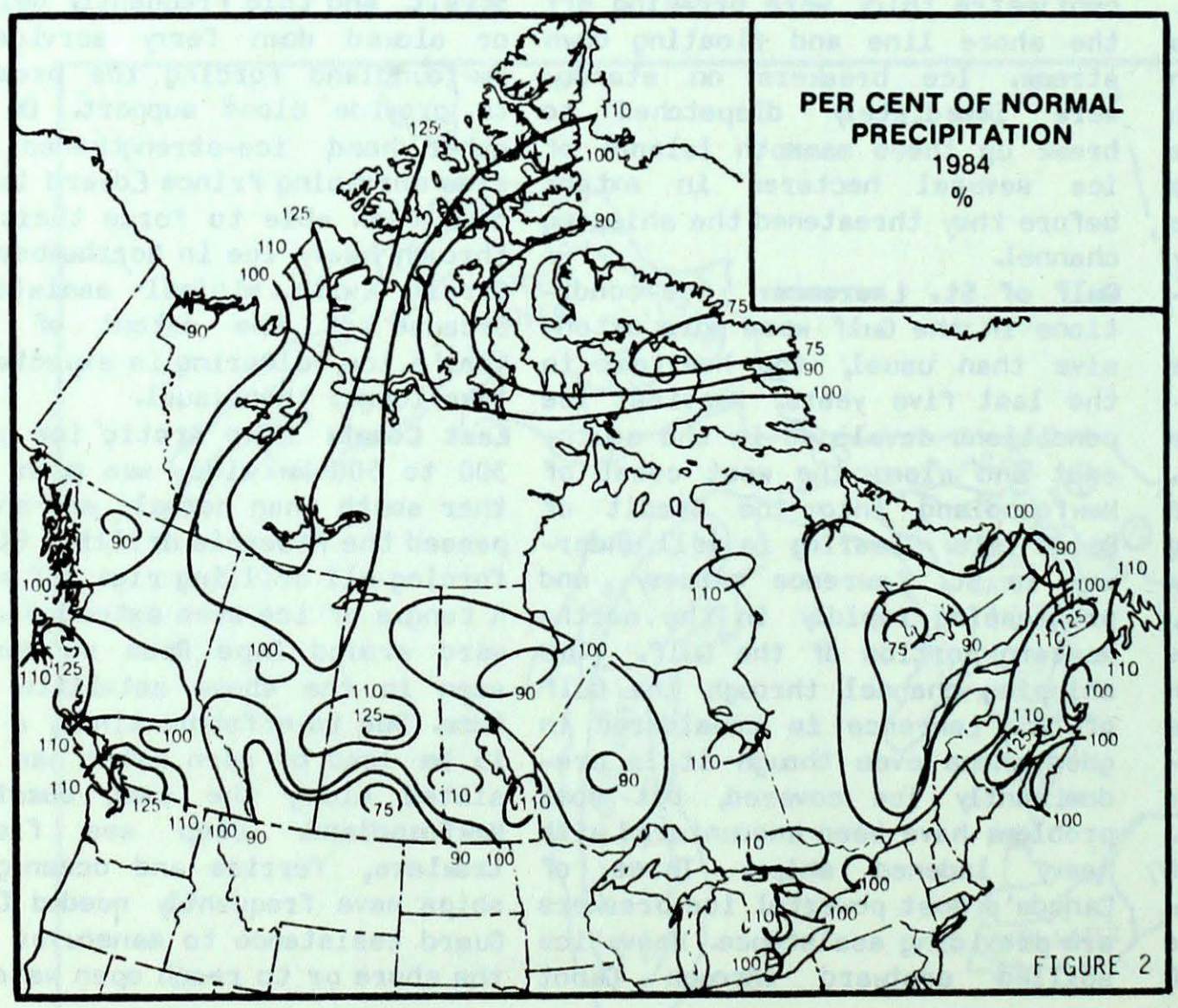


FIGURE 2

Temperature

On average, most Canadi were treated to warmer than nor temperatures during 1984 (s Figure 1). Cooler than normal te eratures were experienced mainly northern Newfoundland, Labrad the Arctic islands, southwest British Columbia and parts Alberta. However, these ann averages conceal the fact t western Canada enjoyed mild con tions from January through Ap with temperatures as much as 1 warmer than normal for the time year. The contribution of t period to the annual statistics overbalanced later in the year the abnormally early onset of w ter in the west. Killing fro were reported by the end September in the interior vall of British Columbia, while at same time cold weather with s moved over the Prairies. Rec cold October temperatures and sn falls were reported from parts British Columbia, Alberta Saskatchewan. During Novemb temperatures were as much as 2 colder than normal for the time year in northern Alberta, north British Columbia and the Yukon.

An unusual reversal of temp ature trends occurred in Onta and Quebec during February March. At a number of locations Ontario, February 1984 was mildest since records began tha to a long stretch of above freez temperatures. During this pe temperatures rose to all levels as high as 15°C. On other hand, March was the col in 25 years in parts of soutl Ontario and Québec, and on ave was colder than February for first time in more than a cen of weather records.

Precipitation

The annual distribution precipitation can be seen in Fi

2. Four main regions of precipitation deficiency can be identified, namely (a) southern Alberta and southern Saskatchewan, (b) northeastern Quebec and adjacent Labrador, (c) central Baffin Island, and (d) the Yukon. The greatest deficiency was centred on the Regina and Moose Jaw area of Saskatchewan which received as little as 64% of its average yearly total of rain and snowfall. In contrast, surrounding areas stretching in a curve from Brooks, Alberta to Prince Albert, Saskatchewan, to southeastern Manitoba received abundant precipitation ranging from 100 to 140% of normal. Most of British Columbia, and part of the Northwest Territories also received above normal amounts.

The most serious consequence of the dry year in southern portions of the Prairies was a major drought on the Prairies during the spring and summer. As early as February, when the snow cover all but disappeared, concerns arose about lack of adequate soil moisture reserves for the upcoming growing season. South of a line from Calgary through Saskatoon to Brandon, nearly 50% of the grain crop was in fact lost as the area suffered through its poorest growing season since the drought of the 1930's. An infestation of grasshoppers and cutworms plagued the area while duststorms and grassfires added to the woes of the farmers. Figure 3 shows the accumulated precipitation at Moose Jaw, Saskatchewan. By April 1984, only 73% of the precipitation that normally accumulates during the water year (Oct 1 to Sept 30) had actually been received. By the end of September the situation had deteriorated to the point where only 50% of the normal up to that time had been received. Figure 4 shows the soil moisture as a percentage of the water holding capacity (WHC); the actual evaporation (in mm) compared to potential evaporation (if the actual is less than the potential then a moisture deficit exists); and actual precipitation in millimetres. A moisture deficit was evident from April onwards, with the period of greatest deficit in July and August. Figures compiled by Statistics Canada in

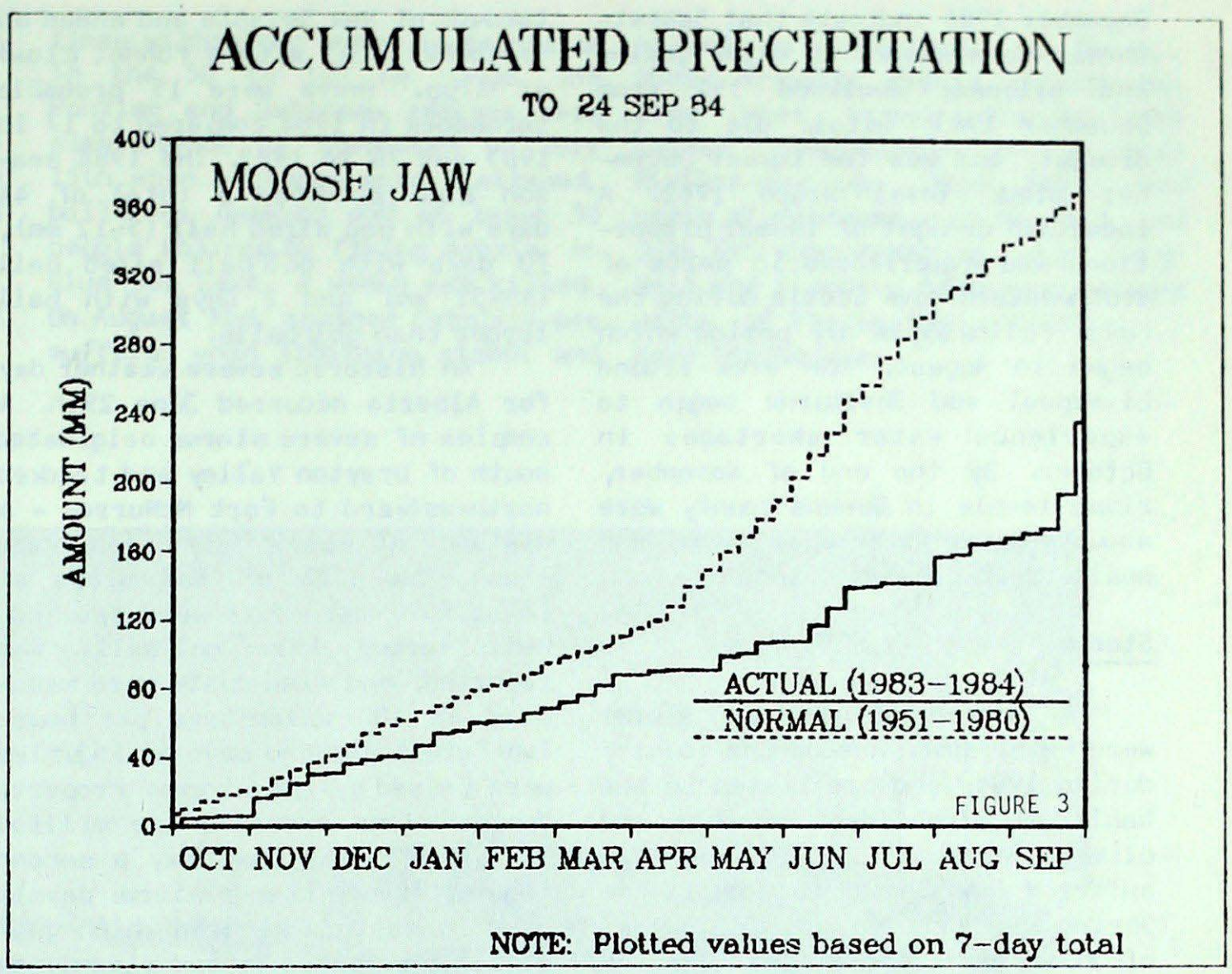


FIGURE 3

NOTE: Plotted values based on 7-day total

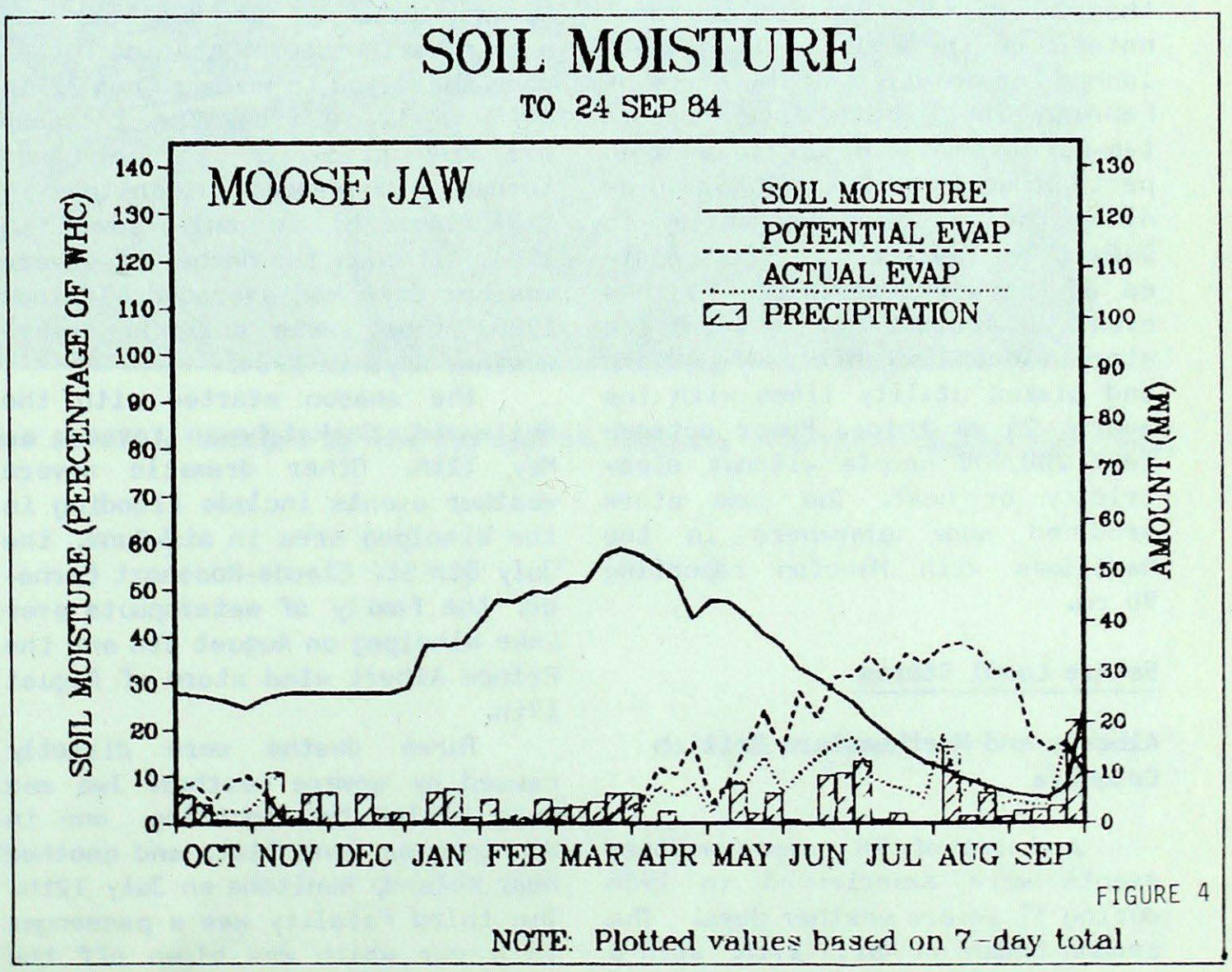


FIGURE 4

NOTE: Plotted values based on 7-day total

December 1984 indicate that Saskatchewan farm stocks of major grains and oilseeds declined 35% from December 1983, mainly due to the drought, and was the lowest December stock level since 1962. A localized drought of lesser proportions was experienced in parts of southwestern Nova Scotia during the Fall. Following a dry period which began in August, the area around Liverpool and Shelburne began to experience water shortages in October. By the end of November, river levels in Queens county were about a metre lower than normal and small trout streams dried up.

Storms

A number of serious storms were experienced across the country during 1984, and are listed in the table of significant weather and climate events. British Columbia suffered damaging windstorms in the Spring and Fall in which a number of lives were lost at sea. One, on April 15th, produced gusts as high as 124 km/h at Terrace. Another on October 11th and 12th was the rejuvenated remnants of typhoon Ogden and produced sustained winds of 100 km/h with gusts to 165 km/h and wave heights estimated at more than 10 metres. Perhaps the most notable of the winter storms which lashed the country was the storm of February 28-29 which dumped record two-day snowfalls of up to 60 cm on parts of southern Ontario and 40 cm along the St. Lawrence Valley in Québec. At least six traffic related deaths were attributed to this event. On April 15th, the worst ice storm since 1958 hit Newfoundland and glazed utility lines with ice nearly 25 mm thick. Power outages left 200,000 people without electricity or heat. The same storm produced snow elsewhere in the Maritimes with Moncton reporting 90 cm.

Severe Local Storms

Alberta and Northeastern British Columbia

A total of 76 severe weather events were experienced in 1984 during 37 severe weather days. The season began on April 27th, with a tornado at New Sarepta and ended on September 9th, with a funnel cloud at Kipp. There were 15 probable tornadoes in 1984 compared to 17 in 1983 and 26 in 1982. The 1984 season also produced a total of 44 days with pea sized hail (5-12 mm), 10 days with golfball sized hail (33-52 mm) and 2 days with hail larger than golfballs.

An historic severe weather day for Alberta occurred June 29th. A complex of severe storms originated south of Drayton Valley and tracked northeastward to Fort McMurray - a distance of nearly 500 kilometres. Along the path of the storm at least five tornadoes were spawned, hail larger than golfballs was reported, and wind gusts were measured at 100 kilometres per hour. Two fatalities and several injuries were caused by the storms. Property damage alone exceeded one million dollars. On the same day a second line of severe thunderstorms developed in eastern Alberta which generated two tornadoes and wind gusts as high as 144 kilometres per hour.

Saskatchewan and Manitoba

The 1984 season was fairly active with 122 severe weather events recorded. There were 49 in Saskatchewan, 67 in Manitoba and six in Northwestern Ontario. Tornadoes increased in number from 22 in 1983 to 35 in 1984. The increase was due primarily to seventeen tornado occurrences in Manitoba in 1984 compared to only seven in 1983. Although the number of severe weather days has averaged 43 since 1980, there were only 34 severe weather days in 1984.

The season started with the Whitewood, Saskatchewan tornado on May 12th. Other dramatic severe weather events include flooding in the Winnipeg area in mid-June, the July 8th St. Claude-Rosenort tornado, the family of waterspouts over Lake Winnipeg on August 8th and the Prince Albert wind storm of August 19th.

Three deaths were directly caused by severe weather. Two men were killed by lightning, one in Winnipeg on June 21st, and another near Roland, Manitoba on July 12th. The third fatality was a passenger in a car which was blown off the road north of Thunder Bay on August 8th. A fourth death was caused directly by lightning near Lockport, Manitoba on October 11th.

Ontario

Although reports of severe weather were down noticeably from 1983, the Summer of 1984 was still above normal and will be particularly memorable in certain portions of the Province. The first severe weather of note was on May 22nd when two tornadoes were reported in Central Ontario. The last significant storm day was September 10th when three tornadoes occurred just south and southeast of Lake Simcoe. August and early September was the most active period with severe weather reported on ten days between August 8th, and September 2nd.

The area around London was particularly hard hit in 1984 with severe weather being reported on no less than 10 days. The most severe event occurred on September 2nd, when a major tornado did in excess of five million dollars damage to the south part of the city. September 2nd, also saw hail up to the size of baseballs and several other small tornadoes to the west and northwest of London. Hail, damaging winds or flooding rains were also reported in the London area on three days in each of the months of June, July and August.

The Hamilton area experienced a stormy period in mid June. Severe thunderstorms on June 13th, and June 18th, caused two lightning deaths and major damage due to flooding.

A tornado struck the north part of Toronto on August 14th, causing millions of dollars damage. This storm was very unusual in that it moved from the northeast to the southwest, a most unusual event in tornado statistics.

There were a few other storms of note. The Westport tornado of June 18th, severely damaged a small group of buildings just outside that Eastern Ontario town. On July 6th, several tornadoes were reported across Southwestern and Central Ontario. The most noteworthy of these storms badly damaged a townhouse unit in Elora.

Québec

Confirmed severe storms occurred on 25 days during the 1984 season which began on May 12th, and ended on September 26th. Flooding downpours were particularly common. In the second half of August some regions such as Pontiac, Gatineau and Laurentian were innundated four times within two weeks by rainfalls in the 50 to 100 mm range. The Pontiac and Gatineau regions were also struck by tornadoes on July 15th when cottages were flattened, buildings damaged and at least 38 people injured by flying debris. At Blue Sea Lake, a woman was killed. On August 3rd, another fatality was suffered when lightning struck and killed an individual at Granby. Other dramatic events include May 23rd when severe thunderstorms caused considerable damage near Rivière-du-Loup, June 18th when parts of Montreal were flooded, and July 6th when damaging winds, large hail and flooding downpours ravaged parts of the eastern townships, near Sherbrooke.

The King Koil industrial building was severely damaged by the tornado in Toronto, Ontario on August 14, 1984. Photo courtesy of S. Leitch.

TABLE OF SIGNIFICANT WEATHER AND CLIMATIC EVENTS AND THEIR IMPACT DURING 1984

DATE, (1984)	EVENT	LOCATION	IMPACT	NUMBER KILLED OR INJURED (where known)
Jan 4	Heavy rains & snowmelt	B.C.	Floods and avalanches	
Jan 21	Record cold	Southern Ont.	High pollution index, deer population theatened	
Jan 31 - Feb 5	Major winter storms	Maritimes	School and business closures; ice jams; floods	
Feb 13 - 15	Heavy rains, warm weather snowmelt	Ontario	Floods	2 (drownings)
Feb 23	Record warmth	Central Canada		
Feb 28 - 29	Snowstorm of the decade	Central Canada	Travel, businesses and schools disrupted	6 (traffic related)
Mar 20 - 22	Severe ice storm	St. Lawrence and Maritimes	Power outages; schools, businesses closed; traffic accidents	
Mar 28 - 30	Snow and wind storms	Atlantic Canada	Roads impassable; Ferries cancelled; Cabot Strait blocked by ice	
Apr 15	Worst ice storm in decades	Nfld.	Power outages; schools, businesses closed	
Apr 15	Wind storm	B.C.	Record strong winds in some locations. Fishing boats capsized; forest fires fanned; widespread property damage.	A number of lives lost at sea
Apr 26 - 28	Winter storm, Strong wind; heavy snow and freezing rain	Manitoba	Roads impassable, trees downed, power outages	
Apr 24 - 30	Dense pack ice	East Coast	Some east coast communities isolated; ship navigation disrupted	1 (boat trapped in ice)
Apr 30	Wind storm	Ontario	Extensive property damage; damage to seeded and transplanted crops; soil erosion	
May 12	Tornadoes and hail	Saskatchewan and Quebec	Property damage; golfball sized hail	
May 16	Hot dry weather, tornado	Southern Sask. Southern Man. Northwestern Ont.	Dust storm and soil erosion; property damage; forest fires	
May 23	Tornado and severe thunderstorm	Ont-Que	Property damage	
May 31 - Jun 1	Strong winds	Saskatchewan - Central Alta.	Power outages. Property damage. Soil erosion and dust storm	Several (in traffic accidents)

...cont'd on page 15B

...Significant Weather cont'd from Page 148

DATE	EVENT	LOCATION	IMPACT	NUMBER KILLED OR INJURED
Jun 3	Snow and record cold. Wind	Maritimes		1 (drowning at sea)
Jun 13	Severe thunderstorms	Ontario	Mud slides; power outages; flooded fields	1 (lightning)
Jun 29	Tornadoes	Alberta	Extensive property damage	
Jun 16	Severe thunder-storms, tornado	Manitoba	Flooding of newly planted crops and farm machinery; property damage	
Jun 19 - 25	Severe thunder-storms, tornadoes	Manitoba	Fields under water; destruction of property	1 (lightning)
Jul 6 - 8	Tornadoes and severe thunderstorms	Man., Ont., Qué.	Extensive property damage. Flooding	
Jul 15	Tornadoes	Ontario-Quebec	Extensive property damage	1 killed, 38 injured
Jul 17 - 23	Drought peak & grasshoppers	southern Alta. southern Sask.	50% of grain crop lost	
Aug 14	Tornado, flood-ing down-pours	Toronto, Ont	$20 million in property damage	
Aug 17 - 19	Severe thunderstorms, hail, flooding downpours	Alberta, Sask.	Extensive property damage, crop damage	
Aug 30 - Sep 2	Tornadoes, severe thunderstorms	Southern, Ontario and Quebec	Extensive property damage	33 injured
Oct 5 - 6	Heavy rain	B.C.	Train derailed, extensive flood damage	
Oct 11 - 12	Severe wind-storm (remnant of typhoon Ogden)	coastal B.C.	Property damage	5 (drowned), 8 fishing boats lost.
Nov 22	Severe wind-storm and heavy rain	northcoast B.C.	Property damage	
Nov 27 - Dec 3	peak of drought	southern Nova Scotia	Abnormally low river levels, dry wells.	
Dec 6 - 7	Snowstorm	eastern Qué. and Atlantic Canada	School and business closures, travel disrupted	5 (traffic related)
Dec 14 - 15	Blizzard	Alberta to Southern Manitoba	Outdoor activities and travel disrupted	

FEBRUARY 1985

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	2.4	-2.0	10.7	-11.0	30.6	257	91.1	57	0	13	85	110	437.5
ALERT BAY	6.0	1.4	9.3	-1.8	14.5	149	162.7	120	0	20	X		401.4
AMPHITRITE POINT	5.3	-0.8	11.3	-1.8	27.6	890	240.1	69	0	24	X		361.0
BLUE RIVER													
BULL HARBOUR	4.0	-0.6	9.8	-5.0	6.2	59	296.5	163	0	23	X		390.7
CAPE SCOTT	4.6	-0.7	9.4	-3.2	7.0	72	322.7	127	0	23	X		375.7
CAPE ST.JAMES	4.7	-0.1	9.7	-3.2	12.5	166	135.9	99	0	21	58	*	373.7
CASTLEGAR	-3.1	-2.3	8.2	-17.7	43.7	180	41.1	64	30	9	92	134	590.8
COMOX	3.6	-0.4	11.6	-4.1	16.6	114	91.3	72	0	8	X		407.7
CRANBROOK	-6.5	-3.0	9.1	-30.9	23.3	88	17.7	62	17	5			
DEASE LAKE	-12.5	0.4	4.9	-38.7	34.5	111	19.4	78	51	6	87	81	855.8
ETHELDA BAY	2.6	-1.3	9.3	-7.1	35.7	144	495.2	165	0	20	X		430.2
FORT NELSON	-22.5	-5.6	11.4	-39.3	31.3	134	24.3	124	56	8	95	*	1135.5
FORT ST.JOHN	-15.5	-4.1	9.3	-35.1	19.3	63	11.8	43	TR	4	X		938.0
HOPE	1.4	-2.0	10.0	-10.7	64.1	204	206.6	105	0	19	24	50	466.0
KAMLOOPS	-2.7	-1.4	10.0	-19.2	39.3	309	27.9	174	0	8	84	89	579.1
KELOWNA	-3.1	-1.5	7.9	-18.8	16.1	109	15.4	78	0	7	71	102	591.5
LANGARA	3.4	-0.2	9.4	-6.0	49.3	276	252.4	176	0	24	X		417.9
LYTTON	0.6	-0.9	13.3	-15.0	23.7	85	24.9	53	0	5	67	77	488.1
MACKENZIE	-8.7	0.4	10.1	-32.3	61.2	118	50.4	86	64	11	69	95	784.0
MCINNES ISLAND	3.7	-0.7	8.9	-6.1	14.1	75	467.9	209	0	23	X		398.5
PENTICTON	-1.8	-2.4	9.3	-16.5	16.4	143	13.4	67	0	4	87	115	553.7
PORT ALBERNI	3.2	*	13.1	-6.2	43.2	*	126.0	*	0	11	58	*	416.2
PORT HARDY	3.8	-0.1	10.1	-2.9	22.8	217	231.9	145	0	22	61	81	397.8
PRINCE GEORGE	-6.2	0.1	6.4	-29.2	39.4	110	40.0	102	13	9	78	89	672.6
PRINCE RUPERT	2.0	-0.3	8.2	-13.1	40.1	172	332.3	149	0	21	66	104	447.5
PRINCETON	-4.6	-1.6	9.1	-25.4	28.2	115	20.6	69	26	8	91	*	0.0
QUESNEL	-4.9	0.0	9.9	-27.8	53.6	180	68.1	212	36	12	X		642.7
REVELSTOKE	-4.2	-1.9	7.1	-24.0	79.6	103	61.5	68	77	12	60	108	620.2
SANDSPIT	3.7	0.2	6.4	1.1	63.9	412	201.3	177	0	14	68	82	617.8
SMITHERS	-4.2	1.1	10.0	-22.0	45.4	147	46.6	147	20	6	55	65	621.1
TERRACE	-1.9	-0.5	5.5	-15.9	122.2	170	244.4	198	0	15	55	76	556.4
VANCOUVER HARBOUR	4.1	-1.1	9.8	-3.1	11.2	117	102.8	66	0	11	X		388.6
VANCOUVER INT'L	3.3	-1.3	10.3	-6.7	27.3	364	93.1	81	0	11	91	104	412.3
VICTORIA GONZ. HTS	4.9	-0.9	11.3	-3.0	9.8	239	52.0	70	0	10	106	110	365.8
VICTORIA INT'L	3.6	-1.2	13.5	-6.2	20.5	253	77.6	78	0	13	102	118	404.4
VICTORIA MARINE	4.3	-1.1	10.8	-5.1	7.0	179	85.7	55	0	17	X		381.5
WILLIAMS LAKE	-6.2	-2.0	10.0	-27.1	63.7	250	48.2	200	50	10	89	82	677.3

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
YUKON TERRITORY													
BURWASH	-22.8	-4.8	4.0	-46.1	25.1	330	21.1	274	20	7	X		1141.8
DAWSON	-27.8	-3.2	-6.2	-49.6	36.7	138	34.0	137	69	9	X		1278.4
MAYO	-24.8	-4.9	2.1	-51.1	30.7	171	19.7	120	42	5	X		1216.0
WATSON LAKE	-21.1	-2.4	5.2	-42.9	78.1	242	43.3	171	88	11	75	87	1108.5
WHITEHORSE	-18.2	-5.0	4.2	-41.5	33.3	219	18.3	137	45	5	92	101	1013.4
NORTHWEST TERRITORIES													
ALERT	-36.7	-3.1	-19.4	-44.5	2.2	39	1.4	26	39	0	0		1531.1
BAKER LAKE	-33.9	-1.3	-18.7	-43.9	11.4	211	11.4	232	47	5	88	82	1453.8
CAMBRIDGE BAY	-36.6	-2.2	-23.3	-45.6	2.8	60	2.8	70	25	1	63	121	1527.0
CAPE DYER	-22.3	0.4	-9.0	-43.8	10.4	17	6.9	13	85	3	X		1128.0
CAPE PARRY	-33.7	-4.0	-16.1	-43.7	4.0	48	1.0	18	5	0	X		1447.8
CLYDE	-30.1	-2.4	-17.8	-40.6	9.0	127	3.6	58	47	1	66	164	1342.0
COPPERMINE	-34.7	-3.6	-17.2	-46.7	16.1	251	10.5	169	26	3	100	130	1476.0
CORAL HARBOUR	-28.2	1.2	-15.2	-44.2	10.0	108	10.0	113	22	4	91	80	1273.7
EUREKA	-41.5	-3.5	-22.5	-48.3	1.6	61	1.2	50	34	1	0		1665.6
FORT RELIANCE	-31.9	-4.8	-10.0	-44.9	28.8	218	18.6	177	44	5	X		1397.6
FORT SIMPSON	-28.8	-6.0	-23.2	-34.4	42.8	226	42.6	224	50	11	100	104	1312.2
FORT SMITH	-27.7	-5.9	8.7	-43.1	25.1	136	18.9	118	70	6	108	94	1278.1
FROBISHER BAY	-25.0	0.9	-10.0	-41.8	13.0	136	12.6	54	20	5	104	107	1203.0
HALL BEACH	-34.5	-2.4	-13.2	-47.3	0.2	2	0.2	2	19	0	X		1470.4
HAY RIVER	-26.1	-6.4	9.4	-42.6	26.1	134	26.3	146	53	7	X		1287.4
INUVIK	-31.6	-2.7	-7.1	-48.2	24.0	190	16.2	154	38	4	59	90	1387.6
MOULD BAY	-40.2	-5.0	-26.1	-50.7	2.6	78	2.2	73	19	1	11	239	1630.3
NORMAN WELLS	-30.8	-4.6	-10.5	-47.0	24.4	141	19.6	121	30	6	90	117	1364.8
POND INLET	-35.6	-1.6	-22.2	-49.2	4.6	51	4.6	51	14	1	56	*	1482.6
RESOLUTE	-34.8	-1.6	-21.3	-44.8	1.8	58	1.8	60	17	1	11	62	1428.1
SACHS HARBOUR	-36.0	-5.1	-15.0	-50.2	3.6	92	3.5	94	9	1	23	53	1512.9
YELLOWKNIFE	-31.2	-6.1	-9.1	-45.1	44.6	340	31.8	283	50	9	118	115	1376.6
ALBERTA													
BANFF	-7.8	-1.5	8.5	-33.0	10.2	31	8.8	31	MSG	MSG	MSG		MSG
BROOKS	-12.6	-3.1	6.5	-37.5	22.6	152	15.4	104	4	MSG	104	*	MSG
CALGARY INT'L	-8.4	-1.1	11.9	-32.2	20.7	108	15.9	102	TR	5	131	102	739.5
COLD LAKE	-16.8	-3.2	8.4	-39.0	21.7	119	15.5	98	25	4	106	84	955.7
CORONATION	-14.4	-2.7	6.0	-37.1	27.5	137	21.0	122	26	4	103	77	906.0
EDMONTON INT'L	-12.6	-1.2	10.5	-35.7	9.8	45	12.5	71	15	5	101	85	856.7
EDMONTON MUNI.	-11.3	-1.7	11.6	-30.5	13.1	61	16.7	88	15	6	94	80	819.3
EDMONTON NAMAO	-12.6	-1.7	11.6	-34.1	11.7	54	9.1	43	12	5	X		856.6
EDSON	-11.0	-1.1	11.2	-38.1	19.2	64	10.6	54	28	4	131	112	810.5
FORT CHIPEWYAN	-25.7	-5.0	6.0	-45.5	11.6	63	11.6	77	48	MSG	MSG		MSG

FEBRUARY 1985

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
FORT MCMURRAY	-20.1	-4.7	9.5	-39.4	22.2	101	16.4	87	24	5	117	90	1074.6
GRANDE PRAIRIE	-14.9	-2.8	8.8	-41.0	32.2	121	22.6	95	17	9	127	*	920.3
HIGH LEVEL	-24.1	-5.6	12.2	-40.8	39.2	190	35.4	222	50	8	101	80	1175.4
JASPER	-8.0	-1.5	11.9	-32.2	16.4	75	15.5	75	27	4	94	*	727.1
LETHBRIDGE	-8.0	-2.6	9.8	-32.4	14.2	66	13.1	69	0	4	MSG		725.5
MEDICINE HAT	-10.4	-2.7	7.2	-35.0	13.3	72	10.9	65	1	5	119	97	794.8
PEACE RIVER	-18.5	-5.0	8.1	-36.8	35.3	136	33.8	160	26	9	X		1005.4
RED DEER	-12.6	-1.9	9.0	-38.0	11.2	57	11.5	65	14	4	X		854.4
ROCKY MTN HOUSE	-11.5	-4.1	15.6	-39.1	40.2	173	26.1	133	25	10	X		827.6
SLAVE LAKE	-15.3	-3.0	12.0	-36.7	40.2	184	22.8	113	32	8	114	100	921.5
SUFFIELD	-11.6	-2.8	6.2	-35.1	14.1	83	12.3	76	13	6	106	84	829.3
WHITECOURT	-11.5	-1.3	14.1	-34.7	23.9	90	20.6	85	19	8	X		715.2
SASKATCHEWAN													
BROADVIEW	-15.5	-0.9	5.3	-35.4	11.8	78	10.6	84	26	3	135	99	937.6
COLLINS BAY	-26.2	-5.1	2.1	-42.6	38.1	175	20.5	116	56	8	127	*	1235.6
CREE LAKE	-25.0	-5.3	3.1	-45.3	22.0	122	16.2	120	36	6	108	80	1205.0
ESTEVAN	-12.5	-0.5	5.1	-33.6	15.6	88	9.7	56	9	2	125	92	852.7
HUDSON BAY	-19.5	-3.5	5.9	-38.3	21.6	106	13.2	81	48	4	129	*	1049.6
KINDERSLEY	-14.9	-2.4	4.0	-36.4	11.8	75	9.1	56	29	4	X		921.7
LA RONGE	-22.4	-5.1	5.1	-41.0	23.7	101	16.9	110	52	6	X		1119.8
MEADOW LAKE	-19.2	-4.4	6.6	-40.0	18.4	119	17.3	109	23	6	97	*	1043.4
MOOSE JAW	-12.8	-1.3	5.5	-36.6	11.8	62	10.5	68	9	3	135	107	867.1
NIPAWIN	-20.5	*	5.5	-39.3	13.4	*	11.0	*	44	4	109	78	1077.9
NORTH BATTLEFORD	-17.0	-2.9	6.5	-38.9	18.8	121	15.5	106	28	4	X		980.6
PRINCE ALBERT	-19.5	-3.0	7.1	-39.5	25.4	153	24.9	167	40	6	104	85	991.7
REGINA	-15.4	-1.8	3.7	-38.3	21.6	118	18.7	116	8	2	117	96	934.9
SASKATOON	-16.6	-2.0	5.3	-38.5	14.8	90	13.6	82	29	3	X		967.5
SWIFT CURRENT	-12.3	-2.0	6.5	-34.8	11.4	63	10.2	59	4	4	105	91	848.2
URANIUM CITY	-27.1	-4.6	-0.8	-42.6	29.0	116	17.8	100	79	5	X		1262.5
WYNYARD	-16.8	-2.3	4.0	-36.2	17.0	96	15.4	100	17	5	106	77	974.3
YORKTON	-17.3	-1.8	5.9	-36.1	17.9	93	17.9	99	48	4	124	96	978.9
MANITOBA													
BISSETT	-18.0	-1.3	7.6	-44.5	17.9	83	17.1	91	38	4	133	96	993.8
BRANDON	-17.1	-1.4	4.7	-37.2	15.0	76	14.5	77	24	4	X		983.6
CHURCHILL	-26.8	-0.9	-10.6	-40.5	8.7	59	8.2	62	29	3	87	66	1254.5
DAUPHIN	-17.5	-1.9	4.9	-33.1	14.2	75	10.2	58	28	4	135	99	993.6
GILLAM	-25.4	-1.5	-5.4	-41.7	34.0	152	20.6	111	56	8	X		1215.5
GIMLI	-17.2	-0.2	7.5	-39.3	27.8	137	17.0	95	19	4	151	99	984.2
ISLAND LAKE	-21.7	-1.4	1.9	-41.6	27.8	131	18.1	126	63	5	X		1102.5
LYNN LAKE	-26.1	-3.9	1.3	-41.2	37.9	250	30.2	202	63	10	107	80	1235.2
NORWAY HOUSE	-21.6	*	4.0	-40.0	30.1	*	27.2	*	52	7	0	*	1121.1
PILOT MOUND	-15.6	-0.5	5.8	-37.3	7.1	34	13.4	65	16	4	X		1028.1
PORTAGE LA PRAIRIE	-16.2	-1.6	6.0	-34.5	28.9	209	19.1	89	16	4	X		959.7
THE PAS	-21.0	-3.0	4.6	-36.6	16.2	78	13.3	86	30	5	136	102	1091.8
THOMPSON	-24.5	-2.2	2.6	-41.4	32.7	291	23.6	243	39	8	125	87	1189.4
WINNIPEG INT'L	-16.9	-1.3	5.4	-35.1	16.6	87	13.5	77	26	4	145	100	977.1
ONTARIO													
ATIKOKAN	-15.8	-0.4	7.5	-42.0	31.2	97	16.2	73	42	5	125	93	945.6
BIG TROUT LAKE	-23.1	-1.7	-0.2	40.1	19.4	*	14.7	77	100	4	150	*	1148.5
EARLTON	-12.8	1.3	2.9	-31.2	60.8	129	52.4	132	60	8	X		862.3
GERALDTON	-17.7	0.2	4.5	-42.0	46.0	138	26.0	78	53	9	X		1008.9
GORE BAY	-10.0	-0.3	5.9	-35.3	80.0	213	50.5	117	30	11	X		782.9
HAMILTON RBG	-4.5	-0.2	10.5	-19.4	54.2	194	96.6	180	1	12	88	*	
HAMILTON	-5.6	0.7	9.9	-21.3	66.6	221	98.9	188	2	16	X		
KAPUSKASING	-16.9	-0.7	3.1	-35.9	74.0	168	70.7	164	76	11	X		976.8
KENORA	-15.8	-1.4	7.1	-39.1	25.4	99	20.4	88	40	6	X		946.4
KINGSTON	-6.7	0.3	6.5	-22.9	36.8	103	86.2	146	3	12	74	57	692.2
LANSDOWNE HOUSE	-20.4	-0.9	1.1	-42.3	12.8	47	10.2	42	56	3	X		1074.2
LONDON													
MOOSONEE													
MOUNT FOREST	-7.7	0.5	6.8	20.0	77.0	162	116.5	184	36	17	X		718.2
MUSKOKA	-7.3	2.3	4.8	-23.4	62.5	121	109.1	174	32		X		
NORTH BAY	-9.8	1.5	4.2	-25.3	57.0	112	72.8	129	39	16	76	60	777.7
OTTAWA INT'L	-7.6	1.9	4.6	-22.4	24.0	47	69.3	114	14	10	91	*	716.8
PETAWAWA	-9.1	2.1	6.1	-32.8	22.4	49	51.0	100	17	14	X		756.6
PETERBOROUGH	-7.4	1.1	7.6	-25.9	30.3	96	113.3	231	14	11	X		
PICKLE LAKE	-20.3	-1.6	3.5	-40.4	39.0	142	23.0	90	87	6			1071.4
RED LAKE	-18.4	-1.6	6.1	-41.4	27.0	117	22.4	108	63	5	133	*	1019.9
ST. CATHARINES	-4.0	-0.3	13.1	-19.0	52.3	231	75.5	167	MSG	12			
SARNIA	-5.6	-1.1	6.2	-21.8	62.8	264	109.6	241	MSG	17	81	76	
SAULT STE. MARIE	-10.1	0.4	4.0	-33.2	24.2	127	87.2	159	46	13	MSG		814.8
SIMCOE	-5.5	-0.5	11.0	-21.0	68.2	286	99.2	177	1	16	X		656.7
SIOUX LOOKOUT	-17.2	-1.5	7.3	-39.6	23.4	83	20.3	73	49	7	X		989.0
SUDBURY	-11.0	1.5	4.8	-27.0	108.8	242	107.7	229	67	15	93	70	812.4
THUNDER BAY	-13.7	-0.7	16.3	-35.6	32.8	105	18.7	66	20	7	105	71	888.4
TIMMINS	-14.7	0.9	2.6	-33.2	64.6	121	60.8	133	90	11			620.1
TORONTO	-3.5	0.4	9.5	-15.7	47.6	167	85.7	165	MSG	9	82	*	
TORONTO INT'L	-5.8	0.3	8.5	-19.9	41.0	154	83.1	180	1	12	X		665.3
TORONTO ISLAND	-3.4	1.4	8.9	-15.1	40.6	162	80.9	175	MSG	13	X		598.9
TRENTON	-6.1	0.4	7.3	-23.3	58.0	163	110.4	193	5	13	X		676.3
WATERLOO-WELL	-6.8	0.0	7.8	-21.0	62.2	200	112.8	207	6	17	X		
WAWA	-13.0	*	4.5	-33.0	81.6	*	74.9	*	54	15	X	*	867.4
WIARTON	-6.1	1.4	5.9	-21.4	129.6	214	117.9	183	27	19	58	56	676.3
WINDSOR	-4.8	-1.0	10.3	-20.2	61.4	269	118.9	236	0	13	X		637.0

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

FEBRUARY 1985

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	-11.8	2.0	3.1	-34.8	64.1	105	54.0	96	44	12	X		834.8
BAIE COMEAU	-10.1	2.4	5.0	-32.9	71.4	97	63.0	101	42	11	109	*	787.7
BLANC SABLON	-11.4	-1.1	2.7	-28.6	72.9	71	74.7	68	78	14	88	*	818.0
CHIBOUGAMAU	-15.4	2.1	0.9	-39.8	48.4	92	51.3	100	69	12	84	67	934.0
GASPE	-8.9	1.2	4.0	-26.8	73.2	110	6.6	7	38	10	91	*	755.4
INUKJUAK	-22.7	2.3	-4.7	-40.0	21.0	241	20.0	232	57	5	106	99	1140.4
KUUJJUAQ	-22.3	0.1	-4.2	-43.6	40.7	120	34.5	103	92	10	95	87	1130.8
KUUJJUARAPIK	-22.5	0.1	1.2	-41.8	27.0	111	27.0	114	25	9	95	76	1122.4
LA GRANDE RIVIERE	-21.2	*	-0.5	-40.4	36.0	*	27.4	*	41	9	81	*	1098.6
MANIWAKI	-9.7	2.5	6.2	-31.6	42.6	93	55.8	110	39	15	71	56	776.1
MATAGAMI	-16.3	1.5	0.7	-35.6	34.6	85	31.1	75	62	8	79	61	961.3
MONT JOLI	-8.7	1.8	4.0	-30.4	61.7	81	56.2	75	22	12	91	79	747.0
NATASHQUAN	-10.7	0.6	5.2	-28.6	28.8	51			28	8	135	103	735.6
NITCHEQUON	-19.9	1.4	-0.6	-42.0	30.2	95	26.6	90	92	8	92	74	1066.9
QUEBEC	-9.5	1.2	3.1	-25.2	70.1	99	69.0	88	70	11	104	91	742.6
ROBERVAL	-11.7	3.0	4.3	-32.4	50.7	84	50.5	85	60	9	109	*	829.9
SCHEFFERVILLE	-20.9	0.3	-1.4	-43.0	26.2	58	25.9	60	53	8	MSG		1085.3
SEPT-ILES	-11.0	1.5	5.3	-29.6	51.8	70	51.0	64	28	12	113	81	812.4
SHERBROOKE	-8.3	2.6	7.8	-32.8	24.3	43	66.4	107	8	11	96	*	739.0
STE AGATHE DES MONTS	-10.0	2.1	3.0	-27.8	56.4	68			86	15	81	64	785.7
VAL D'OR	-13.1	1.8	2.0	-31.5	59.6	118	58.0	114	63	11	100	73	871.6
NEW BRUNSWICK													
CHARLO	-9.2	2.2	4.6	-27.9	63.1	85	57.5	74	40	10	91	66	761.0
CHATHAM	-7.5	1.2	4.8	-29.0	47.6	73	62.4	71	35	8	99	75	715.8
FREDERICTON	-6.5	1.9	6.8	-28.0	20.5	32	69.7	77	4	8	112	*	684.3
MONCTON	-7.1	0.6	5.2	-27.7	57.7	84	83.4	84	20	10	98	79	704.2
SAINT JOHN	-6.3	1.2	6.4	-29.3	29.4	46	107.4	92	TR	11	97	77	681.0

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													
EDDY POINT	-5.9	-0.8	4.9	-17.6	46.0	72	90.4	85	14	11	85	70	668.7
GREENWOOD	-4.5	-0.9	8.6	-25.4	42.8	68	87.0	96	4	12	X		631.6
SABLE ISLAND													
SHEARWATER	-4.2	0.3	6.5	-20.8	32.4	62	92.7	75	2	13	124	95	622.6
SYDNEY	-6.5	-0.6	5.1	-24.4	66.2	96	114.5	92	10	13	109	99	687.1
TRURO	-6.4	1.2	7.3	-27.7	61.5	114	94.6	106	25	12	95	88	683.5
YARMOUTH													
PRINCE EDWARD ISLAND													
CHARLOTTETOWN	-7.7	-0.2	5.5	-26.7	50.5	76	62.4	64	25	13	MSG		719.1
SUMMERSIDE	-6.9	0.3	5.2	-26.1	48.2	86	60.3	73	28	10	96	78	703.6
NEWFOUNDLAND													
ARGENTIA	-4.8	-2.9	9.6	-18.2	40.8	100	88.2	83	6	14	X		633.4
BATTLE HARBOUR	-10.8	-1.1	2.8	-27.5	66.3	79	75.9	105	194	12	X		807.6
BONAVISTA	-5.9	-0.7	6.4	-19.7	62.8	139	67.8	78	45	14	X		669.0
BURGEO	-6.0	-0.8	4.1	-21.0	43.2	85	109.0	83	25	13	105	105	673.2
CARTWRIGHT	-12.6	0.0	2.4	-27.7	68.6	104	73.5	108	283	12	94	89	857.3
CHURCHILL FALLS	-19.0	-0.1	0.4	-40.7	25.5	43	21.6	36	115	8	136	109	
COMFORT COVE	-9.1	-2.1	6.0	24.2	91.4	124	111.3	117	71	18			721.4
DANIEL'S HARBOUR	-8.5	-0.8	3.6	-23.5	37.8	50	29.2	35	90	9	82	109	741.9
DEER LAKE	-8.3	0.7	7.2	-27.3	48.5	74	39.1	53	54	13	X		
GANDER INT'L	-7.4	-0.6	5.7	-22.5	83.0	108	91.4	91	39	17	75	75	710.6
GOOSE	-14.5	0.0	3.3	-37.0	40.4	66	25.1	41	90	5	132	112	909.5
PORT-AUX-BASQUES	-6.1	-0.4	1.6	-20.3	62.9	90	104.0	88	48	17	64	*	675.4
ST ANTHONY	-10.0	-0.4	1.7	-26.8	68.3	66	71.5	97	105	14			787.5
ST JOHN'S	-5.9	-1.4	8.2	-20.7	72.7	97	96.3	68	26	16	71	85	667.8
ST LAWRENCE	-5.4	-1.4	4.1	-18.2	95.0	196	130.1	112	78	18			
STEPHENVILLE	-6.9	-0.7	5.2	-21.6	53.3	70	75.5	83	43	18	72	100	698.6
WABUSH LAKE	-18.2	2.6	0.4	-38.1	45.7	86	35.9	74	70	8	107	97	1014.4

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

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AGROCLIMATOLOGICAL STATIONS — **FEBRUARY 1985**

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	2.1	-2.4	10.5	-8.0	28.4	118.3	67	0	15	64	11.8	11.8
KAMLOOPS												
SIDNEY												
SUMMERLAND	-1.9	-2.0	7.5	-16.0	17.4	10.7	57	0	4	100	0.0	0.0
ALBERTA												
BEAVERLODGE	-12.7	-2.5	9.0	-37.5	27.0	28.0	110	2	8	115	0.0	0.0
ELLERSLIE	-12.8	-1.3	11.5	-36.0	10.5	15.2	87	19	6	98	0.0	0.0
FORT VERMILLION												
LACOMBE	-12.4	-1.9	10.0	-39.5	15.5	15.5	86	23	8	96	0.0	0.0
LETHBRIDGE	-7.7	-2.0	10.0	-31.5	15.1	11.4	61	0	3	125	1.0	5.3
VAUXHALL	-10.3	-2.9	10.0	-33.5	6.4	8.8	55	0	1	116	0.0	0.0
VEGREVILLE	-14.8	-1.4	6.0	-38.0	7.0	7.0	50	15	5	MSG	0.0	0.0
SASKATCHEWAN												
INDIAN HEAD	-15.8	-2.0	5.5	-35.5	30.0	29.2	163	36	4	MSG	0.0	0.0
MELFORT	-18.6	-2.3	4.0	-36.5	13.8	13.8	85	30	5	82	0.0	0.0
REGINA	-16.8	-3.0	3.5	-38.5	17.3	16.1	109	8	6	MSG	0.0	0.0
SASKATOON	-17.0	-2.5	6.0	-37.0	23.1	23.1	105	32	3	100	0.0	0.0
SCOTT	-17.5	-3.1	5.0	-40.5	10.0	11.3	87	25	4	91	0.0	0.0
SWIFT CURRENT SOUTH	-12.0	-1.6	6.5	-34.5	15.5	14.0	93	5	4	102	0.0	0.0
MANITOBA												
BRANDON	-16.6	-1.4	6.0	-39.0	14.1	14.1	71	27	4	145	0.0	0.0
GLENLEA	-13.0	3.4	4.0	-38.0	18.2	18.2	67	26	5	150	0.0	0.0
MORDEN	-14.7	-1.3	6.5	-33.0	17.3	17.3	91	5	6	129	0.0	0.0
ONTARIO												
DELHI	-5.9	-0.5	10.0	-23.0	51.8	104.2	183	1	13	73	2.8	2.8
ELORA	-7.3	0.0	6.1	-22.3	MSG	89.9	184	12	MSG	MSG	0.0	0.0
GUELPH	-6.8	-0.3	7.3	-21.1	82.5	118.1	234	4	15	70	0.0	0.0
HARROW	-5.7	-1.9	10.5	-22.5	62.4	119.2	224	0	10	92	2.8	2.8
KAPUSKASING												
MERIVALE												
OTTAWA	-8.2	1.3	4.6	-26.9	21.4	53.5	98	19	10	90	0.0	0.0
SMITHFIELD	-5.7	0.9	9.0	-21.0	60.2	125.0	17	14	12	MSG	0.5	0.5
VINELAND STATION	-3.7	-0.1	12.4	-18.5	41.8	73.6	132	0	14	78	5.8	5.8
WOODSLEE												
QUEBEC												
LA POCATIERE	-8.0	2.2	3.5	-24.5	50.1	57.5	81	40	9	101	0.0	0.0
L'ASSUMPTION	-8.5	2.1	3.5	-32.5	24.5	56.4	92	22	13	93	0.0	0.0
LENNOXVILLE												
NORMANDIN	-13.5	2.6	4.5	-39.5	67.2	55.8	103	55	7	105	0.0	0.0
ST. AUGUSTIN												
STE CLOTHILDE												
NEW BRUNSWICK												
FREDERICTON												
NOVA SCOTIA												
KENTVILLE	-4.4	0.8	8.5	-23.0	55.2	104.7	98	4	10	95	0.0	0.0
NAPPAN	-6.6	0.3	6.5	-30.5	76.7	99.7	112	20	15	86	0.0	0.0
PRINCE EDWARD ISLAND												
CHARLOTTETOWN												
NEWFOUNDLAND												
ST. JOHN'S WEST	-5.4	-1.1	8.0	-20.0	59.8	110.3	66	28	17	56	0.0	0.0