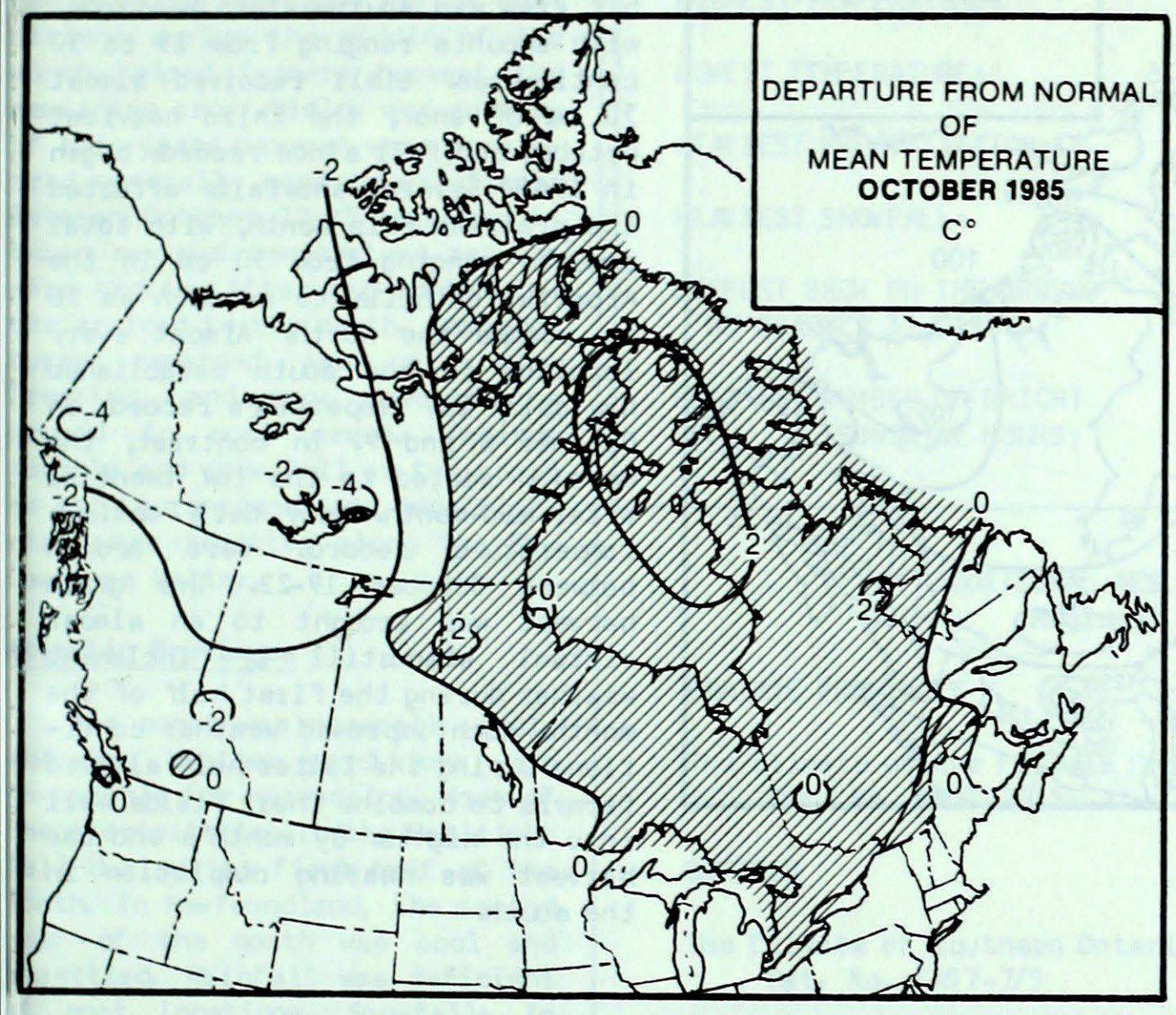
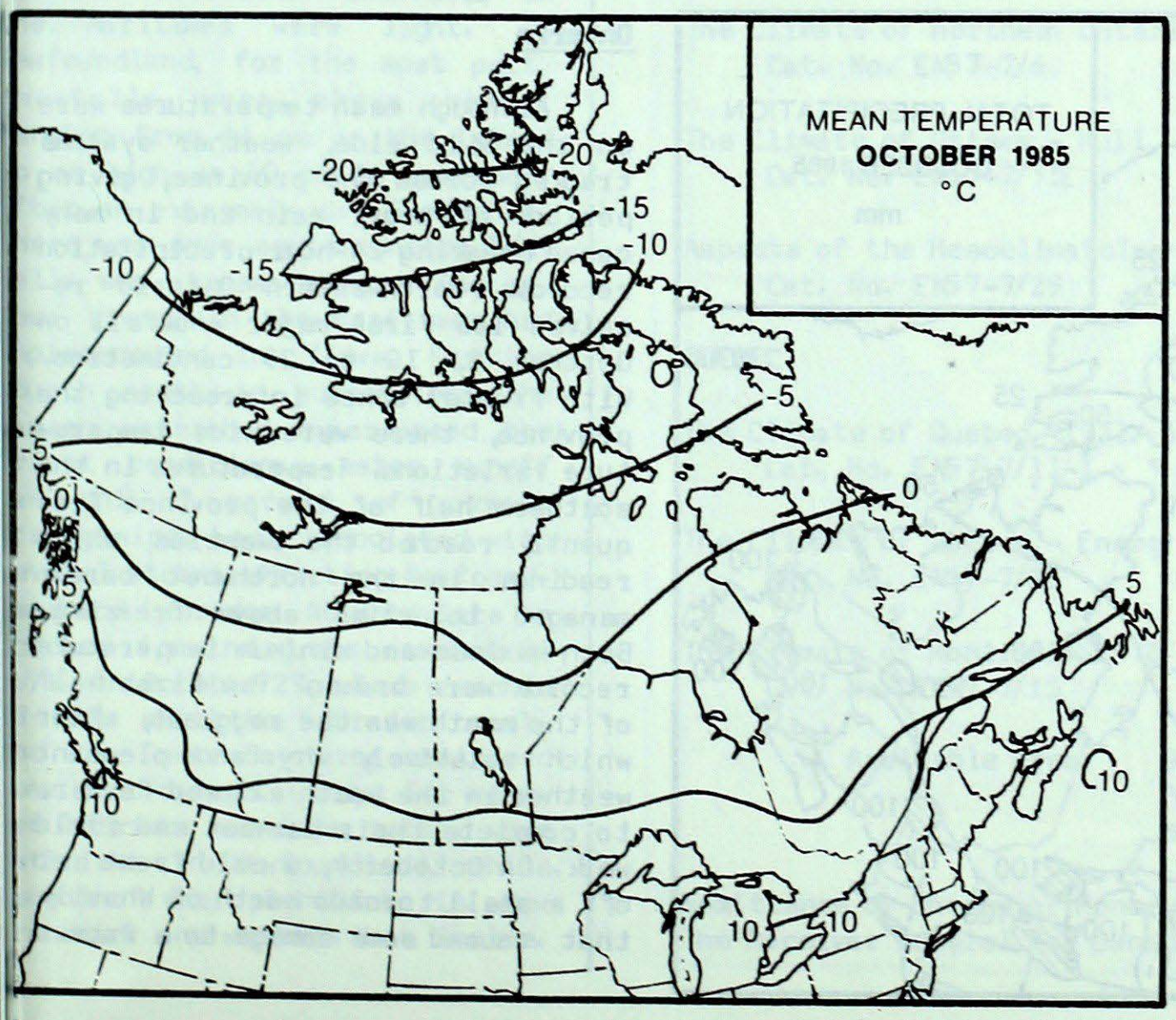
Environment Canada Environnement Canada

Climatic Perspectives

Monthly Supplement

Vol.7 October, 1985





ACROSS THE COUNTRY

Yukon and Northwest Territories

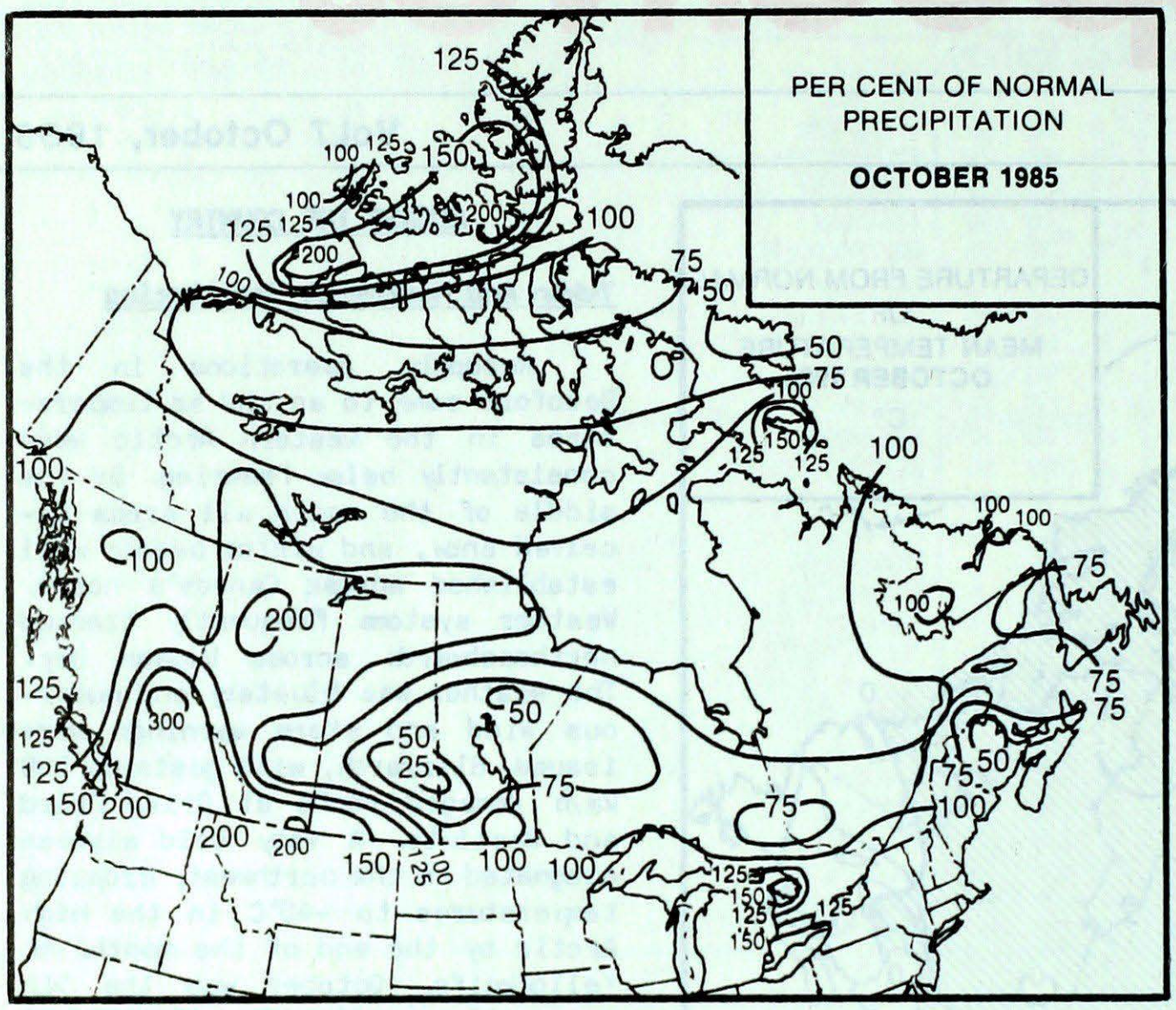
Resupply operations in the Beaufort came to an end as temperatures in the western Arctic were consistantly below freezing. By the middle of the month all areas received snow, and winter became well established across Canada's north. Weather systems frequently tracked northeastwards across Hudson Bay. The weather was blustery and numerous wind and storm warnings were issued. Blizzards, with gusts to 100 km/h damaged roofs at Grise Fiord and Resolute. A very cold airmass stagnated in the northwest, dropping temperatures to -40°C in the high Arctic by the end of the month. At Yellowknife, October was the 5th consecutive month with below normal mean temperatures. In the eastern Arctic several new daily maximum temperature records were set, when readings hovered near freezing, delaying freeze-up by several weeks.

British Columbia

A persistant on-shore flow kept the weather cool, wet and cloudy. At Cranbrook this was the cloudiest October on record, while Castlegar established a new low mean temperature record for the month. Gale force winds occurred frequently along the coast. At Cape St. James wind gusts reached 145 and 165 km/h on October 15 and 26, respectively. Two fishing boats sank, while others needed assistance from the Coast Guard. The majority of sites received double their normal precipitation. Four locations set new precipitation records for the month. There were minor flooding and transportation problems. All harvesting was completed. Early snowfalls were reported in the coastal mountains above 1000 metres. Several communities along the coast and in the interior broke snowfall records.

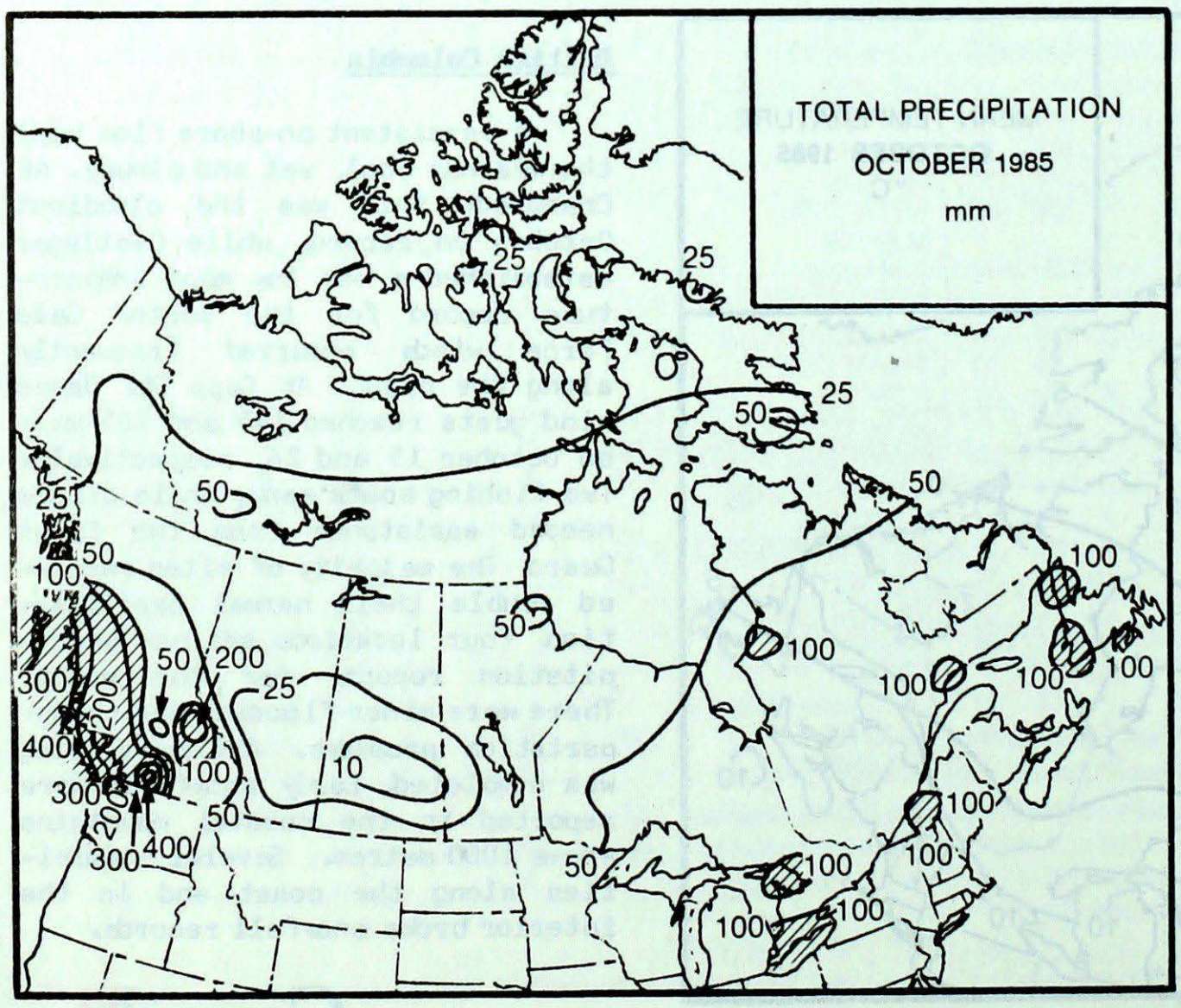
Canada

PRÉCIPITATION



The Prairies

An early but not unusual snowfall hit the prairies during the first part of the month. The storm began in Alberta on October 6 and progressed eastwards depositing 5 to 10 centimetres of snow. The hardest hit area was southwestern Manitoba, with amounts ranging from 15 to 30 centimetres. Gimli received almost 30 cm of snow, the third heaviest October snowfall since records began in 1944. Several snowfalls affected the prairies this month, with total amounts ranging from 30 cm in the Alberta foothills to as much as 56 cm across the north. Almost every location in the south established new daily low temperature records on October 8 and 9. In contrast, the mercury soared to the low twenties after mid-month. Many daily maximum temperature records were broken between October 19-22. The grain harvest was brought to an almost virtual standstill by inclement weather during the first half of the month. Much improved weather conditions during the latter half allowed farmers to combine their fields well into the nights. By month's end the harvest was nearing completion in the south.



Ontario

Although mean temperatures were on the mild side, weather systems tracked across the province, giving periods of heavy rain and in many cases breaking 24-hour precipitation records. Northwestern Ontario received its first major snowfall on October 8, 10 to 25 centimetres. With frontal zones intersecting the province, there were wide temperature variations. Temperatures in the southern half of the province frequently reached the twenties, while readings in the northwest barely managed to climb above freezing. Both maximum and minimum temperature records were broken. The first half of the month was the soggiest, after which relatively dry and pleasant weather in the south allowed farmers to complete their harvest and field work. On October 4, a cold front set off a small tornado north of Wheatly that caused some damage to a farm.

Quebec

Generally pleasant weather conditions prevailed, with above normal hours of sunshine across the southern half of the province. The fall harvest was occasionally hampered by wet weather, but warm temperatures and good drying conditions during the middle of the month helped farmers harvest the remaining crop. Yields and quality of this years harvest were considered generally good to excellent. Between October 22-25 more than a dozen maximum temperature records were broken. After mid-month winter arrived in the north. Temperatures remained near or below freezing, and snow covered the ground in most areas. Towards month's end snow fell as far south as the Laurentians, and snow flurries were reported along the St. Lawrence Valley.

Atlantic Provinces

The month was generally cool, and dry. Weather conditions were favourable for harvesting. Most of the precipitation in the Maritimes fell during the first half of the month. In Newfoundland, the second half of the month was cool and unsettled. Rainfall was deficient at most locations. Snowfalls in the Maritimes were light. In Newfoundland, for the most part, snowfalls were above normal ranging from 11 cm on the Island to as high as 50 cm in Labrador. After an extremely dry September, there was once again concern that wells and streams were drying up. Some rivers in the Maritimes had unprecedented low flows. For the fourth month in succession, the Canaan watershed experienced the driest conditions; water runoff was only 9 percent of normal. Strong winds were associated with several storms affecting Newfoundland and Labrador. At Bonavista on October 6, wind gusts reached 96 km/h. On October 29, winds reached 83 km/h near the Labrador coast, and the Goose Bay area sustained some wind damage. Except for western Labrador sunshine totals were deficient in Newfoundland, while sunshine was plentiful in New Brunswick and western Nova Scotia.

CLIMATIC EXTREMES IN CANADA - OCTOBER 1985

MEAN TEMPERATURE:		
WARMEST	Windsor, ONT	11.9°C
COLDEST	Eureka, NWT	-23.1°C
HIGHEST TEMPERATURE:	Greenwood, NS	25.5°C
LOWEST TEMPERATURE:	Eureka, NWT	-37.3°C
HEAVIEST PRECIPITATION:	Amphitrite Point, BC	481.8 mm
HEAVIEST SNOWFALL:	Blue River, BC	61.9 mm
DEEPEST SNOW ON THE GROUND ON OCTOBER 31, 1985:	Mould Bay, NWT	39.0 cm
GREATEST NUMBER OF BRIGHT SUNSHINE HOURS:	Estevan, SASK	205 hrs

ADDITIONAL AES CLIMATE PUBLICATIONS
Regional Climate Studies

PRAIRIE PROVINCES

The Climate of the Prairie Provinces. 1972.
Cat. No. EN57-7/13 $1.50 copy

ONTARIO

The Climate of southern Ontario. 1980.
Cat. No. EN57-7/5 $6.00 copy

The Climate of northern Ontario. 1968.
Cat. No. EN57-7/6 $1.50 copy

The Climate of Ottawa - Hull, the Climate of Canadian Cities. 1983
Cat. No. EN57-7/35E $3.50 copy

Aspects of the Mesoclimatology of the Toronto Area. 1977.
Cat. No. EN57-7/29 $3.00 copy

QUEBEC

The Climate of Quebec. 1971.
Cat. No. EN57-7/11-1 $5.00 copy

The Climate of Quebec - Energy Considerations. 1975.
Cat. No. EN57-7/23 $3.00 copy

The Climate of Montreal. 1970.
Cat. No. EN57-7/15 $1.00 copy

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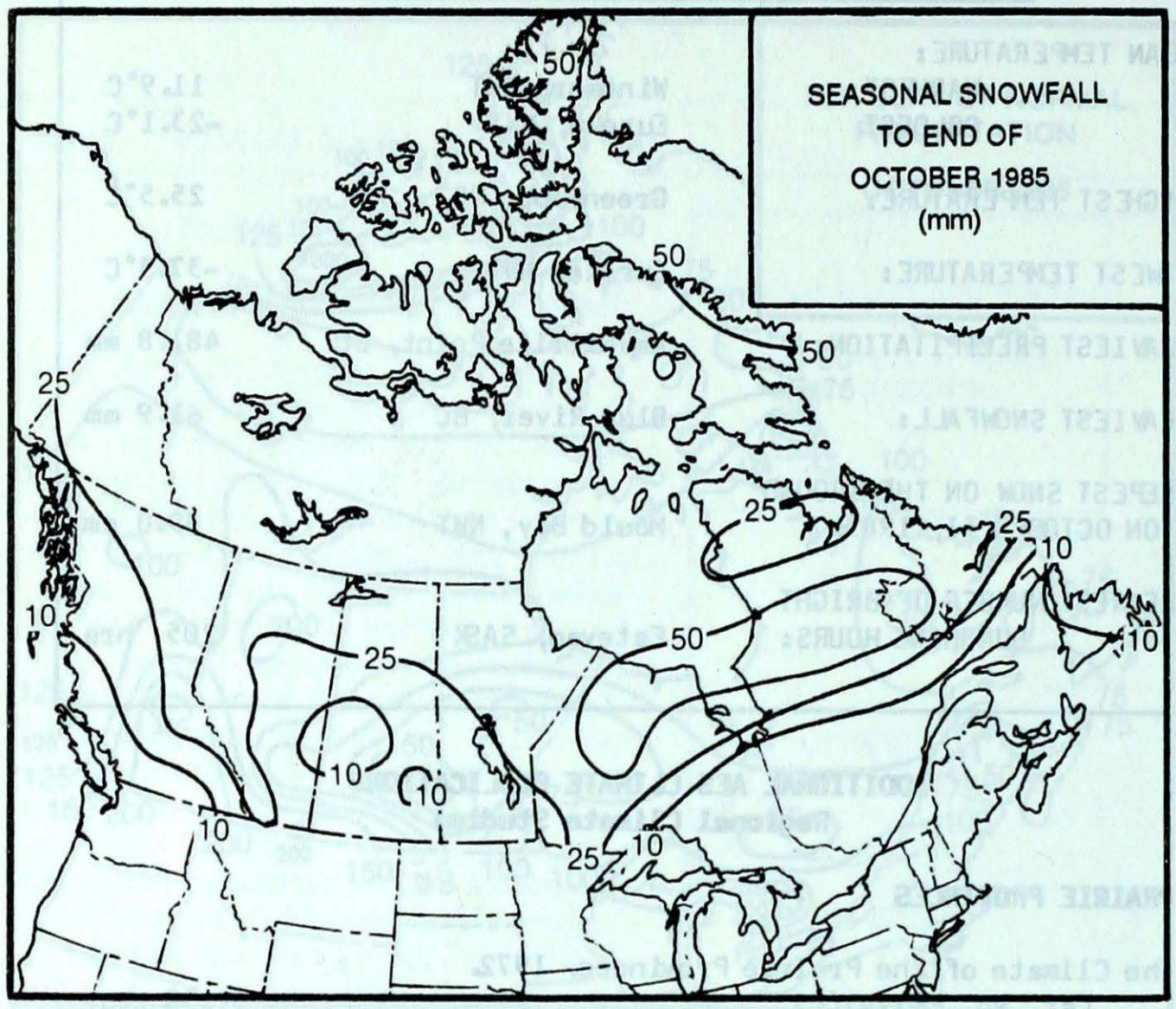
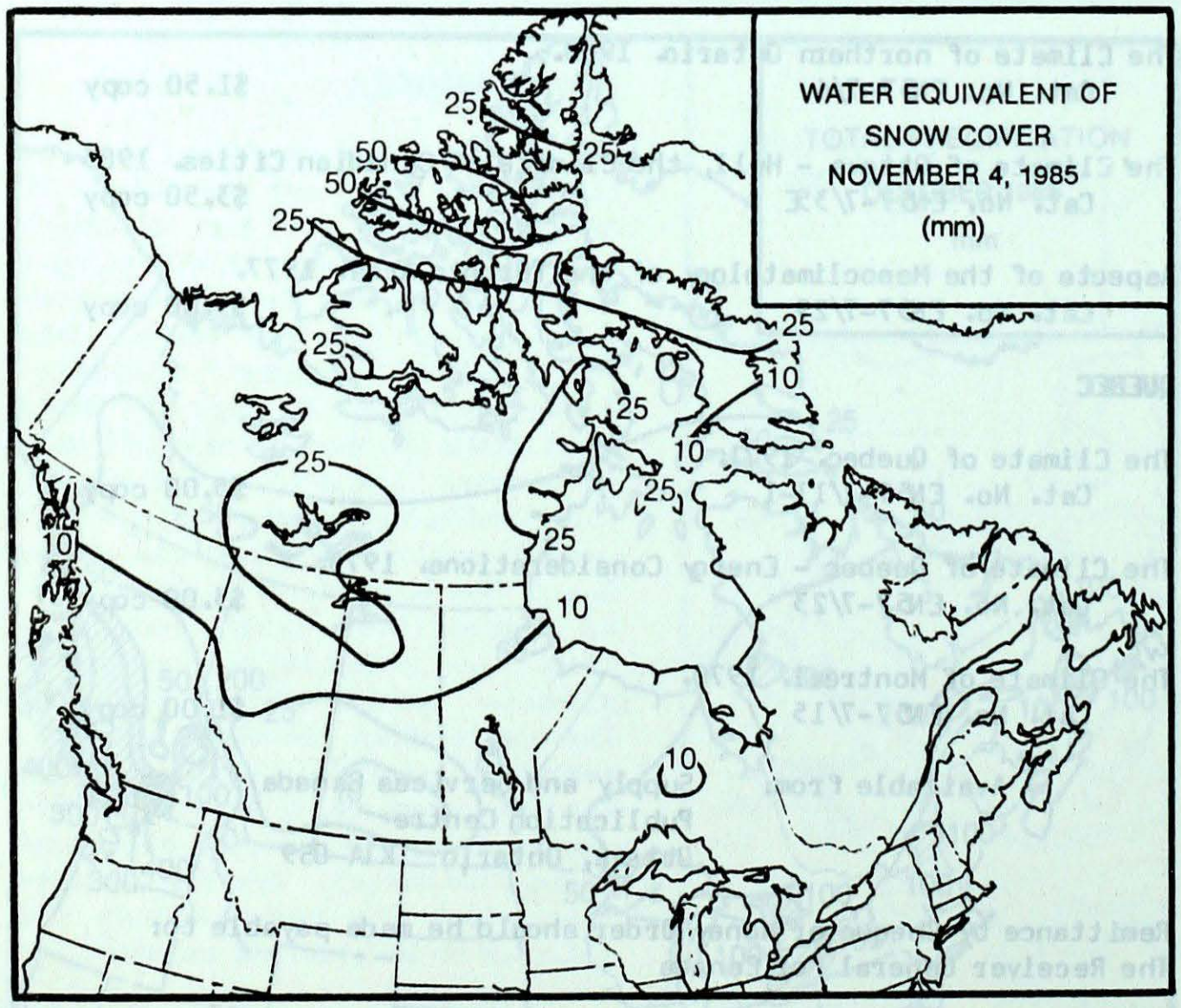
SNOWFALL

SNOWFALL





SEASONAL SNOWFALL TOTALS (CM)

TO END OF OCTOBER

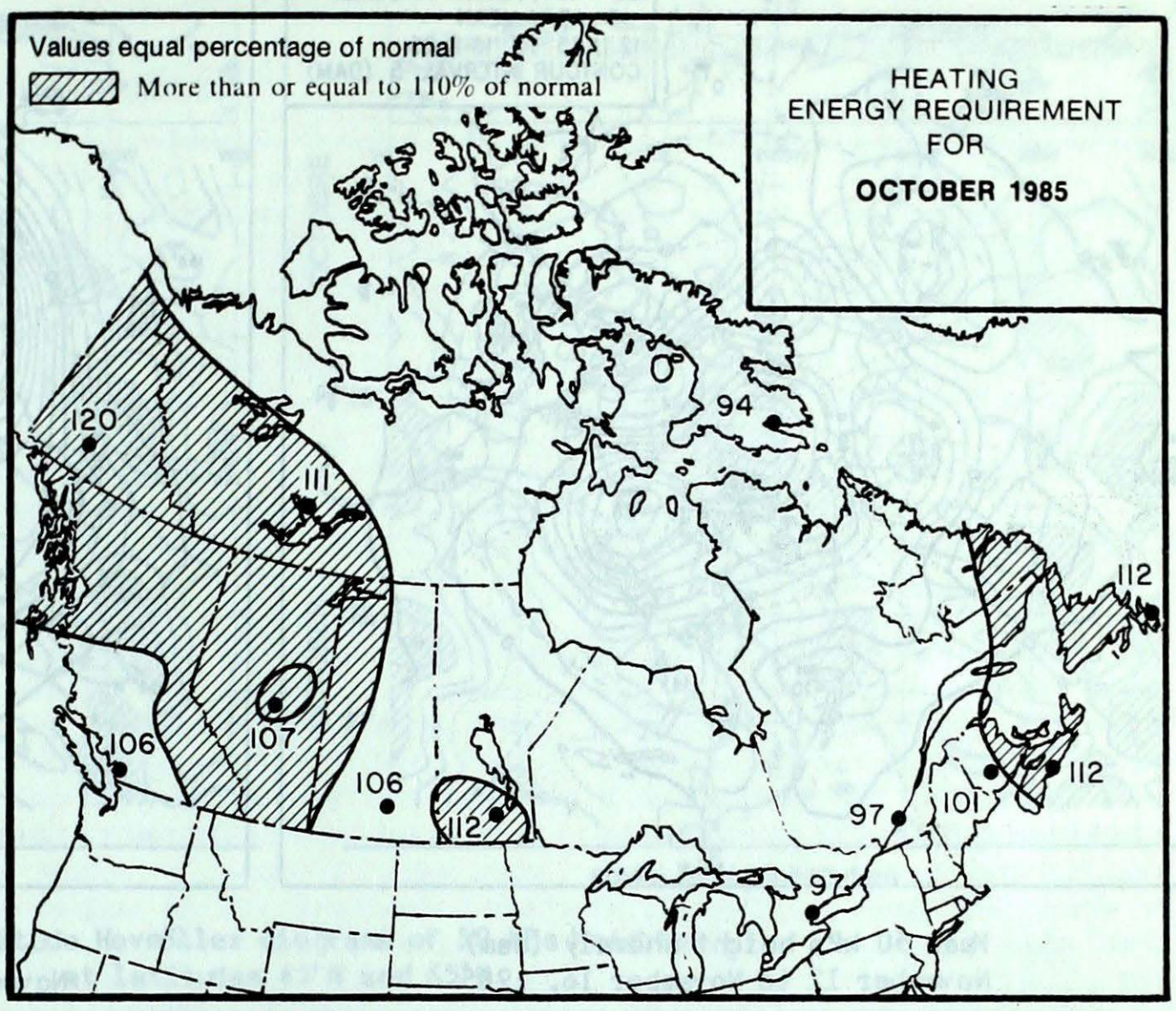
	1985	1984	NORMAL
YUKON TERRITORY			
Whitehorse	33.6	23.4	21.4
NORTHWEST TERRITORIES			
Frobisher Bay	45.2	65.8	54.3
Inuvik	24.7	37.6	53.0
Yellowknife	46.8	34.4	26.7
BRITISH COLUMBIA			
Kamloops	0.0	2.6	0.4
Penticton	0.0	3.0	0.2
Prince George	15.5	13.0	10.4
Vancouver	0.0	0.0	0.0
Victoria	0.0	0.0	0.0
ALBERTA			
Calgary	13.0	39.3	19.4
Edmonton Namao	10.3	42.4	9.7
Grande Prairie	7.7	33.9	16.3
SASKATCHEWAN			
Estevan	16.8	39.8	8.2
Regina	17.2	44.8	10.0
Saskatoon	6.2	55.1	10.4
MANITOBA			
Brandon	29.3	13.0	6.7
Churchill	36.1	30.2	35.7
The Pas	23.9	40.7	11.7
Winnipeg	14.2	19.6	5.4
ONTARIO			
Kapuskasing	12.2	33.4	23.5
London	0.0	0.0	1.9
Ottawa	0.0	0.0	2.7
Sudbury	0.0	0.0	6.5
Thunder Bay	11.6	7.8	3.3
Toronto	0.0	0.0	0.9
Windsor	0.0	0.0	0.1
QUÉBEC			
Baie Comeau	0.0	0.0	6.1
Montréal	0.0	0.0	1.7
Quebec	0.0	0.0	4.4
Sept-Iles	15.9	0.0	10.6
Sherbrooke	0.0	0.0	5.6
Val-d'Or	4.4	6.4	15.7
NEW BRUNSWICK			
Charlo	0.2	1.0	5.8
Fredericton	0.0	2.3	2.3
Moncton	0.0	3.0	3.1
NOVA SCOTIA			
Shearwater	0.0	0.0	1.7
Sydney	7.2	2.8	2.6
Yarmouth	0.0	0.0	1.9
PRINCE EDWARD ISLAND			
Charlottetown	8.8	0.2	2.6
NEWFOUNDLAND			
Gander	28.0	17.2	12.3
St. John's	11.0	2.6	4.4

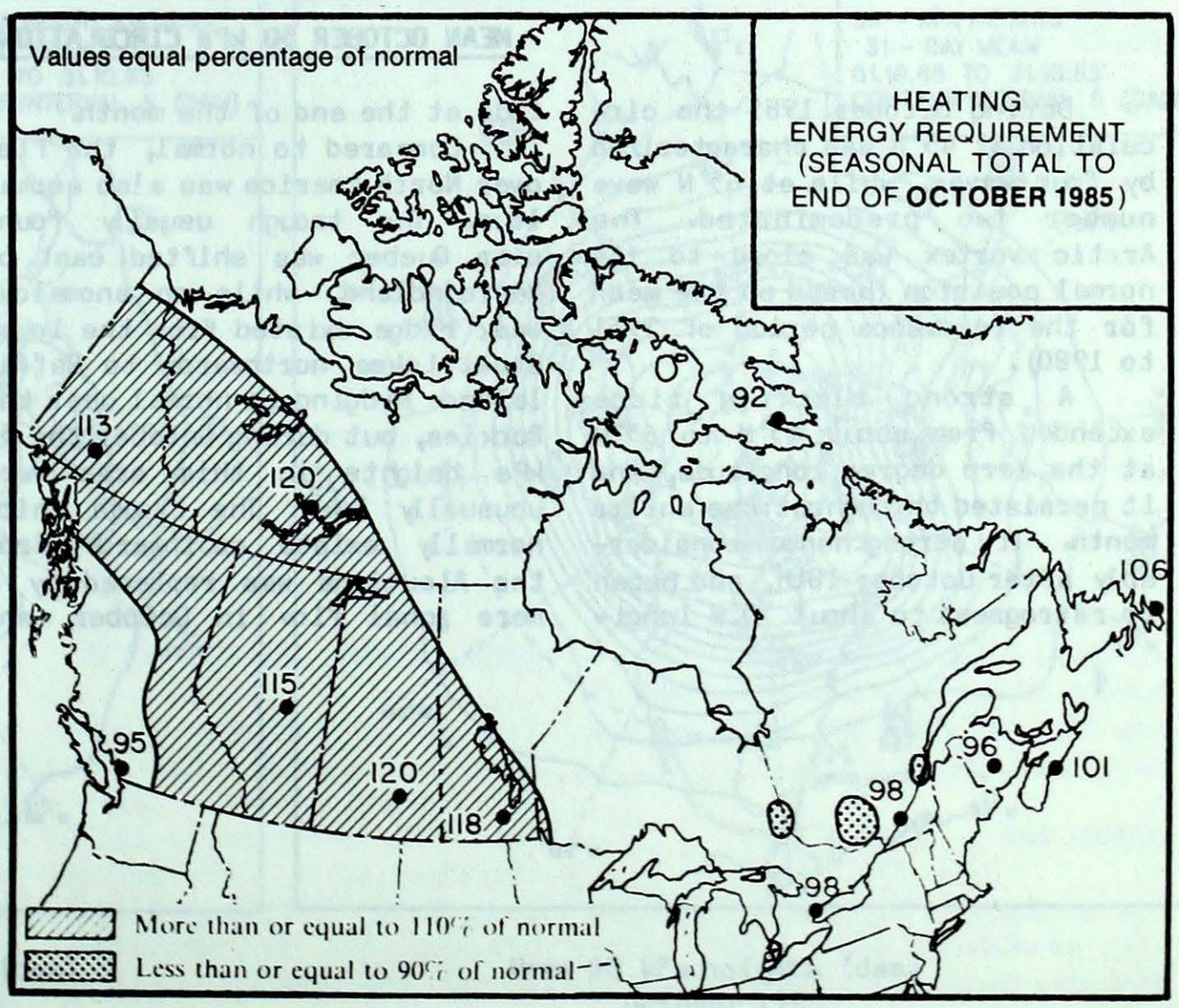
SEASONAL TOTAL OF HEATING

DEGREE-DAYS TO END OF OCTOBER

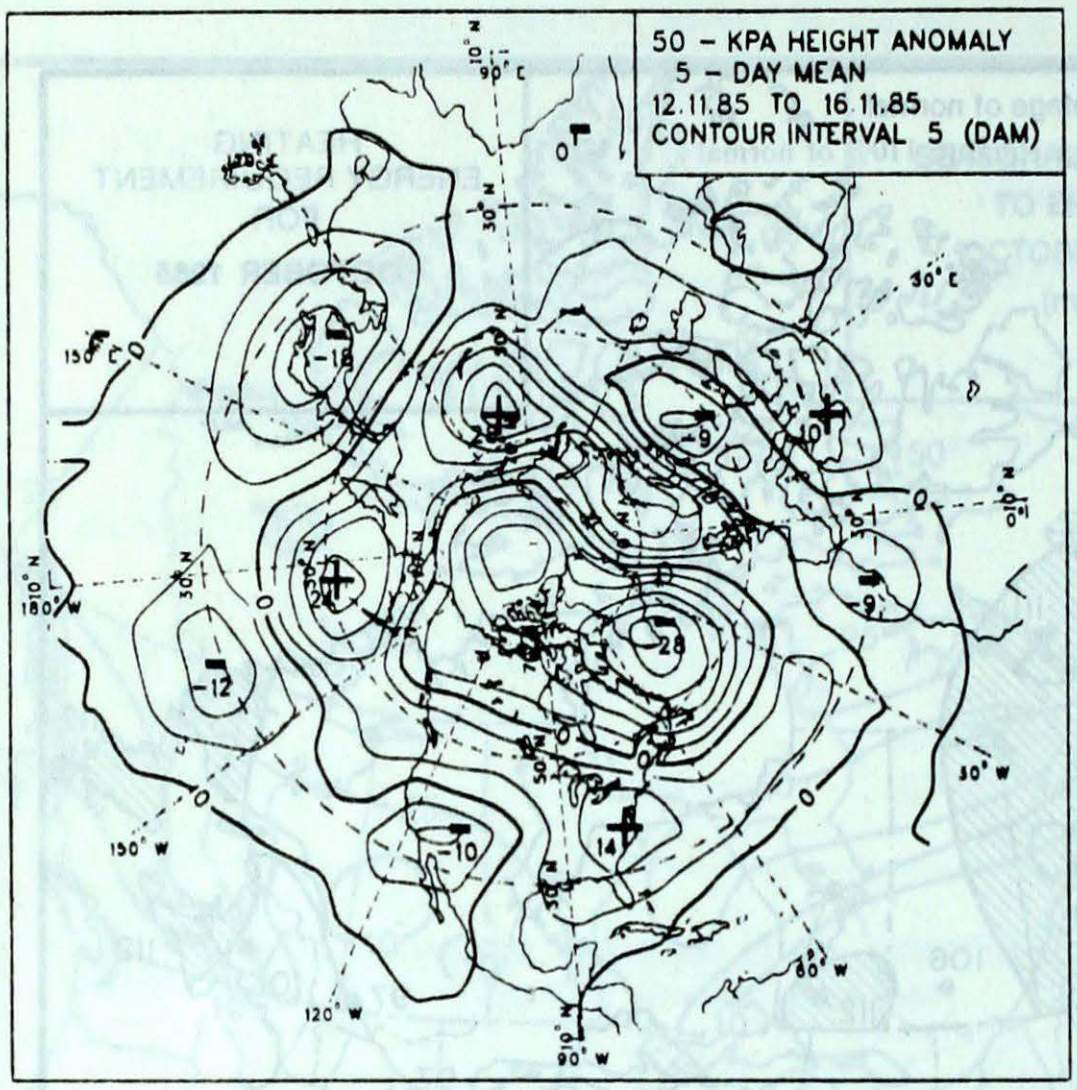
	1985	1984	NORMAL
BRITISH COLUMBIA			
Kamloops	473	533	436
Penticton	495	537	427
Prince George	966	1038	917
Vancouver	445	475	447
Victoria	485	564	501
YUKON TERRITORY			
Whitehorse	1333	1333	1178
NORTHWEST TERRITORIES			
Frobisher Bay	1744	1838	1896
Inuvik	1853	1701	1688
Yellowknife	1384	1195	1152
ALBERTA			
Calgary	928	897	798
Edmonton Mun	869	829	754
Grande Prairie	997	1075	869
SASKATCHEWAN			
Estevan	722	694	607
Regina	812	805	676
Saskatoon	813	810	698
MANITOBA			
Brandon	851	758	661
Churchill	1415	1301	1402
The Pas	934	826	806
Winnipeg	714	617	606
ONTARIO			
Kapuskasing	745	763	799
London	346	345	379
Ottawa	401	420	447
Sudbury	566	575	619
Thunder Bay	712	647	693
Toronto	367	343	375
Windsor	250	241	280
QUÉBEC			
Baie Comeau	801	865	849
Montréal	383	452	390
Quebec	502	542	558
Sept-Iles	852	877	910
Sherbrooke	561	653	649
Val-d'Or	409	757	780
NEW BRUNSWICK			
Charlo	621	633	605
Fredericton	512	518	532
Moncton	510	520	527
NOVA SCOTIA			
Halifax	427	430	424
Sydney	506	512	495
Yarmouth	502	483	490
PRINCE EDWARD ISLAND			
Charlottetown	474	499	488
NEWFOUNDLAND			
Gander	782	782	719
St. John's	755	658	715

ENERGY REQUIREMENTS

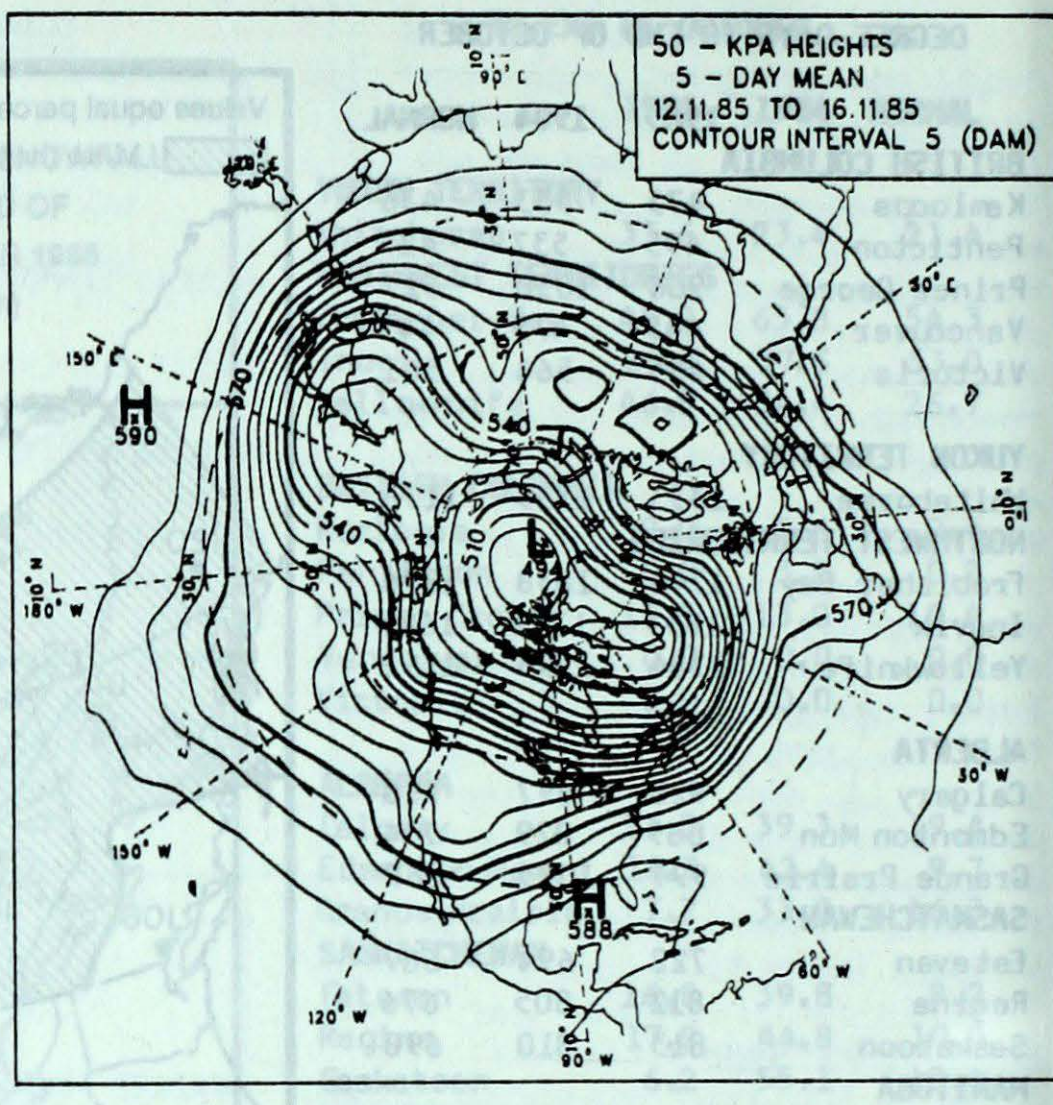




ATMOSPHERIC CIRCULATION



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



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

MEAN OCTOBER 50 kPa CIRCULATION

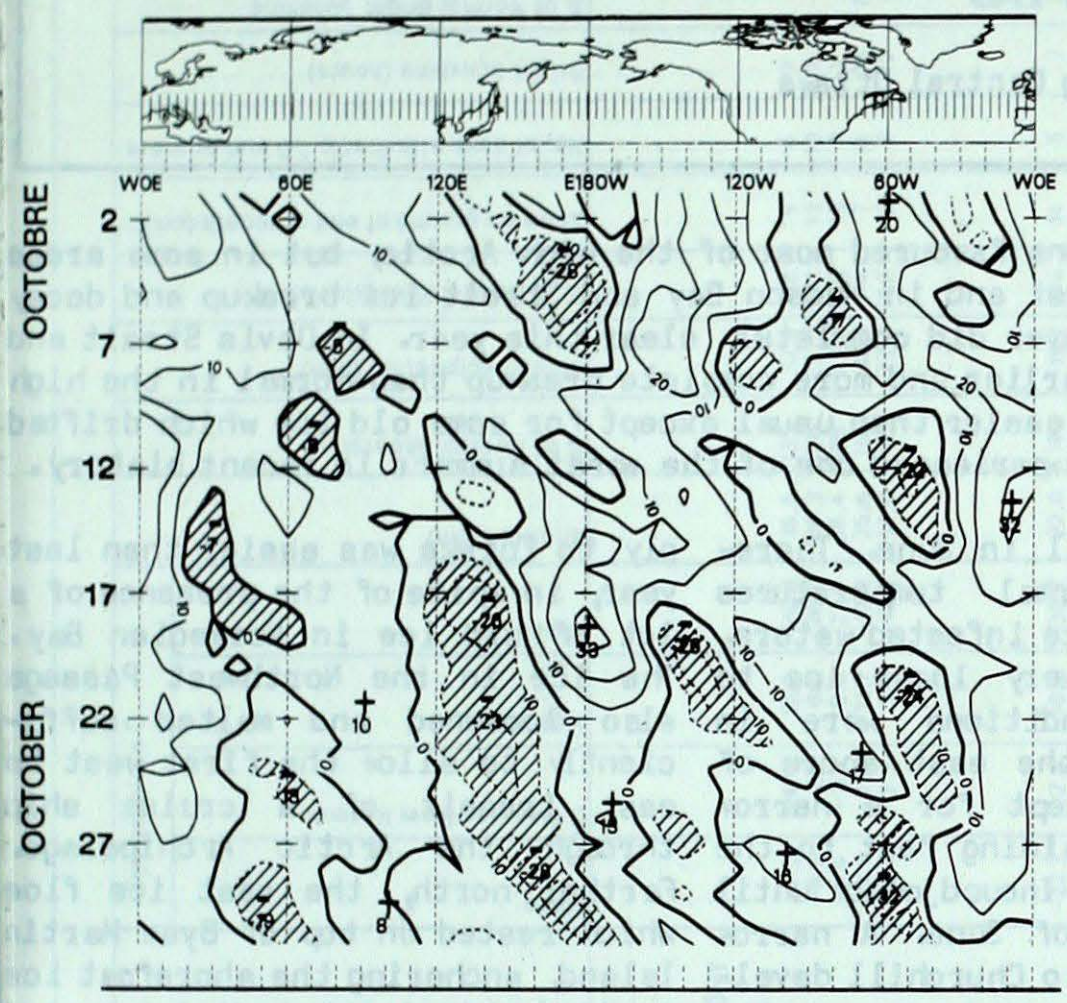
During October 1985 the circulation at 45°N was characterized by four waves, while at 65°N wave number two predominated. The Arctic vortex was close to its normal position (based on the mean for the reference period of 1951 to 1980).

A strong blocking ridge extended from about 45°N to 65°N at the zero degree longitude, and it persisted throughout the entire month. It strengthened considerably after October 10th, and began to retrogress to about 30°W longitude at the end of the month.

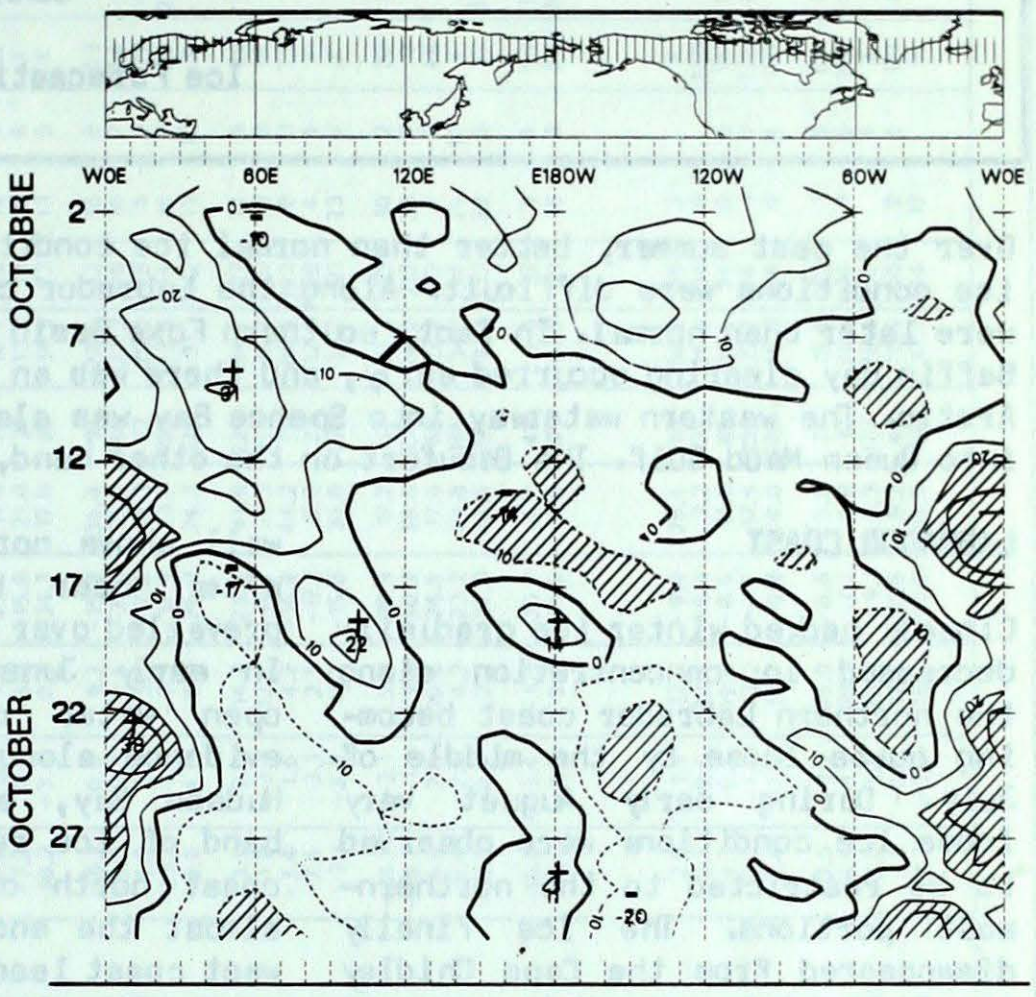
Compared to normal, the flow over North America was also anomalous. The trough usually found over Quebec was shifted east of Newfoundland, while an anomalous weak ridge existed from the lower Great Lakes northwards to Baffin Island. Ridging is normal over the Rockies, but during October the 50 kPa heights in this area were unusually low. The trough which normally exists southwards from the Aleutians was replaced by a more zonal flow in October, and heights were anomalously high in that region.

The lower heights over western Canada, and the tendency towards an anomalous trough in the region, resulted in cool temperatures with 200 to 300% of normal precipitation. In Ontario and Quebec, the weak anomalous ridge resulted in warmer than normal temperatures, and generally lower than normal precipitation (except for the lower Great Lakes region where precipitation was above normal).

ATMOSPHERIC CIRCULATION

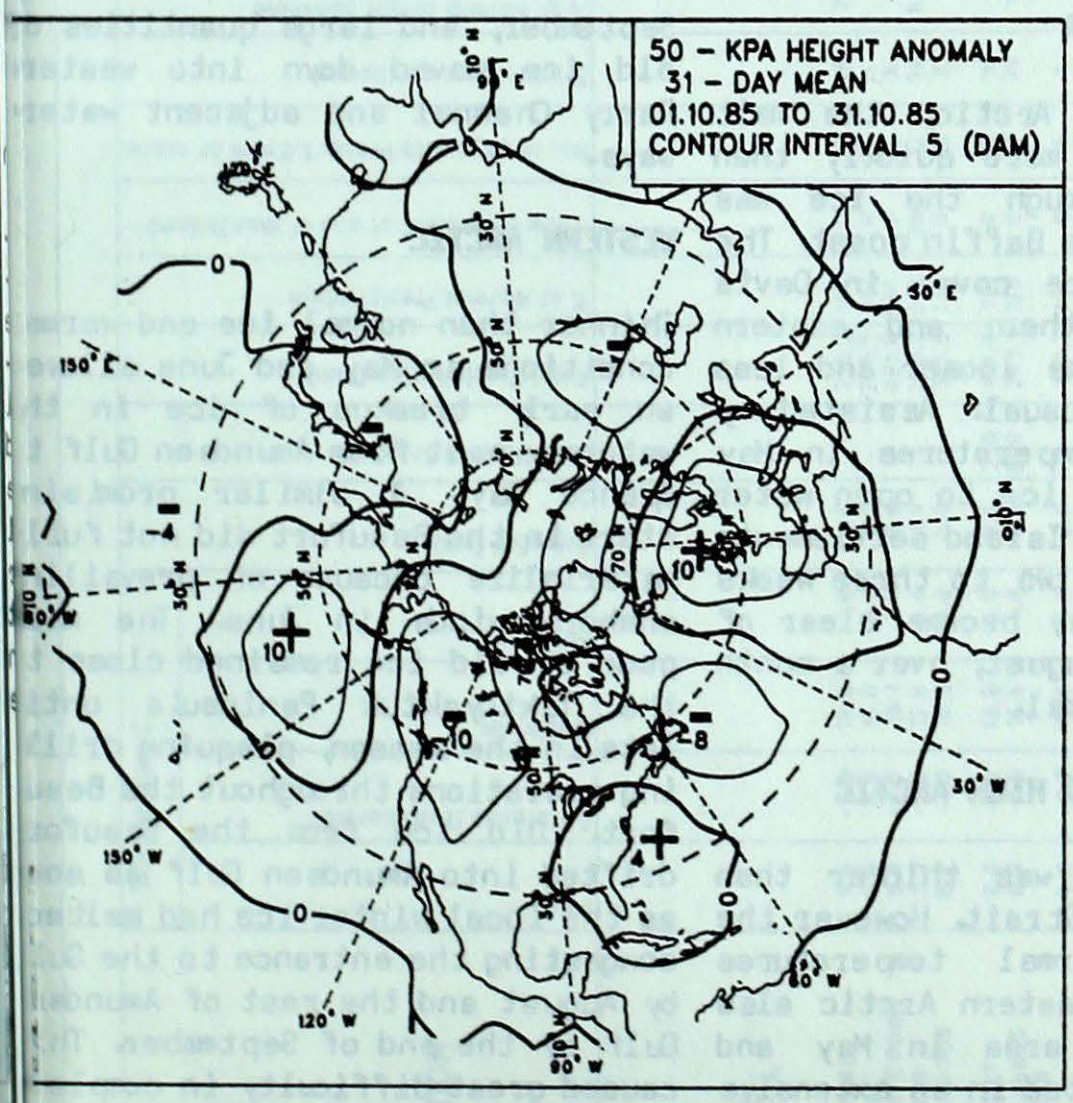


50kPa 45° N $\bar{z}$ = 560 dam

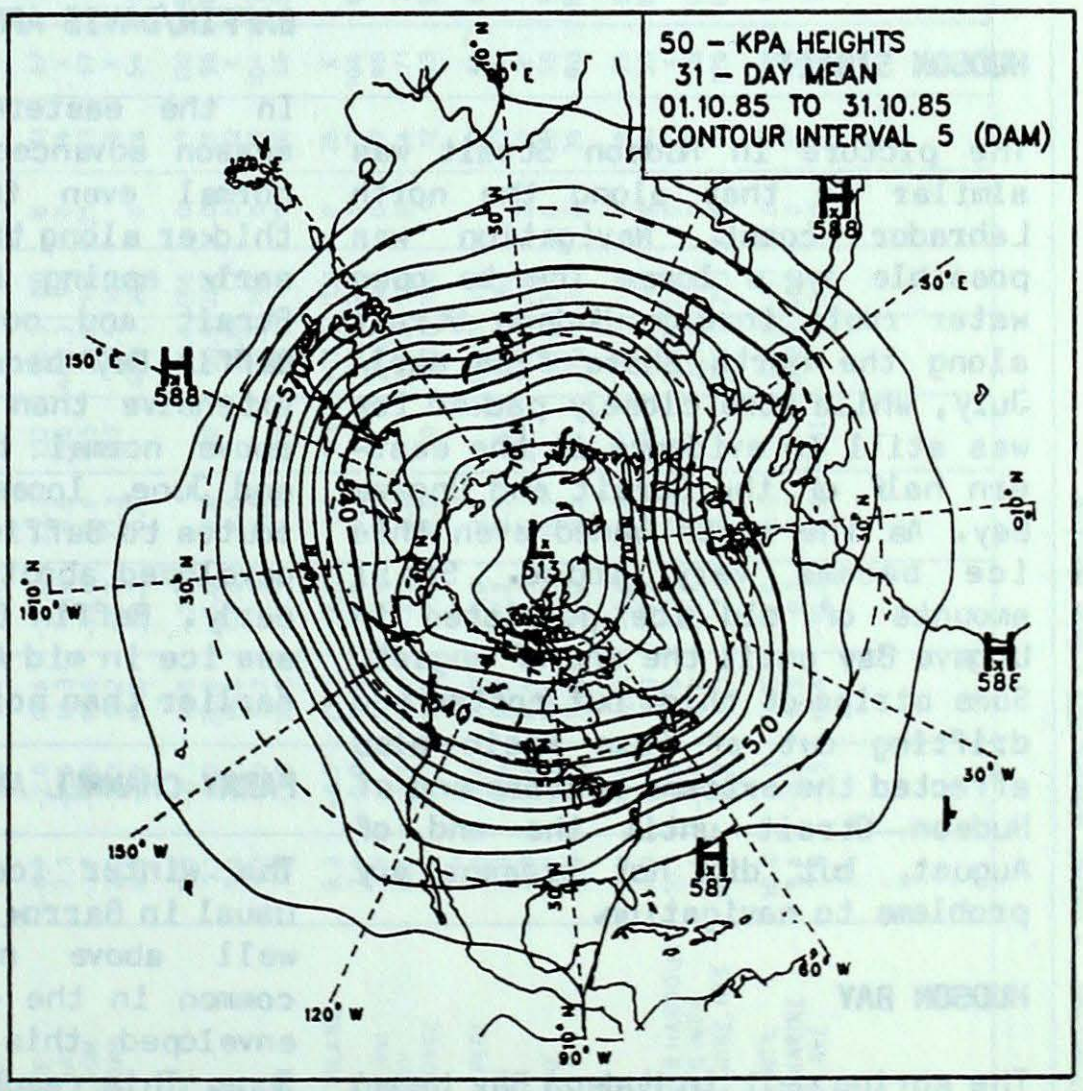


50kPa 45°N $\bar{z}$ = 560 dam

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



Mean 50 kPa height anomaly (dam)
October 1985



Mean 50 kPa heights (dam)
October 1985

FEATURE

ICE CONDITIONS IN CANADIAN WATERS SUMMER 1985

Ice Forecasting Central Ottawa

Over the past summer, better than normal ice conditions favoured most of the high Arctic, but in some areas ice conditions were difficult. Along the Labrador coast and in Hudson Bay and Strait ice breakup and decay were later than normal. In fact, southern Foxe Basin never did completely clear this year. In Davis Strait and Baffin Bay clearing occurred early, and there was an earlier and more complete breakup than normal in the high Arctic. The western waterway into Spence Bay was also easier than usual except for some old ice which drifted into Queen Maud Gulf. The Beaufort on the other hand, experienced one of the worst summers in recent history.

LABRADOR COAST

Closely packed winter ice gradually decreased in concentration along the northern Labrador coast becoming quite loose by the middle of July. During early August very loose ice conditions were observed to be restricted to the northernmost portions. The ice finally disappeared from the Cape Chidley area by mid August. This sequence of events was about two weeks later than normal, and it appears that the cause for the late clearing can be traced back to a colder than usual winter followed by a cooler than normal spring and summer. Small quantities of old ice also contributed to a slow final melt.

HUDSON STRAIT

The picture in Hudson Strait was similar to that along the north Labrador coast. Navigation was possible in a loose ice to open water route through Hudson Strait along the north shore from early July, while some closely packed ice was still in evidence in the eastern half of the Strait and Ungava Bay. As the month waned even this ice became very loose. Small amounts of old ice persisted in Ungava Bay until the end of August. Some strips of thick but rotten ice drifting out of Foxe Basin also affected the extreme western end of Hudson Strait until the end of August, but did not present any problems to navigation.

HUDSON BAY

The spring melt in Hudson Bay began with promise as above normal temperatures developed in May, becoming well above normal in June. Thereafter near normal temperatures prevailed over ice infested waters. In early June very loose ice to open water conditions were in evidence along the east shore of Hudson Bay, except for a narrow band of ice remaining fast to the coast north of Inoucdjouac until almost the end of June. A narrow west coast lead to Churchill developed early in June, by August the only remaining ice in Hudson Bay was rotting near the south coast east of Churchill. This band of ice gradually melted and diminished in size, finally disappearing at the end of the month. This pattern was about two weeks later than normal.

BAFFIN/DAVIS AREA

In the eastern Arctic, the melt season advanced more quickly than normal even though the ice was thicker along the Baffin coast. The early spring ice cover in Davis Strait and northern and eastern Baffin Bay became looser and less extensive than usual. Assisted by above normal temperatures in May and June, loose ice to open water routes to Baffin Island settlements developed about two to three weeks early. Baffin Bay became clear of sea ice in mid August, over a month earlier than normal.

PARRY CHANNEL AND HIGH ARCTIC

The winter ice was thicker than usual in Barrow Strait. However the well above normal temperatures common in the eastern Arctic also enveloped this area in May and June. This resulted in an extensive breakup of the shorefast ice through the high Arctic. The resupply to Eureka was easier than last year, in spite of the presence of a lot of old ice in Norwegian Bay. The ice in the Northwest Passage also loosened and melted sufficiently to allow the first west to east transit of a cruise ship through the Arctic Archipelago. Farther north, the vast ice floe which rested on top of Byam Martin Island, anchoring the shorefast ice in the high Arctic, disintegrated into pieces and drifted away in early August, allowing the ice blocking Byam Martin Channel to move south. This enabled crude oil from Cameron Island to be tankered out for the first time. All the ice bridges among the Queen Elizabeth Islands broke in early September, and large quantities of old ice moved down into western Parry Channel and adjacent waterways.

WESTERN ARCTIC

Thinner than normal ice and warmer conditions in May and June allowed an early breakup of ice in the waterway east from Amundsen Gulf to Spence Bay. A similar promising start in the Beaufort did not fully materialize because of prevailing onshore winds in June. The main pack of old ice remained close to the Tuktoyaktuk Peninsula until late in the season, plaquing drilling operations throughout the Beaufort. Old ice from the Beaufort drifted into Amundsen Gulf as soon as the local winter ice had melted, congesting the entrance to the Gulf by August and the rest of Amundsen Gulf by the end of September. This caused great difficulty in completing the western Arctic shipping season.

OCTOBER 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	9.6	-0.5	18.6	-1.0	0.0		256.2	167	0	23	96	70	259.2
ALERT BAY	9.9	0.6	15.0	-0.7	0.0		235.5	112	0	24	X		314.5
AMPHITRITE POINT	9.9	-0.7	16.1	2.0	0.0		481.8	134	0	25	X		254.1
BLUE RIVER	3.2	-2.3	12.8	-9.6	61.9		208.2	257	29	22	59	64	MSG
BULL HARBOUR	8.4	-1.0	15.3	-2.0	0.0		345.5	128	0	25	X		297.1
CAPE SCOTT	9.0	-1.2	13.8	3.0	0.5	250	417.4	118	0	25	X		MSG
CAPE ST.JAMES	8.9	-1.0	14.6	1.8	0.9	900	243.1	123	0	27	79	*	280.6
CASTLEGAR													
COMOX	9.0	-0.2	12.4	5.5	0.0		137.7	107	0	15	X		279.5
CRANBROOK	4.4	-1.5	15.5	-8.3	5.4	42	47.4	259	0	10	109	*	420.0
DEASE LAKE	-0.7	-2.0	10.6	-14.4	23.3	132	28.3	80	8	11	67	77	580.7
ETHELDA BAY	7.3	-1.5	14.3	-1.9	0.8	266	403.3	99	0	24	X		333.4
FORT NELSON	-1.7	-2.8	16.6	-22.0	25.6	135	28.8	118	21	13	67	*	608.9
FORT ST.JOHN	2.0	-2.3	15.2	-8.2	22.3	123	29.9	107		5	X		496.0
HOPE	9.2	-1.2	19.0	0.2	0.0		480.2	279	0	24	54	51	260.4
KAMLOOPS	8.3	-0.1	19.5	-2.5			28.4	186	0	7	118	86	300.4
KELOWNA	7.1	0.2	20.9	-4.0	0.8	160	50.9	267	0	15	96	63	
LANGARA	7.9	-1.1	19.6	-4.0	0.0		36.8	13	0	12	X		311.8
LYTTON	9.1	-1.0	19.2	-2.7	6.5		73.3	196	0	12	104	76	276.2
MACKENZIE	1.8	-1.8	13.8	-11.3	40.0	228	65.8	111	10	16	66	56	493.0
MCINNES ISLAND	8.8	-0.7	13.3	3.0	1.4	175	407.3	121	0	25	X		286.0
PENTICTON	7.9	-0.8	19.6	4.0	0.0		36.8	241	0	12	104	66	311.8
PORT ALBERNI	9.1	*	20.7	-6.4	0.0	*	259.7	146	0	17	98	*	274.5
PORT HARDY	8.0	-0.7	16.0	-3.0	0.0		307.8	125	0	24	71	72	308.1
PRINCE GEORGE	3.5	-1.3	14.5	-11.3	15.5	170	112.6	190	1	12	103	93	449.9
PRINCE RUPERT	7.0	-0.9	13.2	-1.0	2.6		420.0	114	0	27	45	69	
PRINCETON	6.0	-0.6	16.5	-7.2	9.5	351	37.0	162		11	111	*	MSG
QUESNEL	4.9	-0.8	15.4	-9.4	22.3	353	105.6	219	2	12	X		406.0
REVELSTOKE	5.7	-1.2	15.6	-3.8	18.2		168.8	201	0	23	50	55	380.1
SANDSPIT	7.9	-1.1	15.9	-1.0	0.5	*	275.6	141	0	25	80	88	316.2
SMITHERS	3.1	-1.6	12.6	-7.5	10.0	120	75.3	118	0	16	75	82	460.2
TERRACE	4.9	-1.5	14.0	-2.2	26.0	666	194.7	90	9	23	53	85	405.7
VANCOUVER HARBOUR	10.1	-0.6	16.5	2.1	0.0		330.1	207	0	21	X		246.5
VANCOUVER INT'L	9.6	-0.4	16.0	-0.5	0.0		201.6	176	0	22	108	89	260.1
VICTORIA GONZ. HTS	10.6	-0.2	18.1	3.1	0.0		135.3	213	0	15	126	86	228.2
VICTORIA INT'L	10.0	0.1	20.6	-0.4	0.0		126.9	161	0	17	118	81	247.1
VICTORIA MARINE	9.4	-0.5	15.9	0.7	0.0		248.9	188	0	22	X		265.7
WILLIAMS LAKE	3.6	-1.5	13.4	-10.0	28.6	381	94.8	312	10	13	108	79	439.8

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YUKON TERRITORY													
BURWASH	-7.2	-4.0	12.4	-26.8	19.6	135	12.6	68	9	4	X		782.8
DAWSON	-6.6	-1.2	8.9	-26.3	24.3	100	31.1	111	13	10	X		759.3
MAYO	-5.4	-3.1	8.8	-27.4	38.4	185	33.4	118	13	9	X		759.1
WATSON LAKE	-2.5	-2.4	11.7	-17.0	25.6	118	40.1	114	7	14	79	82	636.1
WHITEHORSE	-2.7	-3.3	9.5	-17.0	32.0	198	23.4	108	12	8	76	81	641.3
NORTHWEST TERRITORIES													
ALERT	-22.2	-2.5	-10.3	-30.7	22.0	141	15.7	116	14	5	2	23	1246.5
BAKER LAKE	-6.0	1.7	4.9	-20.2	24.8	106	27.7	90	10	8	48	66	743.9
CAMBRIDGE BAY	-11.6	0.1	1.0	-25.2	11.6	75	10.4	70	16	4	62	106	918.6
CAPE DYER	-7.2	0.5	3.3	-15.0	21.0	21	13.2	13	8	6	X		781.6
CAPE PARRY	-10.2	-3.4	0.9	-24.7	17.8	65	14.5	72	13	5	X		873.7
CLYDE	-6.1	0.8	6.7	-15.3	36.4	97	28.6	83	16	9	53	111	746.7
COPPERMINE	-8.8	-2.2	2.6	-27.1	35.0	166	22.3	96	10	7	44	95	831.0
CORAL HARBOUR	-4.9	2.9	3.2	-17.8	19.3	72	29.0	78	6	9	72	83	711.2
EUREKA	-23.1	-1.0	-7.3	-37.3	13.7	182	13.6	194	16	7	20	232	1272.6
FORT RELIANCE	-6.6	-4.8	8.9	-26.3	24.3	120	31.1	112	13	10	X		759.3
FORT SIMPSON	-3.9	-2.0	14.2	-23.4	41.8	225	54.7	227	27	9	69	80	679.2
FORT SMITH	-1.8	-2.1	12.4	-14.7	21.3	133	26.7	100	8	8	57	65	612.4
FROBISHER BAY	-3.4	1.6	4.2	-16.9	44.2	111	85.5	193	8	11	33	57	682.8
HALL BEACH	-7.4	3.1	2.5	-17.1	5.0	23	12.4	58	4	4	X		790.5
HAY RIVER	-2.1	-3.0	11.7	-15.8	31.8	168	37.2	121	23	9	X		621.5
INUVIK	-10.2	-2.1	5.8	-28.3	17.7	47	11.3	33	10	2	32	63	867.1
MOULD BAY	-18.7	-1.1	-3.8	-30.9	38.6	350	20.0	212	39	7	7	65	1139.0
NORMAN WELLS	-6.9	-2.3	10.6	-24.5	17.0	68	22.5	83	7	8	48	81	770.5
POND INLET	-9.4	2.6	4.2	-23.2	57.8	174	34.1	134	24	10	X		849.0
RESOLUTE	-15.5	-0.4	-2.2	-27.3	33.6	227	32.1	232	30	5	32	135	1038.3
SACHS HARBOUR	-15.0	-3.4	-1.3	-30.2	9.0	48	9.0	52	9	4	60	155	1023.4
YELLOWKNIFE	-3.4	-1.8	9.9	-19.6	41.0	177	41.9	121	18	9	58	103	661.7
ALBERTA													
BANFF	2.5	-1.9	12.5	-9.0	29.4	165	50.2	160	3		X		
BROOKS	5.7	-0.6	20.5	-9.0	2.2	32	26.8	156	0		130	*	
CALGARY INT'L	4.7	-0.8	19.0	-8.6	11.6	85	16.6	94	0	5	141	80	412.9
COLD LAKE	2.7	-1.8	17.2	-7.7	17.9	255	22.7	134	1	7	134	86	475.0
CORONATION	3.4	-1.4	18.7	-9.9	9.0	103	16.0	106	0	4	128	71	452.4
EDMONTON INT'L	3.5	-1.2	19.0	-8.6	5.0	74	18.8	122	1	5	131	80	450.4
EDMONTON MUNI.	4.6	-1.2	17.2	-7.7	5.8	77	28.9	174	1	5	146	90	415.2
EDMONTON NAMAO	3.6	-1.5	16.3	-9.1	8.3	107	28.4	156		6	X		450.6
EDSON	2.5	-0.6	17.4	-10.6	8.2	40	18.6	65	0	6	121	80	480.4
FORT CHIPEWYAN	-1.7	-2.7	16.5	-13.0	34.5	191	47.7	154	17		X		

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OCTOBER 1985

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FORT MCMURRAY	1.4	-1.9	15.7	-7.8	25.7	202	38.8	138	13	10	82	65	510.9
GRANDE PRAIRIE	2.7	-1.5	15.6	-9.5	2.3	19	34.8	130	0	9	106	*	475.9
HIGH LEVEL	-1.5	-2.8	15.4	-17.0	43.0	281	43.0	292	31	10	70	49	598.7
JASPER	2.7	-2.0	15.4	-11.4	30.6	566	52.6	180	14	10	95	*	474.6
LETHBRIDGE	6.2	-1.3	21.6	-10.5	18.4	157	23.8	133	0	3			360.6
MEDICINE HAT	6.5	-0.9	21.2	-8.3	9.1	113	23.0	141	0	4	169	97	354.5
PEACE RIVER	1.3	-2.2	16.0	-11.9	24.9	259	50.4	252	7	13	X		514.1
RED DEER	3.0	-1.6	19.5	-10.9	14.2	120	20.0	97		6	X		475.3
ROCKY MTN HOUSE	3.0	-1.9	18.7	-9.5	5.0	33	24.2	106		7	X		464.8
SLAVE LAKE	3.1	-1.0	14.6	-7.1	6.6	41	32.6	128	0	8	119	80	462.2
SUFFIELD	5.9	-1.1	20.0	-9.3	5.9	86	21.7	142	0	5	149	80	375.6
WHITECOURT	3.0	-0.4	15.0	-6.7	17.2	110	38.0	137		9	X		692.1
SASKATCHEWAN													
BROADVIEW	4.4	-0.2	20.0	-7.5	16.0	188	17.6	79	0	3	193	120	421.9
COLLINS BAY	-3.3	-2.4	11.6	-15.9	55.9	185	46.2	121	11	11	50	*	659.1
CREE LAKE	1.4	-0.2	12.7	-11.7	42.2	285	44.4	147	14	7	65	67	588.4
ESTEVAN	5.4	-1.0	21.5	-12.7	16.0	231	29.6	133	0	4	205	108	389.9
HUDSON BAY	3.3	-0.6	18.8	-10.7	13.6	134	19.4	72	0	7	140	*	457.3
KINDERSLEY	4.3	-1.0	21.8	-9.3			12.2	87	0	4	X		424.9
LA RONGE	1.4	-2.1	13.8	-11.2	18.3	186	33.9	113		4	X		515.4
MEADOW LAKE	2.3	-2.3	16.4	-12.6	8.8	101	32.0	181	0	6	127	*	485.7
MOOSE JAW	6.1	-0.3	23.0	-9.2	8.2	107	24.5	133	0	4	184	106	364.2
NIPAWIN	2.1	*	16.7	-9.6	14.4	*	16.6	*	0	6	134	93	491.6
NORTH BATTLEFORD	3.8	-1.1	18.2	-7.5	2.7	38	17.2	108	0	5	X		436.8
PRINCE ALBERT	2.9	-0.8	17.5	-9.9	10.0	107	17.5	81	0	6	122	83	469.3
REGINA	4.5	-0.7	21.9	-11.5	10.0	121	14.2	75	0	4	173	102	419.2
SASKATOON	4.5	-0.4	19.7	-7.5	3.0	32	5.8	33	0	2	X		417.7
SWIFT CURRENT	5.6	-0.2	20.0	-12.8	17.2	189	27.7	153	0	7	160	94	417.6
URANIUM CITY	-1.8	-2.4	11.5	-15.0	40.9	298	47.3	153	20	9	X		614.5
WYNYARD	4.3	-0.5	19.7	-7.0	2.4	21	7.8	31	0	3	149	100	425.3
YORKTON	4.1	-0.7	20.6	-8.4	3.0	40	5.8	25	0	2	180	114	431.1
MANITOBA													
BRANDON	4.0	-1.2	19.9	-15.0	10.3	158	15.2	70	0	4	X		436.1
CHURCHILL	-1.9	-0.4	13.1	-14.1	29.3	100	55.8	129	4	13	71	115	616.4
DAUPHIN	4.9	-0.6	20.2	-11.3	9.1	109	14.1	48	0	4	159	103	406.0
GILLAM	-0.6	-0.2	12.9	-15.5	23.0	109	31.1	95		7	X		581.7
GIMLI	4.8	-0.8	17.1	-9.3	29.4	397	46.2	121	0	6	143	99	410.2
ISLAND LAKE	3.6	0.4	14.9	-6.0	13.6	82	28.6	65	0	5	X		446.3
LYNN LAKE	1.8	1.8	13.8	-15.0	31.8	113	37.8	91	14	12	0		613.0
NORWAY HOUSE	3.0	*	15.6	-10.0	12.0	*	19.6	*	0	4	0	*	467.0
PILOT MOUND	4.2	-1.3	20.2	-11.8	25.3	294	54.1	184	0	8	X		426.8

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PORTAGE LA PRAIRIE	5.7	-0.8	20.3	-8.3	22.6	358	45.5	147	0	6	X		380.6
THE PAS	2.7	-0.9	15.5	-8.4	23.9	234	27.1	81	0	3	140	116	473.0
THOMPSON	0.1	-0.1	15.5	-20.0	24.2	87	26.6	54	1	5	73	92	557.5
WINNIPEG INT'L	5.1	-1.0	19.2	-7.8	14.2	273	29.2	94	0	5	168	110	401.3
ONTARIO													
ATIKOKAN	5.3	0.3	18.4	-8.4	13.2	110	42.6	68	0	9	147	131	399.0
BIG TROUT LAKE	2.2	0.4	14.4	-9.4	28.3	*	37.1	66	0	9	88	*	490.6
EARLTON	5.8	0.4	18.0	-7.2			47.7	68	0	12	X		380.5
GERALDTON	4.4	0.5	18.4	9.1	4.6	42	66.0	102	0	12	X		421.9
GORE BAY	8.5	0.2	17.3	-2.5			81.0	119	0	11	X		293.0
HAMILTON RBG	10.9	0.3	22.1	-1.5	0.0		68.4	99	0	9	155	*	
HAMILTON	10.1	0.7	20.9	-1.1	0.0		115.2	187	0	11	X		244.1
KAPUSKASING	5.5	1.1	16.4	-6.4	7.2	34	60.2	77	0	11	X		388.7
KENORA	5.3	-0.3	16.5	-5.6	23.4	316	39.7	97	0	9	X		393.3
KINGSTON	9.7	0.3	17.8	-4.6	0.0		84.6	109	0	10	142	93	257.2
LANSDOWNE HOUSE	3.1	0.3	16.1	-4.8	27.4	88	47.4	73	0	8	X		456.5
LONDON	10.0	0.6	21.4	-2.1	0.0		134.0	182	0	12	139	98	248.8
MOOSONEE	4.8	0.7	16.6	-6.7	8.6	59	76.6	103	0	13	91	103	411.4
MOUNT FOREST	8.1	0.0	17.3	-3.6	0.0		89.0	110	0	13			308.4
MUSKOKA	7.7	0.2	18.0	-6.6	0.0		149.0	158	0	16	X		319.5
NORTH BAY	6.8	0.4	17.3	-5.8	0.0		82.6	94	0	11	142	119	348.9
OTTAWA INT'L	8.7	0.6	20.4	-4.5	0.0		92.8	136	0	9			288.7
PETAWAWA	7.1	0.0	13.2	-6.9	0.0		51.8	77	0	7	X		339.0
PETERBOROUGH	8.1	0.2	18.0	-6.5	0.0		82.1	137	0	13	X		306.2
PICKLE LAKE	3.1	0.4	15.9	-7.0	33.4	159	45.8	72	0	7	X		464.1
RED LAKE	4.3	-0.2	16.9	-5.2	30.6	280	45.0	89	0	9	121	*	425.7
ST. CATHARINES	10.9	0.0	22.4	-3.3	0.0		106.2	161	0	10	X		221.8
SARNIA	10.8	0.3	20.5	-0.3	0.0		100.5	167	0	10	153	105	225.7
SAULT STE. MARIE	7.7	0.1	17.6	-4.9			83.7	112	0	15	132	111	320.9
SIMCOE	10.2	0.3	20.3	-1.7	0.0		116.4	137	0	11	X		243.7
SIOUX LOOKOUT	4.5	-0.2	16.4	-4.5	34.7	242	56.8	87	0	12	X		415.0
SUDBURY	6.9	0.6	16.1	-3.9			66.7	89	0	8	165	135	
THUNDER BAY	5.7	0.0	18.7	-5.5	2.4	72	63.0	114	0	8	157	122	381.1
TIMMINS	5.8	1.0	16.3	-8.3	1.7	13	50.8	74	0	11	X		394.8
TORONTO	11.4	0.4	19.4	0.9	0.0		61.4	100	0	10	146	*	205.5
TORONTO INT'L	9.4	0.1	20.8	-3.2	0.0		52.3	84	0	12	X		265.4
TORONTO ISLAND	11.0	0.9	18.9	2.1	0.0		73.3	129	0	9			216.2
TRENTON	9.2	0.0	19.0	-4.7	0.0		80.0	114	0	11	X		273.9
WATERLOO-WELL	8.6	-0.2	20.7	-4.6	0.0		84.8	129	0	13	X		291.5
WAWA	5.4	*	14.8	-7.5	1.0	*	117.5	*	0	14		*	410.4
WIARTON	9.0	0.0	18.9	-3.0			134.8	163	0	12	139	104	276.1
WINDSOR	11.9	0.8	23.7	2.2	0.0		104.9	183	0	9	X		189.5

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QUEBEC													
BAGOTVILLE	5.5	0.2	19.0	-6.6	3.3	28	62.1	86	0	10	X		476.9
BAIE COMEAU	4.5	0.2	15.6	-5.4			97.9	109	0	12	141	*	417.6
BLANC SABLON	2.4	-1.5	13.6	-9.6	5.8	64	64.2	69	0	13	117	*	471.1
CHIBOUGAMAU	3.5	0.9	15.3	-8.5	17.5	75	83.1	96	3	16	88	123	450.9
GASPE	5.4	-0.4	18.7	-5.2	5.0	100	61.0	66	0	10	138	*	391.9
INUKJUAK	1.8	2.2	10.1	-8.5	16.2	73	49.0	106	5	13	2	3	504.0
KUUJJUAQ	0.1	1.0	10.6	-11.6	4.8	17	48.8	100		9	48	98	552.2
KUUJJUARAPIK	3.5	1.5	14.6	-3.4	42.4	155	114.9	156	8	16	50	107	448.8
LA GRANDE RIVIERE	1.8	*	14.4	-8.9	32.5	*	94.2	*	4	16	79	*	472.6
MANIWAKI	7.1	0.6	19.3	-5.0			77.6	107	0	9	142	117	338.2
MATAGAMI	4.2	1.2	16.6	-7.5	10.2	59	85.6	138	0	13	96	102	429.1
MONT JOLI	6.0	0.3	17.6	-3.7	0.8	10	56.2	74	0	11	146	125	373.4
MONTREAL INT'L	9.0	0.3	19.8	-5.2			84.8	112	0	13	164	120	279.6
MONTREAL M INT'L	7.7	*	19.2	-5.1		*	86.5	*	0	10	168	*	320.3
NATASHQUAN	3.6	-0.5	14.2	-9.7	5.2	133	72.4	66	0	9	130	100	447.2
NITCHEQUON	0.7	0.9	12.0	-10.8	46.3	119	83.1	99	8	19	65	118	537.4
QUEBEC	7.2	0.6	18.7	-4.0			87.5	96	0	12	150	128	333.9
ROBERVAL	6.4	1.2	19.5	-5.5			51.3	80	0	7	134	*	358.4
SCHEFFERVILLE	-0.9	0.5	10.8	-15.4	49.3	109	69.3	91	2	17	58	*	596.7
SEPT-ILES	3.4	-0.2	13.6	-9.3	15.9	150	108.4	112		14			451.0
SHERBROOKE	7.1	0.5	22.2	-7.4			112.0	128	0	13	135	*	320.6
STE AGATHE DES MONTS	6.4	1.0	18.4	-5.1			99.2	112	0	11	147	115	361.3
ST-HUBERT	8.6	0.2	19.6	-4.7	0.0		102.2	132	0	13	0		291.5
VAL D'OR	4.2	-0.4	17.8	-7.6	4.4	30	55.8	67	0	11	129	144	409.1
NEW BRUNSWICK													
CHARLO	5.7	-0.1	17.3	-5.5	0.2	3	46.1	56	0	8	165	128	380.9
CHATHAM	6.5	-0.6	19.3	-7.1	0.2	6	42.0	43	0	7	165	116	357.7
FREDERICTON	7.4	-0.1	21.0	-6.7			65.9	67	0	7	158	*	328.8
MONCTON	7.3	-0.3	22.0	-8.0			60.4	61	0	7	164	115	333.7
SAINT JOHN	7.8	0.2	20.4	-5.3			97.4	76	0	9	168	119	317.0

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NOVA SCOTIA													
GREENWOOD	8.5	-0.1	25.5	4.6			60.9	62	0	8	X		293.8
HALIFAX INT'L	8.1	-0.5	20.5	-3.4			64.9	48	0	6	0		304.9
SABLE ISLAND	11.0	-0.5	19.8	2.1			77.4	66	0	16	134	111	216.6
SHEARWATER	9.1	-0.4	19.5	-1.8			55.2	45	0	6	150	95	275.4
SYDNEY	7.5	-0.9	21.2	-0.6	7.2	276	96.8	78		13	123	93	326.1
TRURO	6.8	-1.0	21.2	-4.2			62.8	56	0	8	120	93	346.5
YARMOUTH	9.6	0.1	23.8	-3.0			74.6	64	0	9	173	115	261.7
PRINCE EDWARD ISLAND													
CHARLOTTETOWN	7.7	-0.4	20.4	-2.0	8.8	338	86.9	81	0	11	X		319.9
SUMMERSIDE	8.3	-0.3	21.3	-1.8	0.4	19	68.3	72	0	12	125	94	301.5
NEWFOUNDLAND													
ARGENTIA	7.4	-1.0	16.7	-0.6			73.4	81	0	10	X		328.3
BATTLE HARBOUR	2.7	-1.5	12.8	-5.2	4.2	113	68.6	88	3	14	X		474.9
BONAVISTA	6.4	-0.8	15.9	-1.1	14.3	841			0	16	X		358.2
BURGEO	5.8	-1.3	17.3	-3.2	1.0	62	79.6	55	0	13	112	97	376.6
CARTWRIGHT	2.6	-0.5	12.3	-3.9	35.5	295	80.7	112	6	13	88	98	478.0
CHURCHILL FALLS	-0.5	-0.4	14.0	-12.4	50.3	92	90.4	104	20	19	57	85	568.5
COMFORT COVE	4.7	-1.3	16.4	-5.0	18.0	141	74.0	66		19	X		408.4
DANIEL'S HARBOUR	4.3	-1.6	15.5	-6.2	10.0	217	104.4	115	1	16	79	94	447.6
DEER LAKE	4.5	-0.8	16.0	-5.7	5.6	76	62.5	59	0	14	X		418.3
GANDER INT'L	4.5	-1.5	16.9	-4.5	28.0	229	72.3	69	1	18	103	93	418.6
GOOSE	1.8	-0.9	14.3	-10.8	22.4	90	61.2	79	1	10	84	89	501.3
PORT-AUX-BASQUES	6.1	-0.9	15.8	-1.4	6.0	187	103.2	77	0	13	95	*	370.5
ST ANTHONY	2.0	-1.6	11.6	-5.2	20.2	103	90.2	105		15	X		460.6
ST JOHN'S	5.8	-1.1	17.9	-2.3	11.0	250	85.9	59		16	106	96	378.1
ST LAWRENCE	6.1	-1.3	16.4	-4.5			110.5	81	0	11	X		
STEPHENVILLE	5.9	-1.1	17.4	-3.2	9.8	272	120.2	107		16	71	77	368.2
WABUSH LAKE	0.6	1.3	12.4	-13.2	39.0	77	69.7	82	5	9	69	104	539.3

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

AGROCLIMATOLOGICAL STATIONS

OCTOBER 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	9.5	-1.4	19.0	2.0	0.0	393.8	224	0	24	81	139.8	2055.0
KAMLOOPS												
SIDNEY												
SUMMERLAND	8.3	-0.7	19.0	-2.0	0.0	30.8	175	0	7	125	106.5	2165.0
ALBERTA												
BEAVERLODGE	2.0	-2.4	16.0	-9.0	7.5	44.1	154	0	10	97	14.0	1183.8
ELLERSLIE	3.4	-1.2	17.5	-8.5	7.1	17.9	106	2	4	139	25.4	1224.5
FORT VERMILLION												
LACOMBE	3.4	-1.3	19.0	-9.0	5.0	13.8	78	0	4	143	27.6	1376.6
LETHBRIDGE												
VAUXHALL												
VEGREVILLE	2.8	-1.3	16.5	-10.5	8.5	27.7	178	0	3		21.3	1194.9
SASKATCHEWAN												
INDIAN HEAD	4.2	-1.1	20.5	-8.0	7.2	12.6	51	0	3		43.0	1507.0
MELFORT	3.6	-0.6	18.0	-7.5	6.0	14.8	56	0	5	121		1224.5
REGINA	3.3	-1.2	22.0	-12.5	5.2	14.8	80	0	4		0.0	1333.8
SASKATOON	4.5	-0.7	20.0	-9.5	1.9	5.4	31	0	3	150	42.0	1438.5
SCOTT	3.4	-0.8	19.5	-9.0	0.7	3.8	28	0	2	151	25.3	1298.8
SWIFT CURRENT SOUTH	4.9	-1.0	20.0	-13.0	11.9	21.4	132	0	5	141	57.9	1582.2
MANITOBA												
BRANDON	4.5	-1.1	20.5	-14.0	9.5	13.7	59	0	4	164	44.7	1537.0
GLENLEA	4.0	-1.8	19.0	-10.0	18.2	45.2	120	0	8	165	38.3	1630.4
MORDEN	6.0	-1.0	20.0	-10.0	26.2	39.2	124	0	4	173	72.0	1748.5
ONTARIO												
DELHI	10.3	0.4	22.0	-3.5	0.0	107.2	143	0	12	146	166.7	2252.1
ELORA	8.6	0.1	19.4	-3.6	0.0	72.2	109	0	18		118.0	1886.3
GUELPH	8.8	-0.4	20.6	-5.5	0.0	71.9	98	0	14		126.9	1993.4
HARROW	12.1	0.8	22.0	1.0	0.0	92.8	166	0	10	138	225.3	2573.1
KAPUSKASING												
MERIVALE												
OTTAWA	9.3	0.8	20.0	-3.5	0.0	81.3	119	0	12	149	142.1	2109.5
SMITHFIELD								0				
VINELAND STATION	11.1	0.1	21.5	-1.5	0.0	103.2	176	0	10	151	191.9	2321.6
WOODSLEE												
QUEBEC												
LA POCATIERE	7.4	0.5	18.0	-9.0	0.0	51.6	72	0	7	168	93.8	1637.4
L'ASSUMPTION	8.6	0.6	19.5	-5.5	0.0	97.2	122	0	11	146	124.7	1926.1
LENNOXVILLE												
NORMANDIN	4.7	0.1	18.0	-9.5	0.6	52.0	87	0	10	116	38.2	1244.4
ST. AUGUSTIN												
STE CLOTHILDE	9.0	0.7	19.5	-5.0	0.0	101.2	121	0	12	158	134.7	2021.6
NEW BRUNSWICK												
FREDERICTON												
NOVA SCOTIA												
KENTVILLE	9.3	0.2	24.0	-3.0	0.0	55.8	55	0	9	141	145.2	1849.3
NAPPAN	8.3	0.0	22.0	-5.0	0.0	71.5	71	0	8	140	116.0	1662.5
PRINCE EDWARD ISLAND												
CHARLOTTETOWN												
NEWFOUNDLAND												
ST. JOHN'S WEST	6.0	-1.1	17.5	-3.0	6.0	84.6	58	0	15	106	64.0	1153.0

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