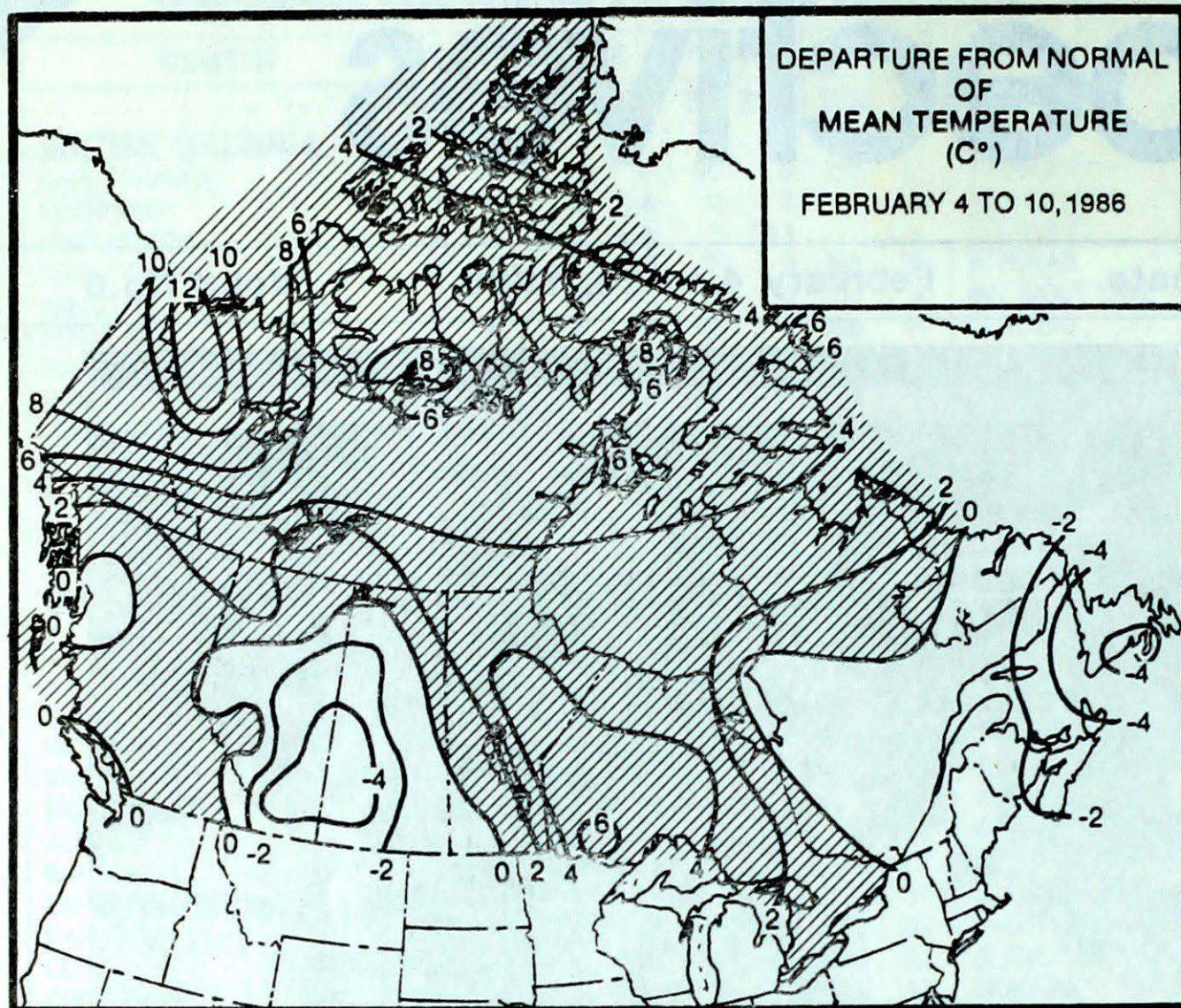


A view of the mountainous snow covered terrain of British Columbia taken by the NOAA 9 meteorological satellite on February 6, 1986. For more detail see page 3.

- **Winter delivers a double blow to Ontario**
- **Ideal weather for the Quebec Winter Carnival**
- **Fog blankets the Eastern Prairies**



# TEMPERATURE



## ACROSS THE COUNTRY...

### Yukon and Northwest Territories

Conditions in the high Arctic were generally clear and cold. Minimum temperatures registered in the minus thirties and forties, and periods of blowing snow were encountered. A blizzard in the Frobisher District gradually moved across Hudson Bay and encompassed the Keewatin District. In the Yukon, it was sunny and relatively mild. Old Crow recorded three record daily high temperatures this past week, the warmest being 5.6°C.

### British Columbia

The weather was relatively pleasant and dry. Sunshine was plentiful along the coast, but many interior valleys were plagued by fog and low cloud, which disrupted air travel. Terrace received more than twice their normal sunshine. Temperatures, for the most part, were near seasonal values. In the north, temperatures averaged well above normal, and some freezing precipitation was reported. A sunny weekend at Fort Nelson made for a successful run of the annual Dog Sled Championships. Several highways were temporarily closed due to avalanche control.

### Prairie Provinces

Extensive fog formed in the eastern half of the prairies, as a mild airmass moved across cold snow covered terrain. Periods of freezing drizzle and rain caused slick road conditions. On February 4 and 5, maximum temperatures managed to climb above the freezing mark at several locations in Saskatchewan and Manitoba, breaking daily temperature records. A more normal winter weather regime returned to Alberta by mid-week, as a clear and cold airmass gradually penetrated southeastwards to encompass all of the prairies by the weekend. As a result, road weight restrictions were lifted in southern Alberta. An avalanche hazard still remains high in the Alberta Rockies.

## WEEKLY TEMPERATURE EXTREME (C)

### MAXIMUM

### MINIMUM

BRITISH COLUMBIA	MCINNES ISLAND	12	PUNTZI MOUNTAIN	-26
YUKON TERRITORY	BURWASH	5	OGILVIE	-43
NORTHWEST TERRITORIES	CAPE DORSET A	-1	FROBISHER BAY	-43
ALBERTA	LETHBRIDGE	6	FORT CHIPEWYAN	-36
SASKATCHEWAN	ROCKGLEN	3	CREE LAKE	-39
MANITOBA	DAUPHIN	1	CHURCHILL	-37
ONTARIO	WINDSOR	2	NAGAGAMI	-35
QUEBEC	MANIWAKI	0	KUUJUAQ	-41
NEW BRUNSWICK	ST STEPHEN	0	ST STEPHEN	-26
NOVA SCOTIA	SHELBURNE	2	TRURO	-22
PRINCE EDWARD ISLAND	SUMMERSIDE	-2	CHARLOTTETOWN	-19
NEWFOUNDLAND	ARGENTIA	3	WABUSH LAKE	-35

## ACROSS THE NATION

WARMEST MEAN TEMPERATURE	6	CAPE ST. JAMES BC
COOLEST MEAN TEMPERATURE	-36	EUREKA NWT



**Ontario**

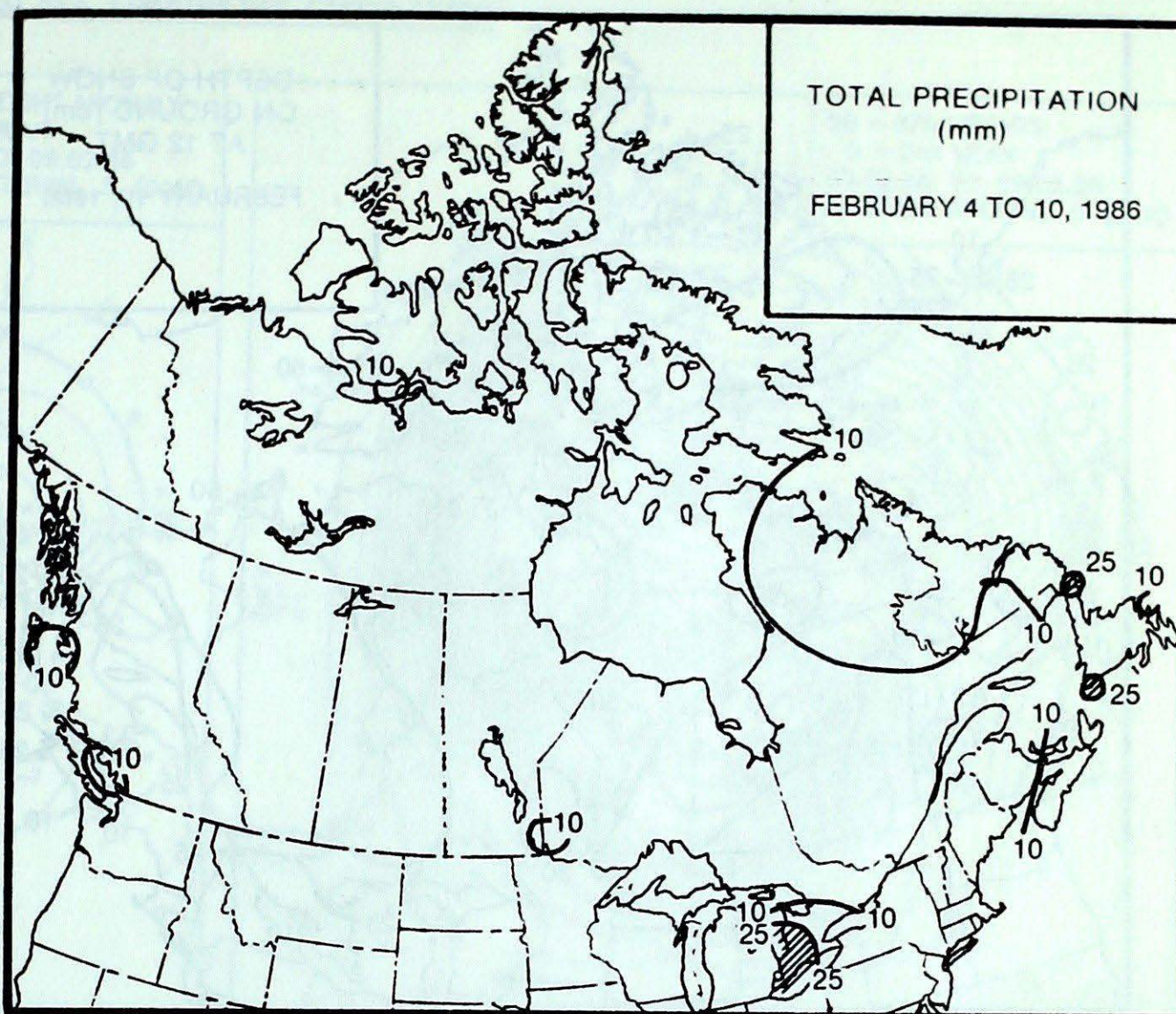
An area of freezing rain moved across southern Ontario on February 4, leaving a treacherous coating of ice before finally changing to rain. Only extreme southern communities were spared. Windsor received more than 20 mm of rain. In the north, a cold area of high pressure kept snowfalls to a minimum. On February 7, a fierce snowstorm moved up the Ohio Valley, and dumped 15 to 20 centimetres of snow on southern Ontario. Winds gusting to 80 km/h caused blowing snow and whiteouts, causing chaos on the highways. A 50 car pile-up occurred on highway 401 west of Toronto. The west end of Lake Ontario was hardest hit; easterly winds picked up additional moisture, while blowing across the open water of the lake.

**Quebec**

The weather was seasonably cold and sunny, perfect conditions for the Quebec Winter Carnival, which started on February 6. Cold air flooded the province around mid-week, but temperatures slowly recovered over the weekend. Snowfalls were surprisingly light across the south. In the north, where minimum temperatures plunged to the minus forties, it snowed almost everyday, and falls of 20 cm were common place.

**Atlantic**

In the Maritimes, the week was predominantly sunny and cold. On February 5, a storm gave 10 to 20 centimetres of snow and a mixture of rain and freezing rain to some coastal districts. Strong winds and blowing snow caused poor visibilities. In Nova Scotia transportation was disrupted again, and some rural schools were closed. The same storm dumped more than 30 cm of snow on parts of Newfoundland. At St. John's a thunderstorm accompanied the snow on February 6, very unusual at this time of year. Cold temperatures early in the week gradually moderated to more seasonal values. In Labrador an on-shore circulation brought periods of snow, with local accumulations of 5 to 10 centimetres.

**HEAVIEST WEEKLY PRECIPITATION (mm)**

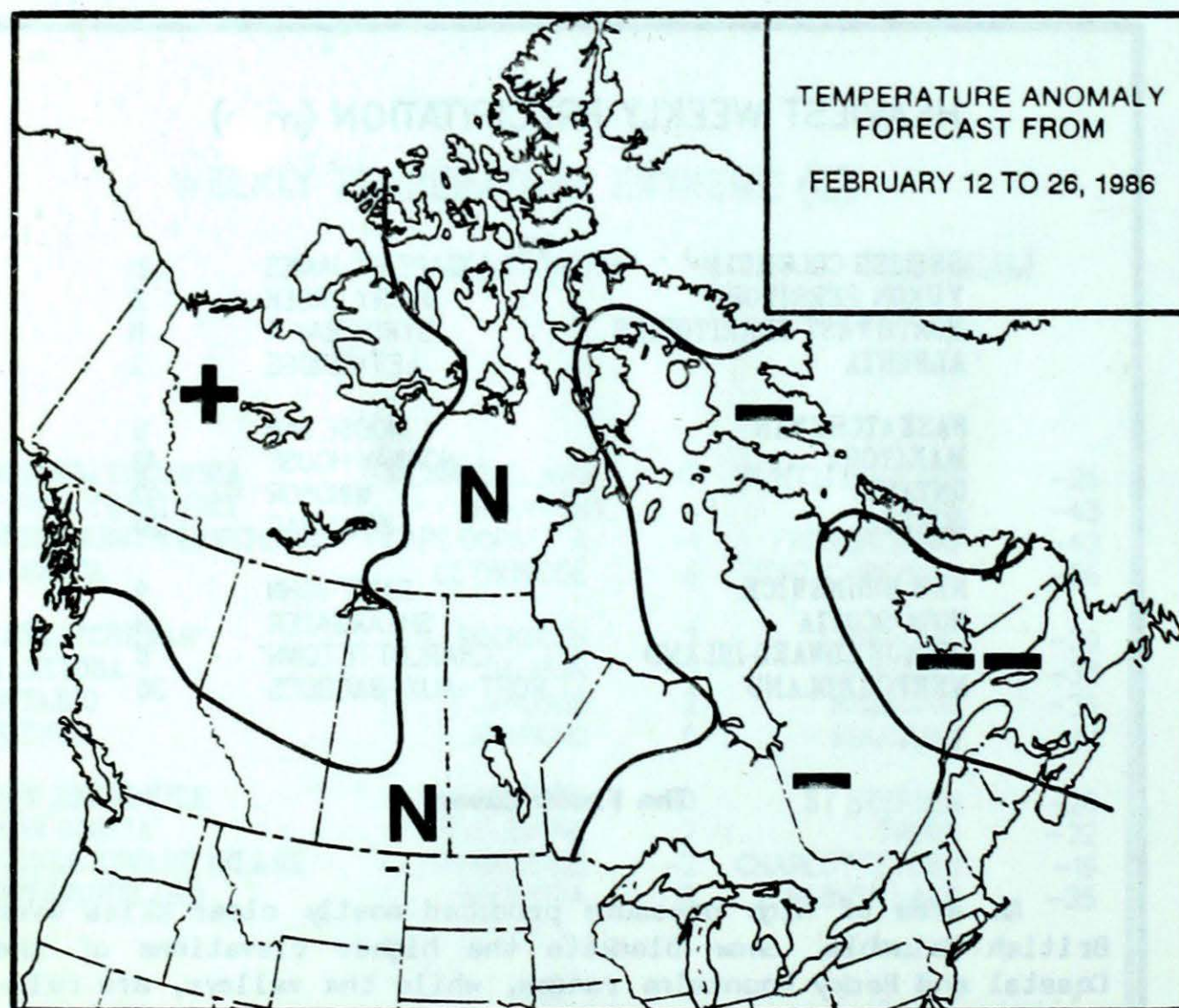
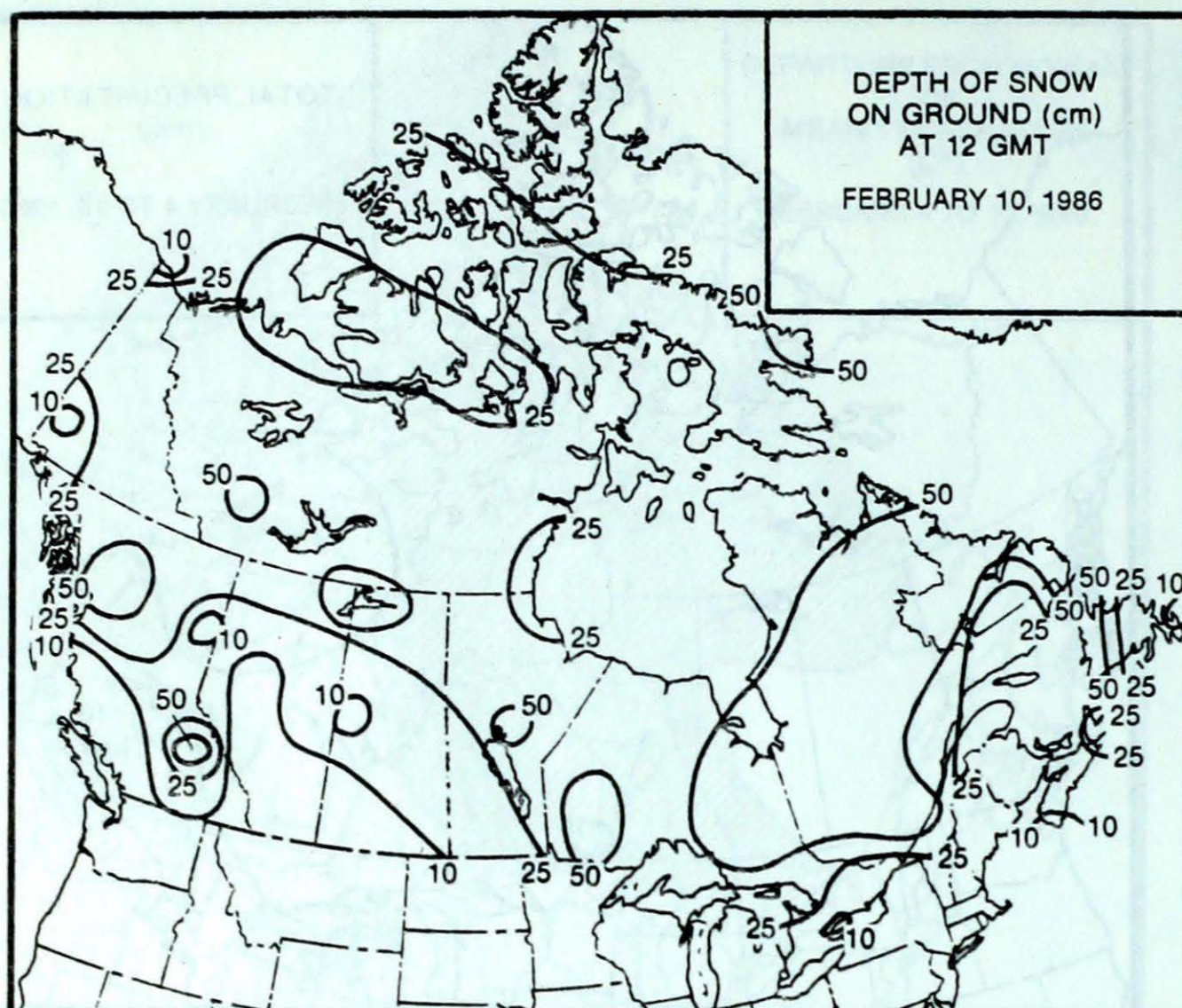
BRITISH COLUMBIA	CAPE ST. JAMES	21
YUKON TERRITORY	DRURY CREEK	6
NORTHWEST TERRITORIES	BYRON BAY A	11
ALBERTA	LETHBRIDGE	3
SASKATCHEWAN	MOOSE JAW	6
MANITOBA	NORWAY HOUSE	13
ONTARIO	WINDSOR	42
QUEBEC	KOUJOUAQ	20
NEW BRUNSWICK	SAINT JOHN	9
NOVA SCOTIA	SHEARWATER	18
PRINCE EDWARD ISLAND	CHARLOTTETOWN	8
NEWFOUNDLAND	PORT-AUX-BASQUES	36

**The Front Cover**

An area of high pressure produced mostly clear skies over British Columbia. Snow blankets the higher elevations of the Coastal and Rocky Mountains ranges, while the valleys, are relatively snow free, and show up very distinctly. Between the mountain ranges, low stratus and fog covers a large portion of the southern interior plateau. In the state of Washington, the Columbia River (A) snakes its way southward from the Kootenays. Further downstream the back waters behind the Coulee Dam are easily discernable.



# FORECAST



## Temperature Anomaly Forecast

- ++ much above normal
- + above normal
- N normal
- below normal
- much below normal

This forecast is prepared by searching historical weather maps to find cases similar to the present. The historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

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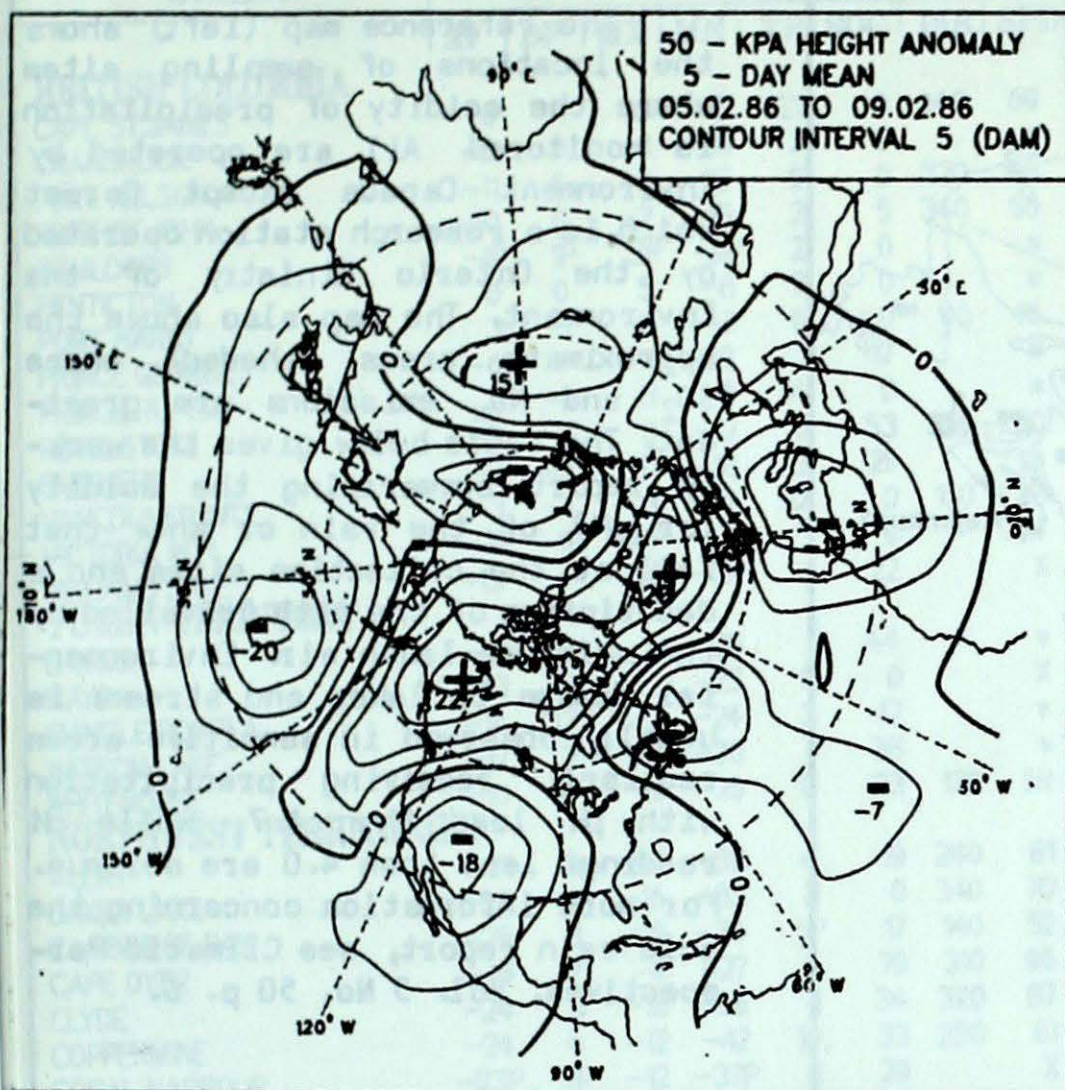
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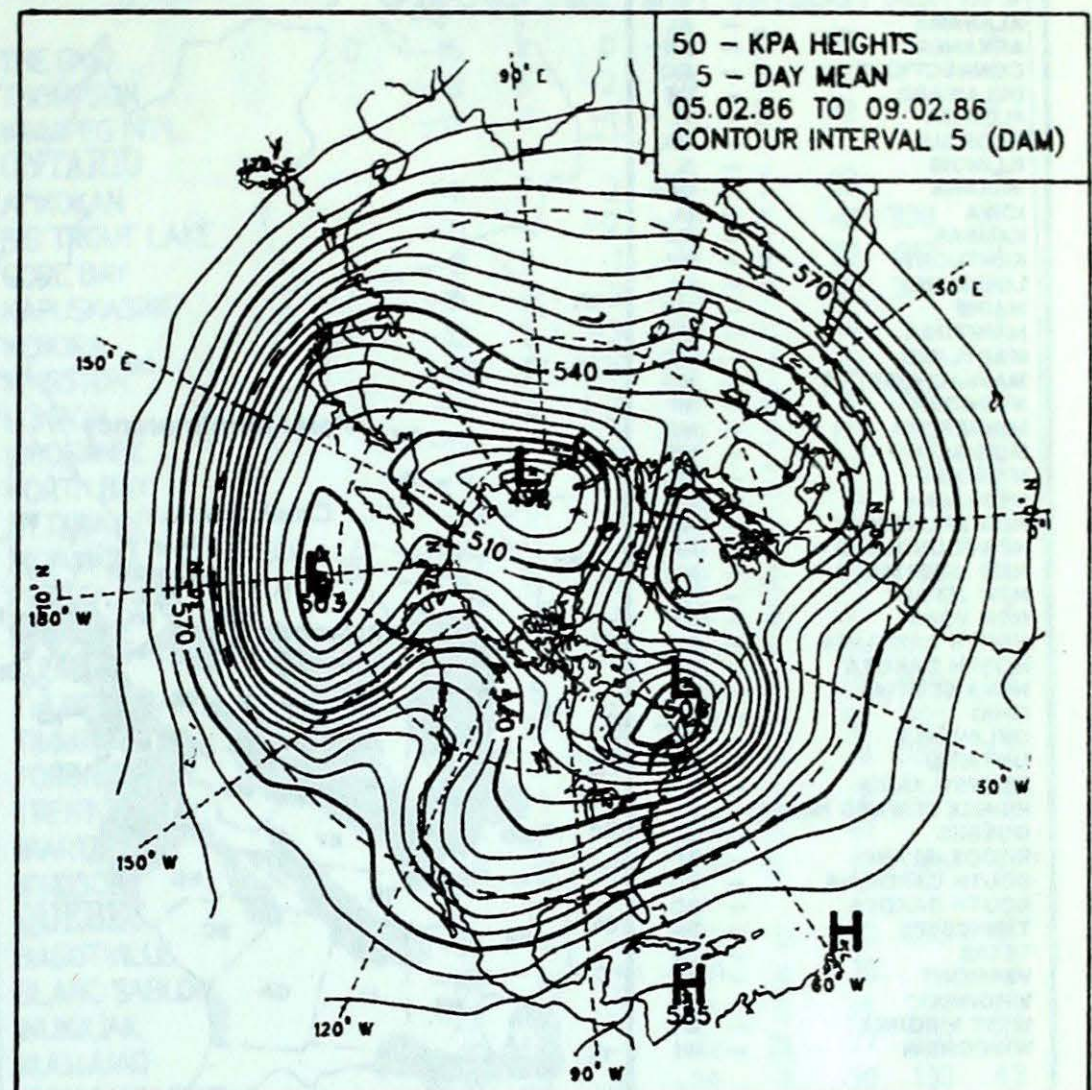
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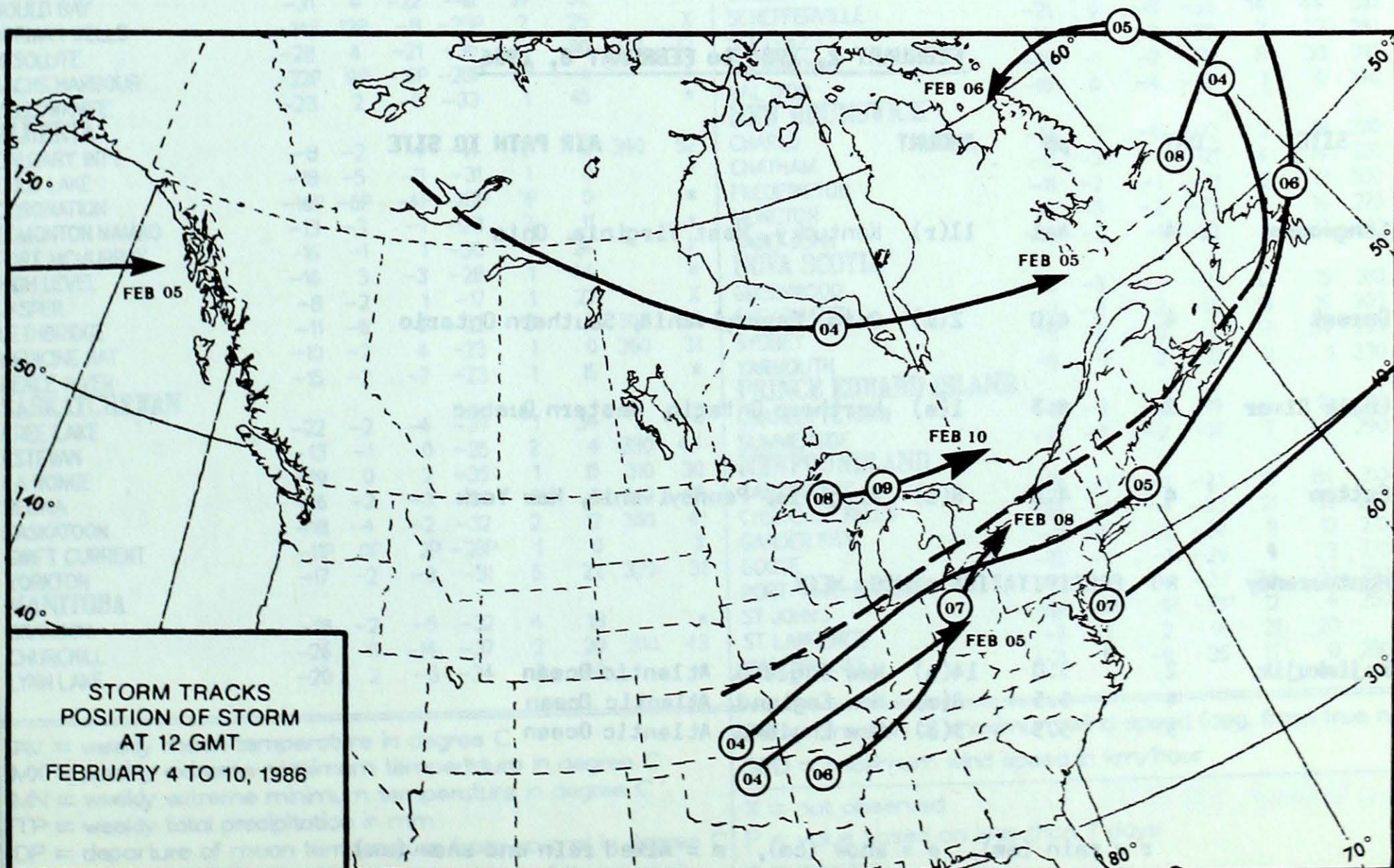
## 50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)  
February 5 to February 9, 1986

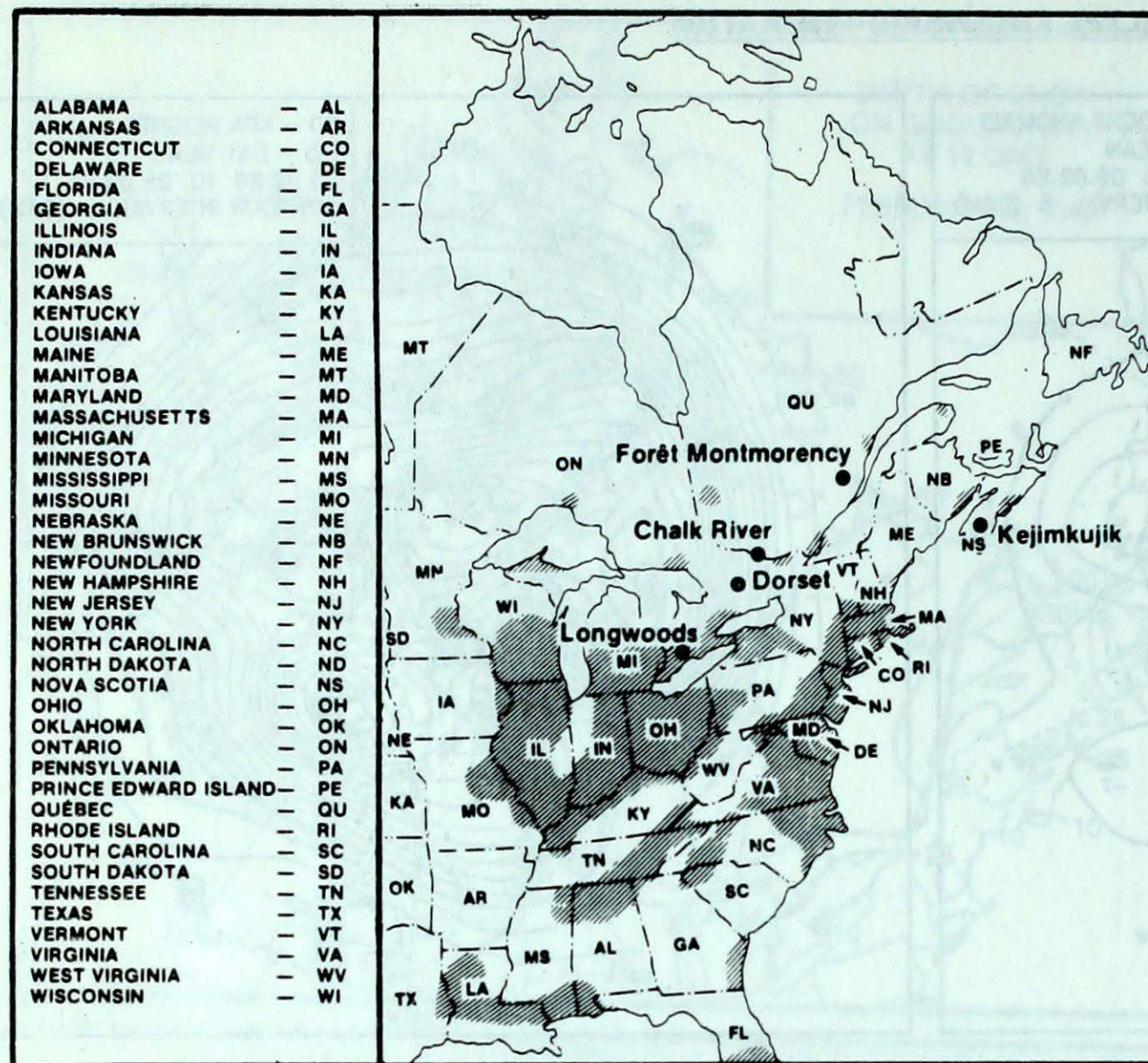


MEAN 50 KPa HEIGHTS (dam)  
February 5 to February 9, 1986





# ACID RAIN



## ACID RAIN REPORT

The reference map (left) shows the locations of sampling sites where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset which is a research station operated by the Ontario Ministry of the Environment. The map also shows the approximate areas (shaded) where  $\text{SO}_2$  and  $\text{NO}_x$  emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the rain or snow that fell at the collection sites and a description of the path travelled by the moisture laden air. Environmental damage to lakes and streams is usually observed in sensitive areas regularly receiving precipitation with pH less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

**FEBRUARY 2, 1986 to FEBRUARY 8, 1986**

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	4	4.1	11(r)	Kentucky, West Virginia, Ohio
Dorset	4	4.0	2(m)	Ohio, Pennsylvania, Southern Ontario
Chalk River	2	4.3	1(s)	Northern Ontario, Western Quebec
Sutton	4	4.8	8(s)	Virginia, Pennsylvania, New York
Montmorency	NO PRECIPITATION THIS WEEK			
Kejimikujik	2	5.0	14(s)	New England, Atlantic Ocean
	4	5.5	8(m)	New England, Atlantic Ocean
	5	5.5	3(s)	New England, Atlantic Ocean

r = rain (mm), s = snow (cm), m = mixed rain and snow (mm).



## TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT FEBRUARY 11, 1986

STATION	TEMPERATURE				PRECIP.		WIND MX		STATION	TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	MX	MN	TP	SOG	DIR	SPD		AV	DP	MX	MN	TP	SOG	DIR	SPD
<b>BRITISH COLUMBIA</b>									THE PAS	-16	*	0	-28	2	18		*
CAPE ST. JAMES	6	1	10	2	21	0	040	69	THOMPSON	-18	6	-2	-28	3	36		*
CRANBROOK	-6	0	1	-16	2	9		*	WINNIPEG INT'L	-15	1	-1	-30	3	12		*
FORT NELSON	-11	6	4	-22	1P	0	320	48	<b>ONTARIO</b>								
FORT ST. JOHN	-10	0	-2	-18	2	5	340	50	ATIKOKAN	-11	7	2	-33	7	52		*
KAMLOOPS	-1P	1P	3P	-9P	2	0		*	BIG TROUT LAKE	-21	*	-2	-31	4	41	330	37
PENTICTON	0	0	5	-8	7	0		*	GORE BAY	-8	2	1	-19	2	22	010	37
PORT HARDY	3	-1	8	-2	6	0	110	45	KAPUSKASING	-15	2	-2	-33	2	82	360	37
PRINCE GEORGE	-6	*	1	-17	1	17		*	KENORA	-12	3	-3	-27	10	49		*
PRINCE RUPERT	2	-1	8	-5	14	0		*	KINGSTON	-9P	1P	-2P	-18P	1	0		X
REVELSTOKE	-5	0	3	-12	0	53	350	50	LONDON	-5	2	1	-17	31	18	090	78
SMITHERS	-7	-2	0	-18	3	25		*	MOOSONEE	-19	0	-2	-33	5	115	330	43
VANCOUVER INT'L	3	-1	8	-4	12	0	150	41	NORTH BAY	-11	1	-1	-25	5	27	120	44
VICTORIA INT'L	3P	-1P	10P	-2P	3	0		*	OTTAWA INT'L	-11	0	-2	-21	7	18		X
WILLIAMS LAKE	-8P	*	0P	-16P	2	22		X	PETAWAWA	-13	1	1	-26	3	12		X
<b>YUKON TERRITORY</b>									PICKLE LAKE	-15	5	-3	-28	2	55	250	35
DAWSON	-17	*	-6	-28	1	44		*	RED LAKE	-13	5	-2	-33	2	38		*
MAYO	-13	8	-1	-23	0	0		X	SUDBURY	-12	2	-1	-24	4	39		X
SHINGLE POINT A	-14	13	-2	-24	3	47		*	THUNDER BAY	-9	5	2	-23	3	39	060	35
WATSON LAKE	-17	2	-8	-30	1	38		*	TIMMINS	-14P	2P	-2P	-35P	3	62	360	37
WHITEHORSE	-10	4	2	-25	0	23	170	59	TORONTO INT'L	-5	2	1	-15	16	9	080	63
<b>NORTHWEST TERRITORIES</b>									TRENTON	-9	-1	-1	-19	9	17		X
ALERT	-31	2	-17	-38	4	19	240	81	WIARTON	-7P	1P	0P	-13P	25	41		X
BAKER LAKE	-29	4	-16	-33	3	0	340	70	WINDSOR	-4P	1P	2P	-12P	42	12	060	57
CAMBRIDGE BAY	-26	8	-19	-34	5P	17	140	52	<b>QUEBEC</b>								
CAPE DYER	-15	7	-6	-27	5	79	310	96	BAGOTVILLE	-16	-1	-4	-28	5	26	290	65
CLYDE	-24	3	-18	-36	1	34	320	87	BLANC SABLON	-14P	*	-3P	-24P	*	15		X
COPPERMINE	-24	*	-12	-42	10	33	230	61	INUKJUAQ	-23	2	-7	-37	5	34	290	59
CORAL HARBOUR	-23P	7P	-12	-37P	1	29		X	KUUVJUAQ	-19	4	-1	-41	21	77	300	80
EUREKA	-36	2	-22	-42	4	17	190	81	KUUVJUAPIK	-25	-2	-15	-36	7	39	130	43
FORT SMITH	-20	1	-6	-33	1	64		X	MANIWAKI	-13	0	0	-28	2	21	360	43
FROBISHER BAY	-19	6	-3	-43	3	28	350	78	MONT JOLI	-12	-1	-3	-22	1	18	290	78
HALL BEACH	-28	3	-16	-39	1	23	310	56	MONTREAL INT'L	-13	-2	-3	-25	6	18	340	48
INUVIK	-16	13	-3	-30	1	35		X	NATASHQUAN	-13	-2	-1	-27	2	26	280	100
MOULD BAY	-31	4	-22	-42	2P	32		X	QUEBEC	-14	-2	-4	-26	0	60	310	50
NORMAN WELLS	-14P	13P	-8	-25P	2	25		X	SCHEFFERVILLE	-21	0	-8	-35	14	44	310	81
RESOLUTE	-28	4	-21	-36	5	30	020	72	SEPT-ILES	-14	-1	-3	-30	2	27	310	61
SACHS HARBOUR	-22P	9P	-16P	-28P	2P	*		X	SHERBROOKE	-15	-1	-2	-31	8	30	310	44
YELLOWKNIFE	-23	2	-11	-33	1	45		*	VAL D'OR	-16	0	-4	-33	1	0	340	41
<b>ALBERTA</b>									<b>NEW BRUNSWICK</b>								
CALGARY INT'L	-8	-2	4	-14	2	2	340	52	CHARLO	-12	1	-4	-22	2	19	280	67
COLD LAKE	-18	-5	-3	-31	1	0		*	CHATHAM	-11	-2	-1	-21	4	14	320	63
CORONATION	-16P	-6P	-4P	-28P	1P	0		*	FREDERICTON	-11	-2	-1	-21	6	13	300	61
EDMONTON NAMAO	-13	-3	-1	-23	2	11		*	MONCTON	-11	-3	-2	-23	5	14	270	70
FORT MCMURRAY	-16	-1	1	-30	1	24		X	SAINT JOHN	-10	-2	-1	-22	9	17	320	67
HIGH LEVEL	-16	3	-3	-28	1	44		*	<b>NOVA SCOTIA</b>								
JASPER	-8	-2	1	-17	1	22		X	GREENWOOD	-8	-3	-1	-21	12	15	310	89
LETHBRIDGE	-11	-6	6	-22	3	3	360	39	SHEARWATER	-7	-3	2	-18	18	19	300	61
MEDICINE HAT	-10	-2	4	-23	1	0	360	31	SYDNEY	-11	-5	0	-21	17	34	290	70
PEACE RIVER	-15	-2	-7	-23	1	15		*	YARMOUTH	-5	-1	2	-12	11	1	330	72
<b>SASKATCHEWAN</b>									<b>PRINCE EDWARD ISLAND</b>								
CREE LAKE	-22	-2	-4	-39	1	34		*	CHARLOTTETOWN	-11	-3	-4	-19	8	18	310	65
ESTEVAN	-13	-1	0	-25	2	4	330	44	SUMMERSIDE	-10	-2	-2	-18	7	25	290	87
LA RONGE	-19	0	2	-35	1	15	310	30	<b>NEWFOUNDLAND</b>								
REGINA	-16	-2	-3	-30	3	9	340	46	CARTWRIGHT	-13	-1	-1	-23	16	84	310	85
SASKATOON	-18	-4	-2	-32	2	12	360	41	CHURCHILL FALLS	-20	-1	-1	-33	21	82	290	85
SWIFT CURRENT	-11P	0P	2P	-28P	1	0		X	GANDER INT'L	-11	-4	-3	-20	11	12	270	69
YORKTON	-17	-2	-3	-31	5	22	320	31	GOOSE	-15	-1	-1	-29	9	23	270	78
<b>MANITOBA</b>									PORT-AUX-BASQUES	-11	-5	-1	-23	36	59	270	107
BRANDON	-18	-2	-5	-32	4	18		*	ST JOHN'S	-9P	-5P	1P	-16P	12	4	250	104
CHURCHILL	-26	0	-14	-37	2	20	310	43	ST LAWRENCE	-7	-3	2	-14	21	20		X
LYNN LAKE	-20	2	-3	-34	2	40		*	WABUSH LAKE	-21	0	-8	-35	15	0	280	56

AV = weekly mean temperature in degree C  
 MX = weekly extreme maximum temperature in degree C  
 MN = weekly extreme minimum temperature in degree C  
 TP = weekly total precipitation in mm  
 DP = departure of mean temperature from normal in degree C  
 SOG = snow depth on ground in cm, last day of the period

DIR = direction of maximum wind speed (deg. from true north)  
 SPD = maximum wind speed in km/hour

X = not observed

P = value based on less than 7 days

\* = missing