Environment Canada Environnement Canada

Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

A WEEKLY REVIEW OF CANADIAN CLIMATE

NOVEMBER 25, 1983 (Aussi disponible en français) VOL. 5 NO. 47

FOR THE PERIOD OF NOVEMBER 15-21, 1983

- ***Heavy rains cause mudslides and washout bridges on the Pacific Coast***
- ***Eastern Canada continue to be plagued by major storms***
- ***Much above normal temperatures in the North***
- ***Heavy snowfall in the Upper Great Lakes***

Inside the October Monthly supplement.....

- ***Growing season summary***
- ***Forest fires season in Quebec***
- ***Canadian Climate Program***

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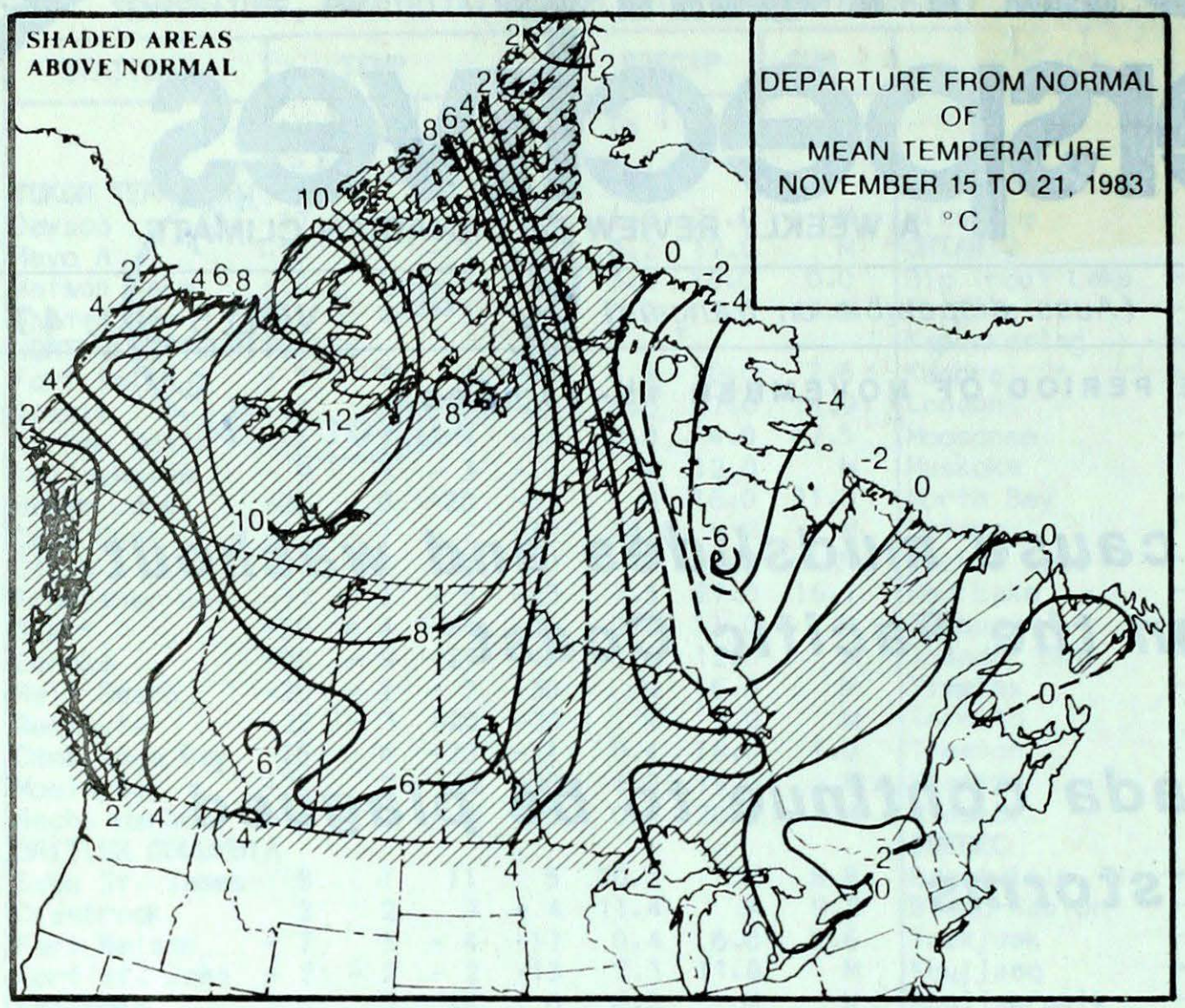
NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic stations.

Canada



WEEKLY TEMPERATURES EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	0.3	Komakuk Beach	-34.6	Old Crow
NORTHWEST TERRITORIES	0.0	Fort Reliance	-41.3	Eureka
BRITISH COLUMBIA	14.9	Abbotsford	-22.5	Dease Lake
ALBERTA	13.6	Medicine Hat	-15.0	Edmonton
SASKATCHEWAN	10.6	Estevan	-10.5	Meadow Lake
MANITOBA	5.9	Pilot Mound	-27.2	Churchill
ONTARIO	14.5	Windsor	-19.9	Timmins
QUEBEC	12.5	Grindstone Island	-22.7	Inoucdjouac
NEW BRUNSWICK	11.5	Saint John	-10.6	Charlo
NOVA SCOTIA	14.4	Inverness	-5.7	Sydney
		Yarmouth		Truro
PRINCE EDWARD ISLAND	11.8	Charlottetown	-4.6	Summerside
NEWFOUNDLAND	12.2	St. Lawrence	-21.6	Churchill Falls

ACROSS THE NATION

Warmest mean temperature	9.2	Amphitrite Point BC
Coolest mean temperature	-31.0	Eureka, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

Mean temperatures were as much as 10 to 14 degrees above normal across the north, but nevertheless the mercury never climbed above freezing. Only in the vicinity of Baffin Island were temperatures below normal. Extensive fog and low cloud plagued the valleys in the southern and central Yukon, a constant aviation hazard.

British Colombia

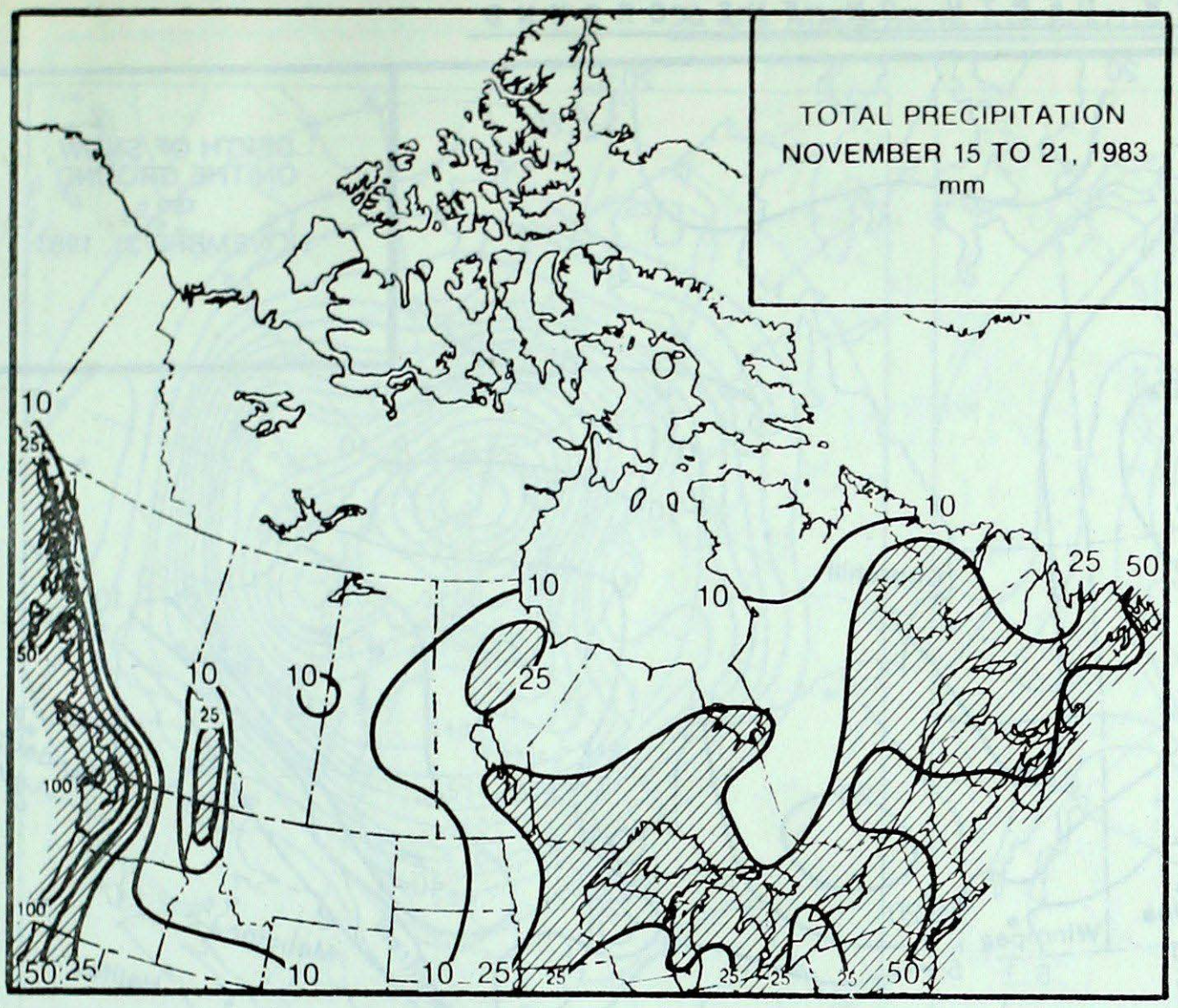
A strong southwesterly flow pumped mild and moist Pacific air inland. A series of disturbances gave heavy rains to the south coast. Victoria received 98 mm of rain, more than three times the normal for the week. The Vancouver area recorded 110 mm, swelling creeks and rivers. Vancouver's water supply turned murky when muddy flood waters made their way into one of the city's reservoirs. The scenic highway north from Vancouver to Squamish was closed several times this week due to mud slides and weakened bridge abutments; raging waters also washed out a railway bridge. Heavy snow in the mountains allowed several ski resorts in the southern interior to open for the season.

Prairies

It was a predominantly cloudy but mild week. Fog plagued much of central and northern Alberta. Weak weather systems left between 4 and 10 centimetres of snow in all districts. Southeastern Manitoba was hit with the first major snow storm of the season when a complex disturbance crossed the upper Great Lakes. Generally, snowfalls were between 10 and 20 centimetres: Gimli had more than 25 cm. Snow depths ranged from 1 and 2 centimetres in the south to more than 30 cm in northern Manitoba.

Ontario

It was cloudy and wet as two more vigorous storms affected the province. The first, early in the



HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	7.2	Dawson
NORTHWEST TERRITORIES	20.0	Mackar Inlet
BRITISH COLUMBIA	110.2	Vancouver
ALBERTA	10.2	Cold Lake
SASKATCHEWAN	17.8	Nipawin
MANITOBA	30.2	Gimli
ONTARIO	48.2	Trenton
QUEBEC	63.9	Sherbrooke
NEW BRUNSWICK	62.8	Saint John
NOVA SCOTIA	79.5	Shearwater
PRINCE EDWARD ISLAND	27.6	Summerside
NEWFOUNDLAND	64.9	Argentia

A GREY CUP FORECAST

During Grey Cup week, the Atmospheric Environment Service is besieged by football fans, game officials, and "poolsters" for weather conditions at the site of the big game. At this time of year, beyond the climatic limits for most outdoor sports in Canada, weather stats are as important as a team's injury report and import quotas in preparing the final game plan. Weather has often been a deciding factor because seldom has this Canadian spectacle been staged in decent weather. Icy fields, howling gales, drenching rains, and blinding blizzards have plagued this fall classic to the degree that Grey Cups are often remembered more for the weather conditions than for the game itself such as the 1950 Mud Bowl and the 1962 Fog Bowl.

This year in Vancouver AES forecasts game time weather conditions at ground level will be ideal. There will be a 100% chance of 21°C air temperature, 40% relative humidity, 3 km/h winds, 350 m visibility, rising air pressure and no precipitation.

D.W. Phillips
AES - Toronto

P.S. East 30 West 18

week, tracked across the lower Great Lakes giving 20 to 30 millimetres of rain to the south. In Central Ontario, including the Ottawa Valley, heavy snow downed power lines leaving many towns without power for several hours. In the wake of this system, cold Arctic air crossing the relatively warm waters of the Great Lakes dumped 30 cm of snow in the southern Ontario snow belt. On November 20, a second storm centre tracked due north towards the upper Great Lakes. Northwestern Ontario received the brunt of this storm with a 20 to 30 centimetre snowfall, while rain and very mild temperatures pushed into southern and central Ontario.

Québec

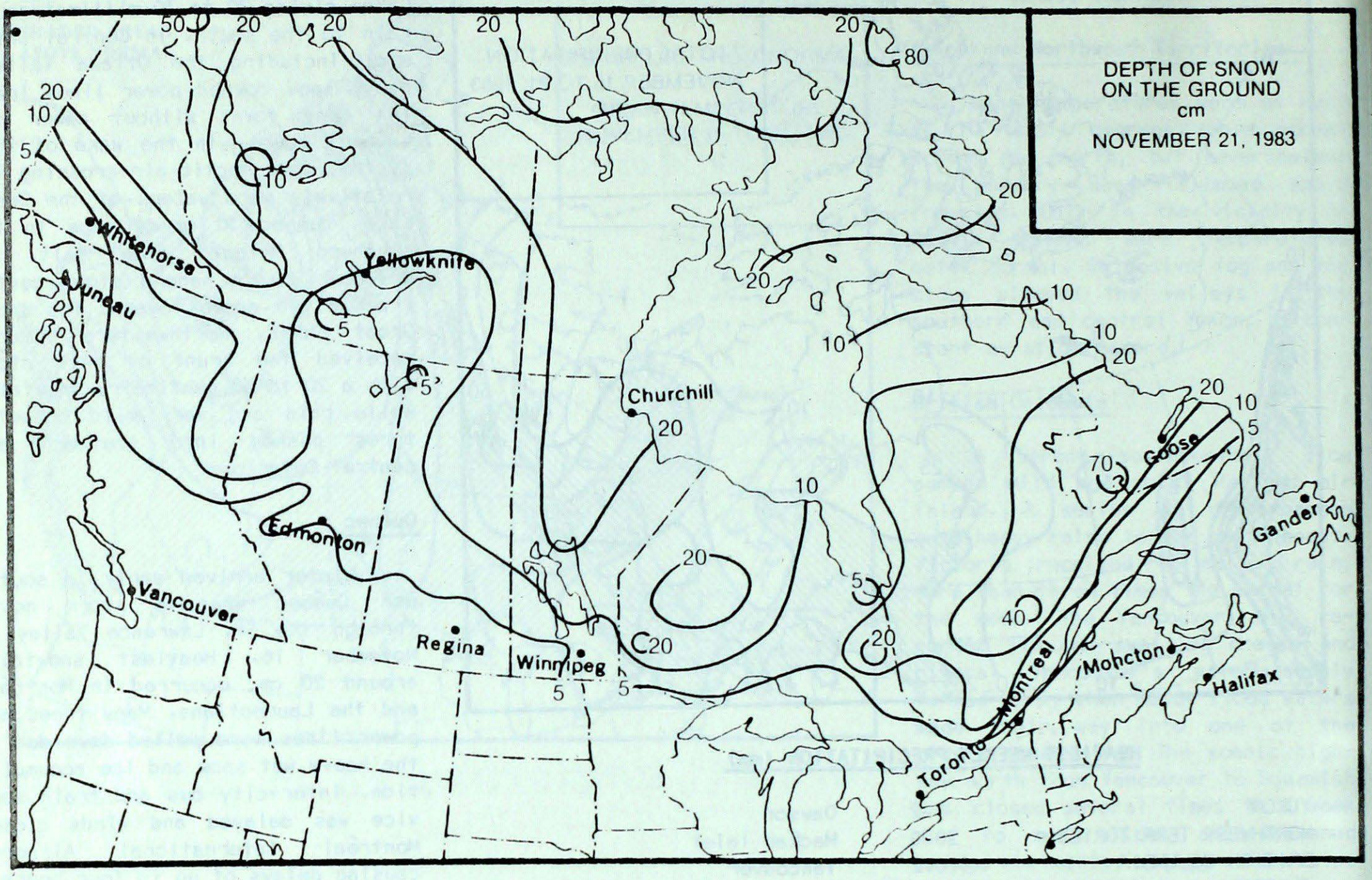
Winter arrived early in southern Québec when a storm moved through the St. Lawrence Valley on November 16. Heaviest snowfalls around 20 cm, occurred in Montréal and the Laurentians. Many trees and power lines were pulled down due to the heavy wet snow and ice accumulation. Inter-city bus and train service was delayed and winds closed Montréal International Airport, causing delays of up to four hours.

Several ski resorts in the Laurentians, with the help of snow making equipment, opened for the season this week.

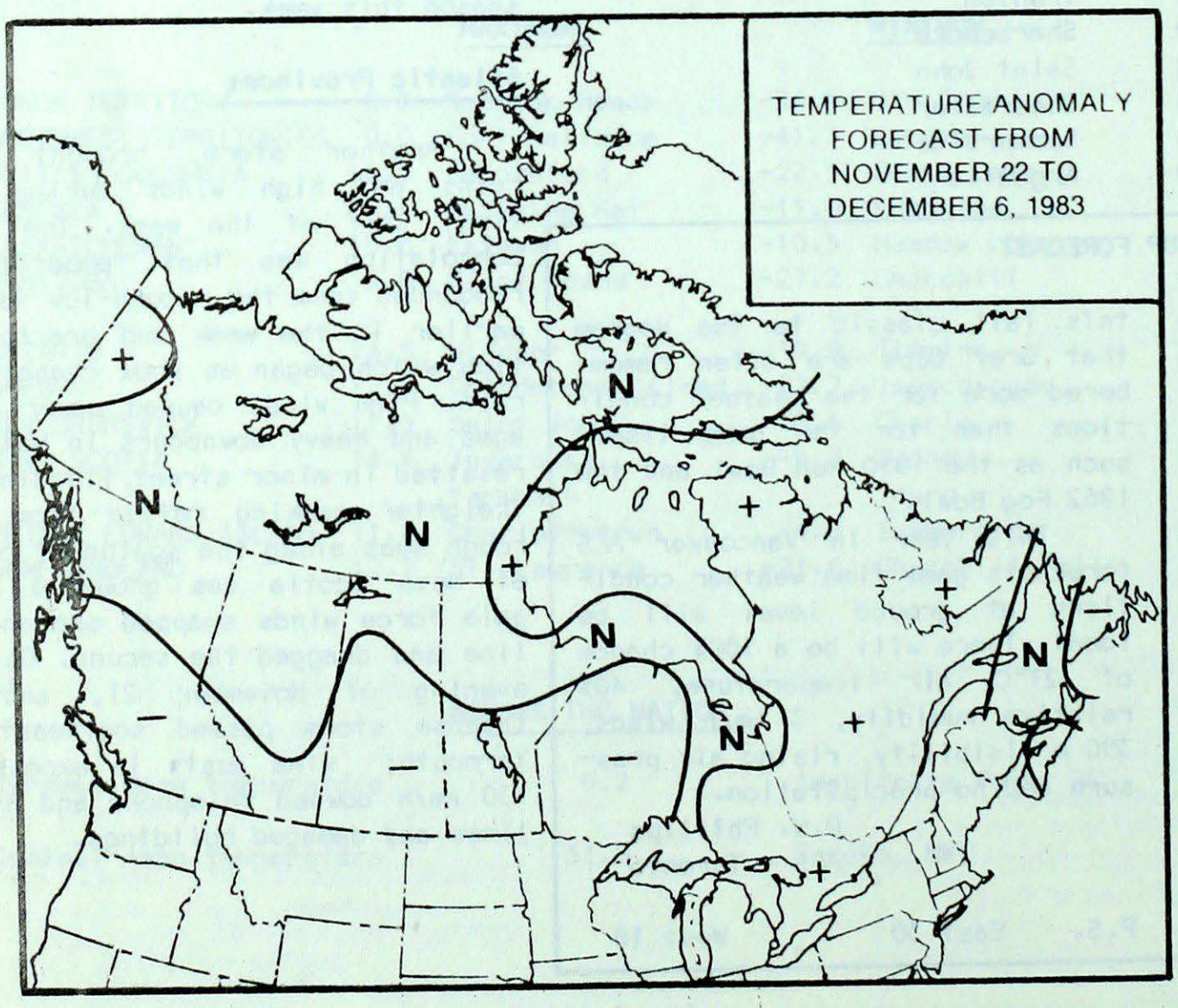
Atlantic Provinces

Another storm, brought more rains and high winds during the first half of the week. The only consolation was that temperatures rebounded from the record-low values earlier in the week and precipitation which began as snow changed to rain. High winds caused power outages and heavy downpours in Halifax resulted in minor street flooding. A freighter seeking refuge from the rough seas along the southeast coast of Nova Scotia was grounded when gale force winds snapped one anchor line and dragged the second. On the evening of November 21, another intense storm passed southeast of Yarmouth; wind gusts in excess of 130 km/h downed telephone and hydro lines and damaged buildings.

SNOW DEPTH ON THE GROUND



TEMPERATURE ANOMALY FORECAST



Temperature Anomaly Forecast

The temperature anomaly forecast, for each of the 70 Canadian stations, is prepared by searching historical weather maps to find cases similar to the present one. The principle used is that a prediction for the next 15 days may be based on what is known to have actually happened during 15-day periods. After the five best cases are selected, the surface temperature anomalies are calculated. This results in five separate forecasts, which are averaged to provide the forecast depicted.

++ much above normal

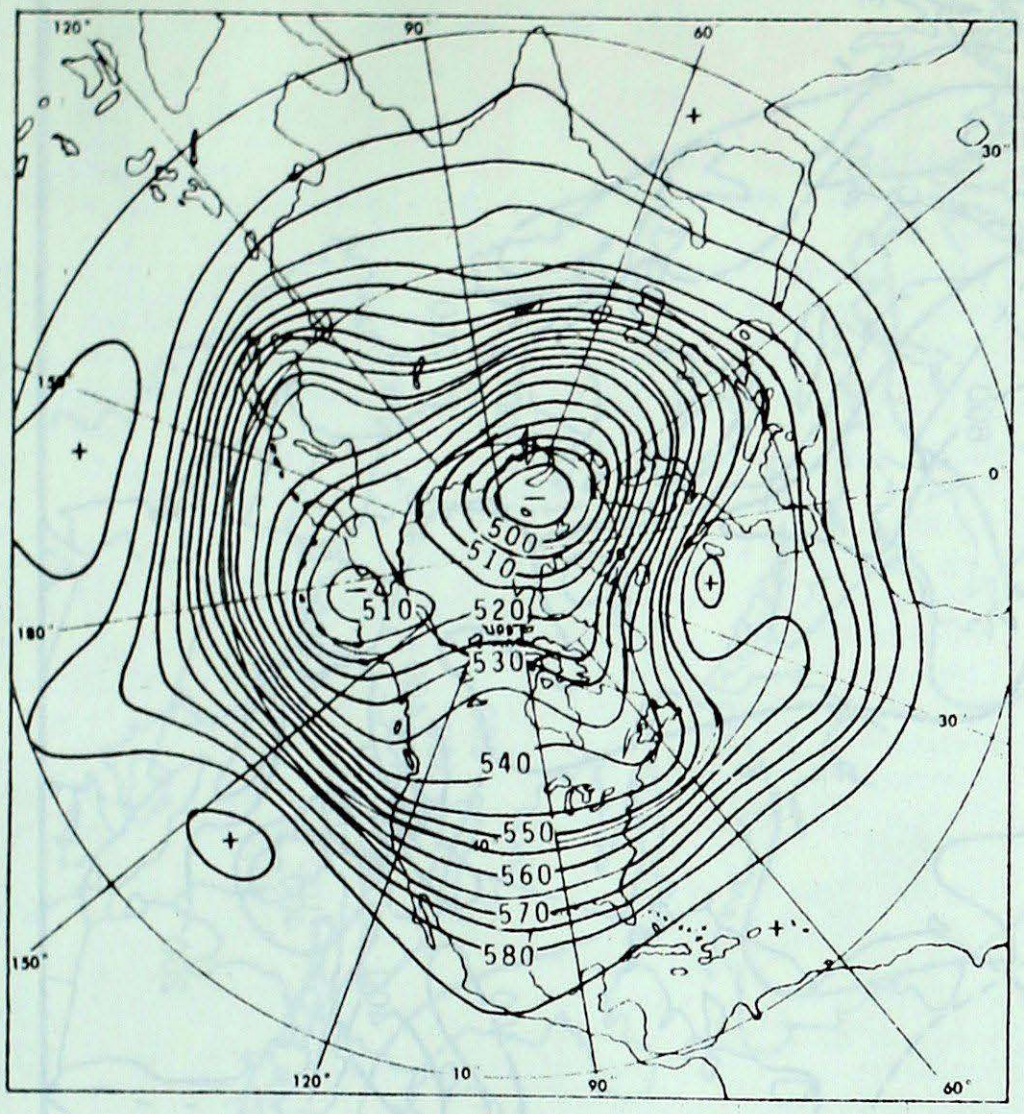
+ above normal

N normal

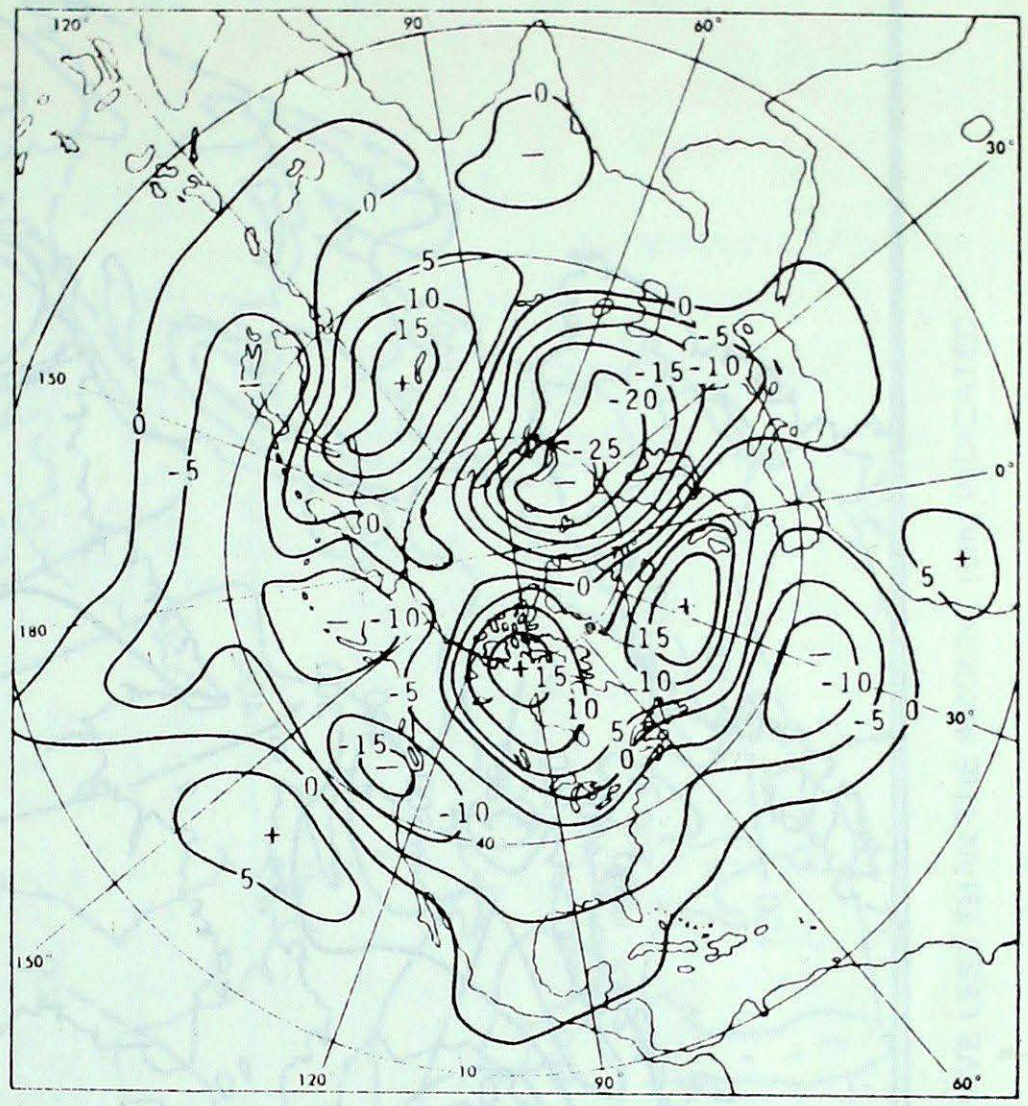
- below normal

-- much below normal

50 kPa ATMOSPHERIC CIRCULATION

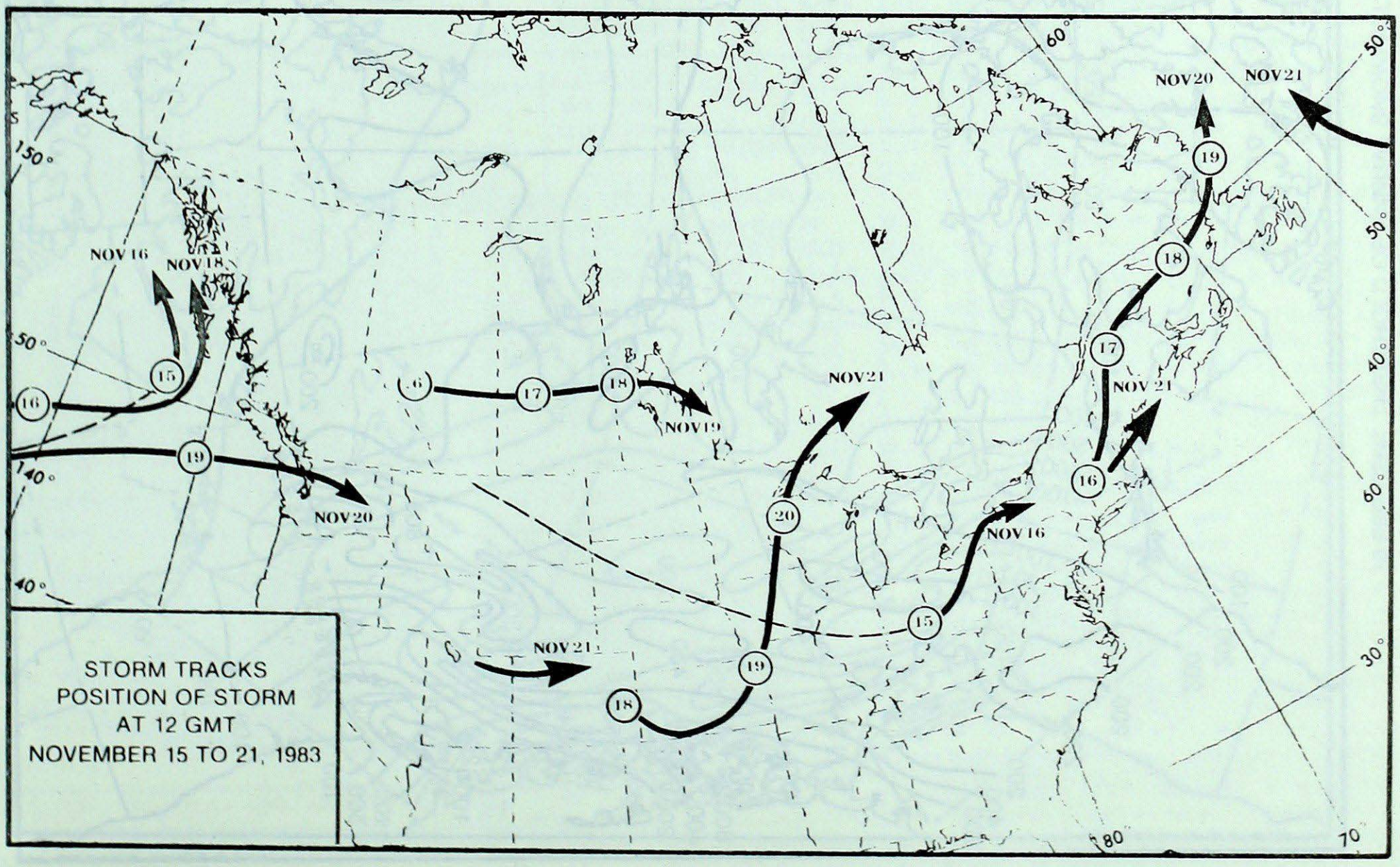


MEAN 50 kPa HEIGHT (dam)
NOVEMBER 17 TO 21, 1983

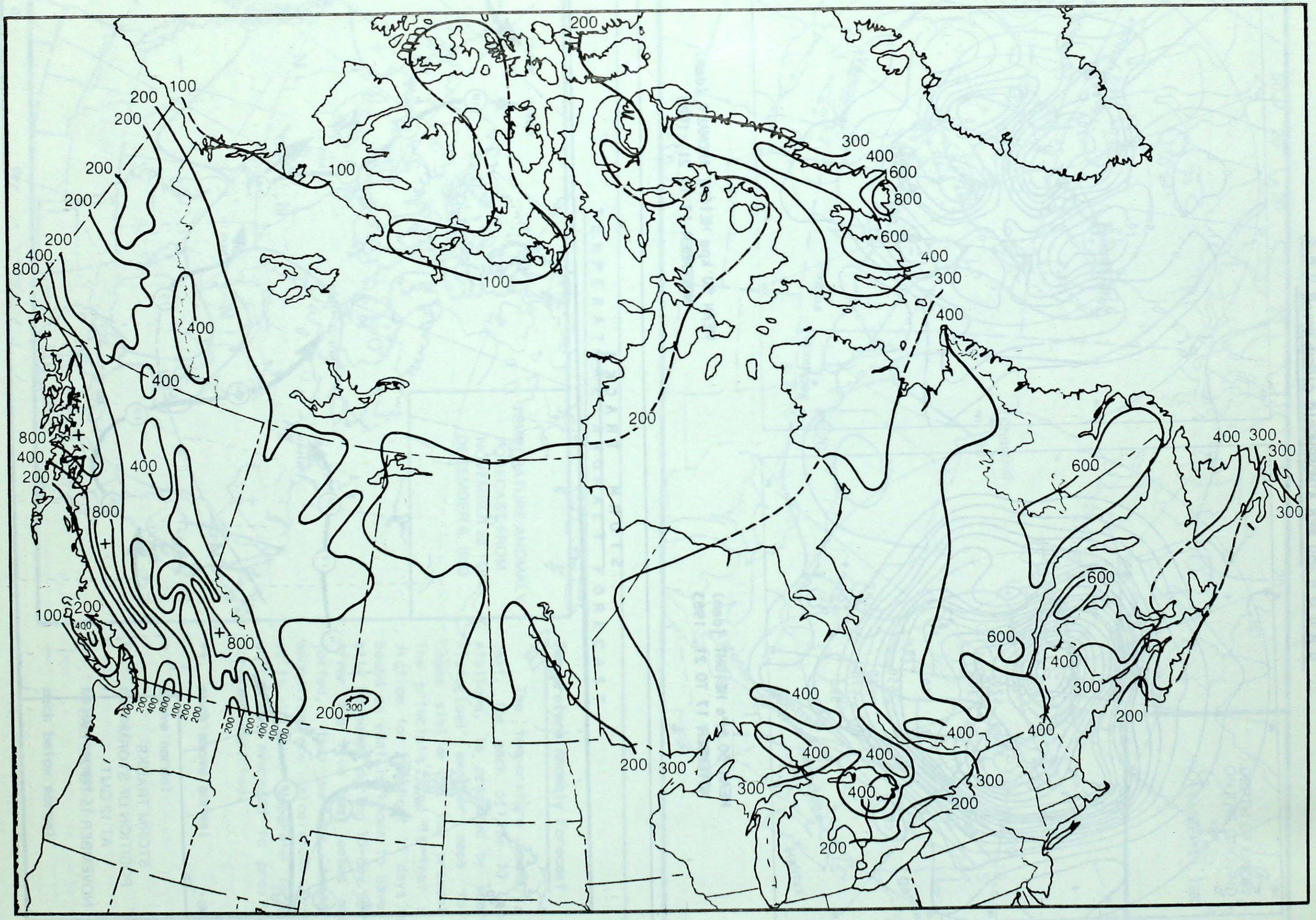


MEAN 50 kpa HEIGHT ANOMALY (dam)
NOVEMBER 17 TO 21, 1983

STORM TRACKS



STORM TRACKS
POSITION OF STORM
AT 12 GMT
NOVEMBER 15 TO 21, 1983



90 PER CENT THRESHOLD OF ANNUAL SNOWFALL. 9 YEARS IN 10 WILL HAVE LESS THAN THE AMOUNT (cm) INDICATED

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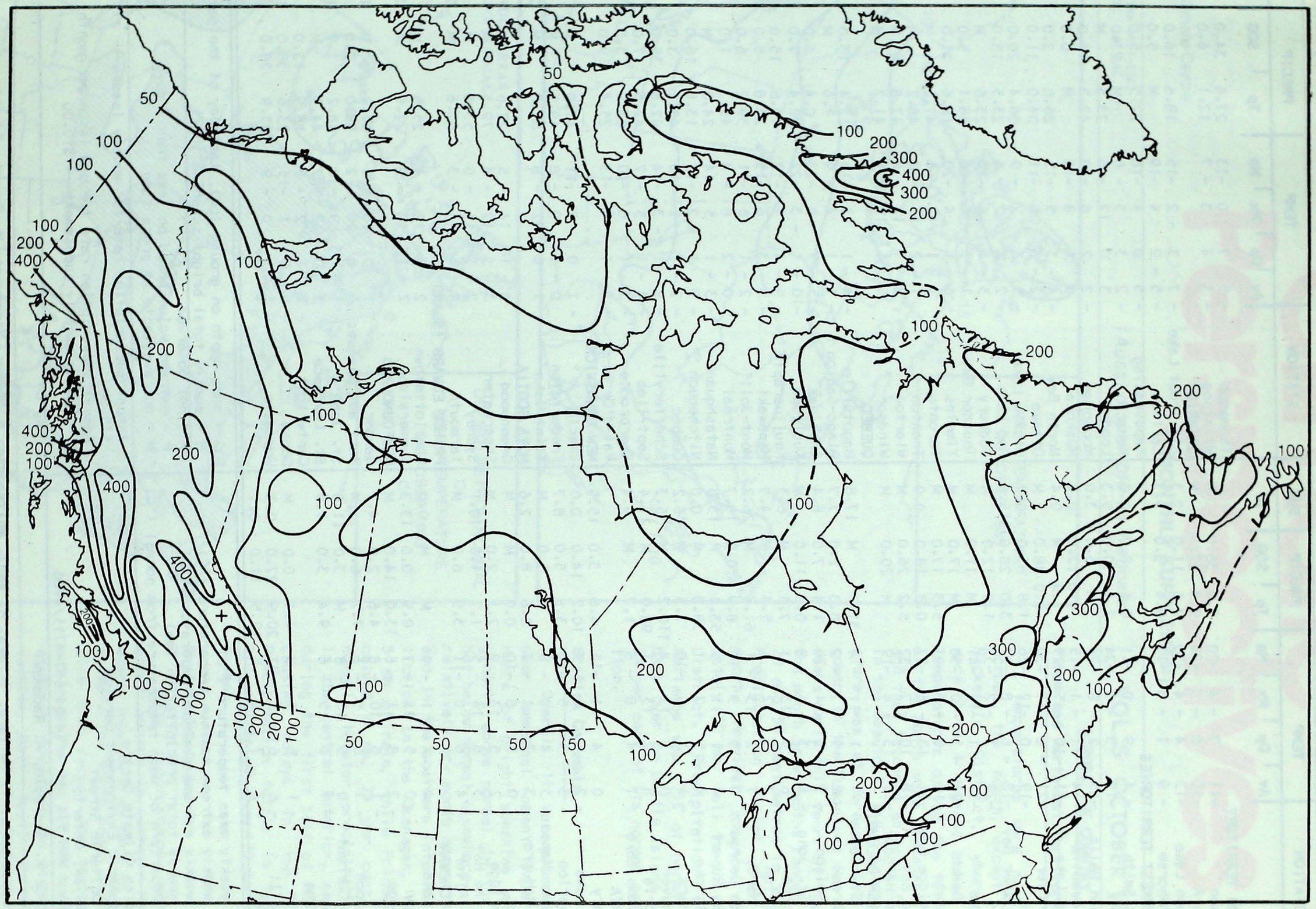

10 PER CENT THRESHOLD OF ANNUAL SNOWFALL. 1 YEAR IN 10 WILL HAVE LESS THAN THE AMOUNT (cm) INDICATED

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT NOVEMBER 22, 1983

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	-11	7	- 4	-20	7.2	36.0	M
Mayo A	-10	8	- 3	-24	2.3	22.0	M
Watson Lake	-13	4	- 4	-30	2.6	11.0	2.3
Whitehorse	- 9	1	- 3	-17	0.4	3.0	5.7
NORTHWEST TERRITORIES							
Fort Smith	- 4	9	0	-11	0.6	8.0	2.0
Inuvik	-17	5	- 9	-24	2.4	50.0	5.3
Norman Wells	-15	5	- 8	-24	M	6.0	3.0
Yellowknife	- 4	11	- 1	-15	4.6	13.0	0.0
Baker Lake	-11	10	- 5	-29	1.9	M	0.4
Cape Dyer	-21	- 6	-11	-30	0.0	38.0	M
Clyde	-19	0	-12	-26	1.8	83.0	0.4
Frobisher Bay	-18	- 6	- 8	-27	3.0	28.0	15.6
Alert	-24	3	-12	-33	1.0	12.0	M
Eureka	-31	1	-12	-41	M	11.0	M
Hall Beach	-21	- 1	-10	-30	M	17.0	M
Resolute	-16	9	- 8	-23	5.3	17.0	M
Cambridge Bay	-11	13	- 5	-27	0.8	18.0	0.0
Mould Bay	-18	10	- 7	-32	5.2	26.0	M
Sachs Harbour	-12	13	- 4	-19	M	20.0	M
BRITISH COLUMBIA							
Cape St. James	7	1	11	4	31.3	M	17.8
Cranbrook	2	5	7	- 2	8.3	2.0	7.7
Fort Nelson	- 9	5	- 4	-20	1.4	7.0	8.4
Fort St. John	- 5	3	- 1	- 8	0.8	11.0	M
Kamloops	6	5	13	1	7.3	M	6.3
Penticton	7	5	12	1	5.4	M	4.5
Port Hardy	7	2	13	- 1	61.7	M	26.2
Prince George	0	5	9	-10	8.9	0.0	18.7
Prince Rupert	4	1	11	- 5	53.4	M	13.8
Revelstoke	4	5	7	1	38.8	M	0.0
Smithers	- 1	3	6	-10	7.3	M	6.2
Vancouver	8	3	13	4	110.2	M	6.3
Victoria	8	2	13	1	98.0	M	11.4
Williams Lake	1	4	8	- 6	1.7	M	9.4
ALBERTA							
Calgary	0	4	11	-15	4.0	3.0	15.5
Cold Lake	- 2	5	1	- 7	10.2	14.0	0.0
Coronation	- 3	5	5	- 9	3.8	5.0	8.7
Edmonton Namao	- 3	4	0	- 8	M	5.0	M
Fort McMurray	- 3	7	- 1	- 7	3.6	8.0	2.6
Jasper	0	5	6	-10	0.0	M	M
Lethbridge	2	5	13	- 8	2.1	2.0	M
Medicine Hat	3	6	14	- 5	1.7	1.0	10.1
Peace River	- 4	6	0	-11	3.9	6.0	M
SASKATCHEWAN							
Cree Lake	- 4	X	- 1	- 9	M	M	0.0
Estevan	0	5	11	- 7	0.9	0.0	13.3
La Ronge	- 2	8	1	- 6	13.0	14.0	M
Regina	- 1	6	10	- 8	4.6	2.0	4.7
Saskatoon	- 1	6	5	- 6	7.2	6.0	M
Swift Current	0	5	10	- 8	M	3.0	11.6
Yorkton	- 1	6	5	- 6	9.4	3.0	1.5
MANITOBA							
Brandon	- 1	5	3	- 9	4.4	0.0	M
Churchill	- 6	6	- 2	-27	20.9	27.0	0.3
The Pas	- 2	7	1	- 5	12.5	11.0	0.1
Thompson	- 5	7	0	-13	27.6	34.0	0.0
Winnipeg	- 1	4	3	- 7	12.1	6.0	0.9
ONTARIO							
Big Trout Lake	- 7	3	- 2	-15	18.6	16.0	M
Earlton	- 5	- 2	4	-19	M	5.0	M
Kapuskasing	- 5	0	4	-18	22.5	5.0	M
Kenora	- 2	3	3	- 6	M	23.0	M
London	3	0	12	- 6	23.5	M	6.3
Moosonee	- 2	2	6	- 9	42.2	3.0	3.1
Muskoka	0	1	8	-13	M	0.0	M
North Bay	- 4	- 3	5	-15	26.6	2.0	16.4
Ottawa	- 2	- 3	6	-11	34.0	11.0	14.1
Pickle Lake	- 5	3	2	- 9	36.4	26.0	M
Red Lake	- 2	4	2	- 6	23.5	18.0	M
Sudbury	- 3	- 1	6	-14	23.6	M	11.9
Thunder Bay	1	3	6	- 6	48.1	5.0	0.0
Timmins	- 6	- 1	4	-20	18.6	21.0	M
Toronto	3	- 1	12	- 6	41.6	M	M
Trenton	1	- 2	13	- 8	48.2	M	M
Wiarton	2	- 1	12	- 8	47.8	M	M
Windsor	5	1	15	- 1	41.2	M	M
QUEBEC							
Bagotville	- 4	- 1	3	-15	12.4	13.0	M
Blanc-Sablon	- 1	- 1	4	- 9	7.6	M	M
Inukjuak	-15	- 7	- 8	-23	0.4	6.0	30.3
Kuujjuaq	-10	- 1	- 3	-22	2.4	7.0	13.8
Kuujjuarapik	- 9	- 4	7	-17	13.6	15.0	30.2
Manawaki	- 3	- 3	6	-13	23.8	5.0	3.2
Mont-Joli	- 2	- 1	6	-11	39.2	6.0	9.1
Montréal	0	- 2	8	- 8	45.3	1.0	M
Natashquan	- 3	- 1	5	-14	24.0	M	15.5
Nitchequon	- 8	1	- 2	-12	13.8	16.0	M
Québec	- 2	- 1	2	-10	48.4	3.0	M
Schefferville	- 8	1	- 3	-14	42.6	35.0	3.8
Sept-Iles	- 4	- 1	5	-17	42.5	7.0	M
Sherbrooke	- 1	1	6	-10	63.9	3.0	6.8
Val-d'Or	- 5	- 1	4	-13	25.4	9.0	0.3
NEW BRUNSWICK							
Charlo	- 1	0	7	-11	47.9	M	M
Fredericton	0	- 1	9	- 8	49.5	M	M
Saint John	1	0	12	- 6	62.8	M	28.4
NOVA SCOTIA							
Greenwood	3	- 1	14	- 5	27.6	M	M
Shearwater	3	- 1	12	- 4	79.5	M	M
Sydney	2	- 1	11	- 6	53.4	M	9.7
Yarmouth	4	- 1	14	- 3	62.6	M	20.1
PRINCE EDWARD ISLAND							
Charlottetown	2	0	12	- 4	25.5	M	M
Summerside	2	- 1	12	- 5	27.6	M	10.4
NEWFOUNDLAND							
Gander	1	0	10	- 5	35.0	M	14.5
Port aux Basques	3	0	10	- 2	58.0	2.0	M
St. John's	1	- 1	9	- 8	48.2	1.0	17.1
St. Lawrence	3	0	12	- 7	44.9	M	M
Cartwright	- 2	1	2	- 7	18.9	12.0	5.6
Goose	- 5	0	1	-15	23.6	38.0	11.2
Hopedale	- 3	1	0	- 9	23.9	28.0	M

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)
X = not observed
P = extreme value based on less than 7 days
M = not available at press time

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