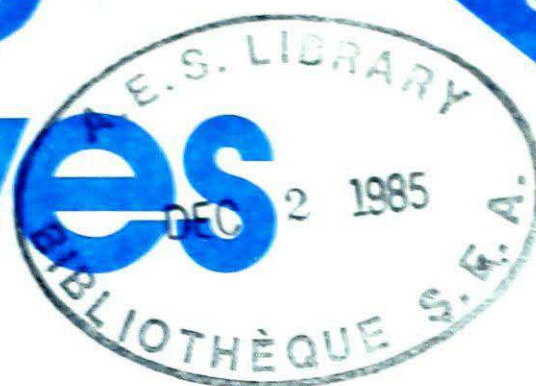


Environment CANADA Environnement
1005959D VOL 7 ISS 45 851112
REF # 002

CLIMATIC PERSPECTIVES

OTM

atic
ctives



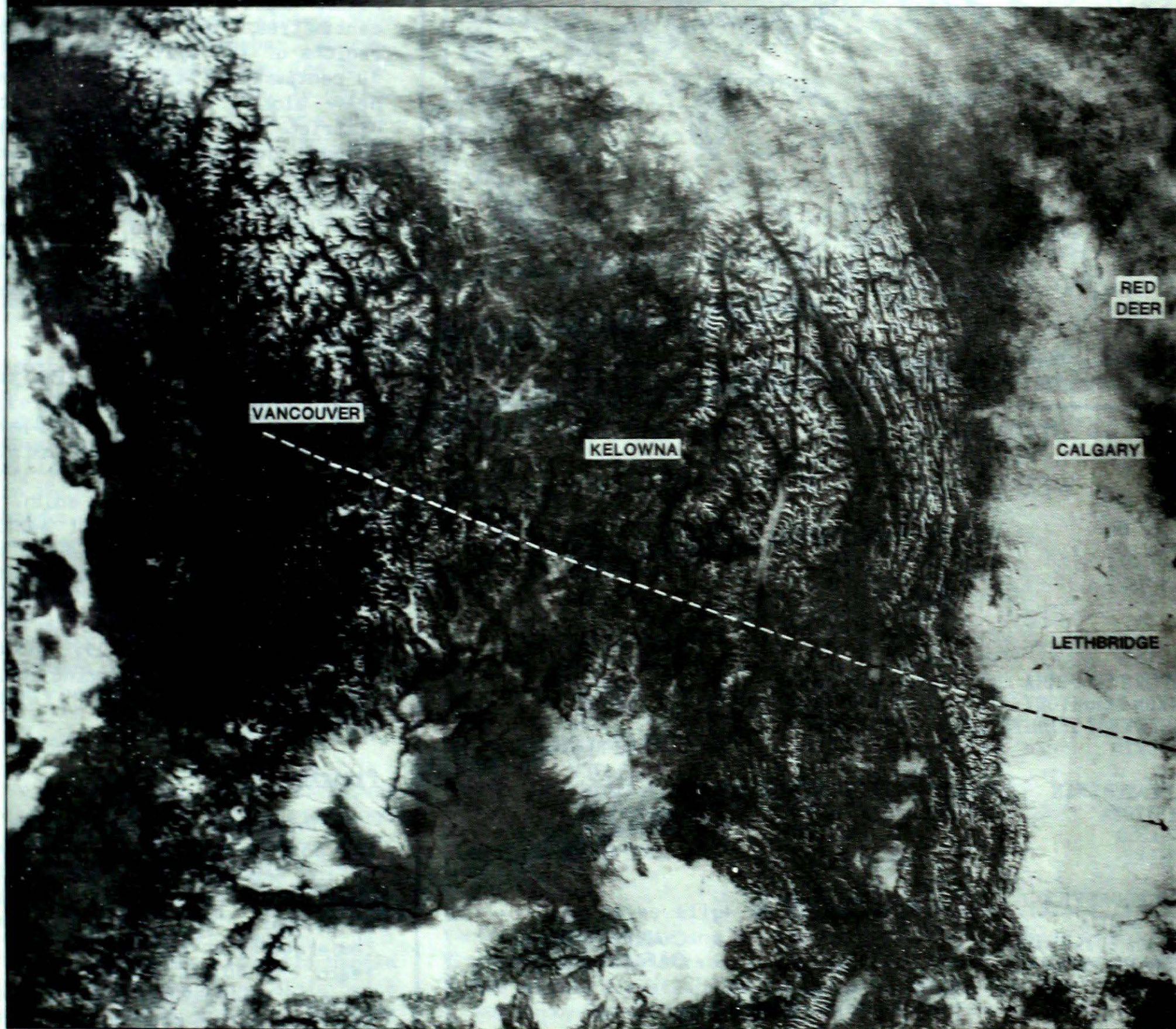
MONTHLY
SUPPLEMENT
INCLUDED

A weekly review of Canadian climate

November 12 to 18, 1985

Vol.7 No.45

RES N-9 4746 NIR 13N085 2117Z 49.0N 118.9W 1: 4.0M

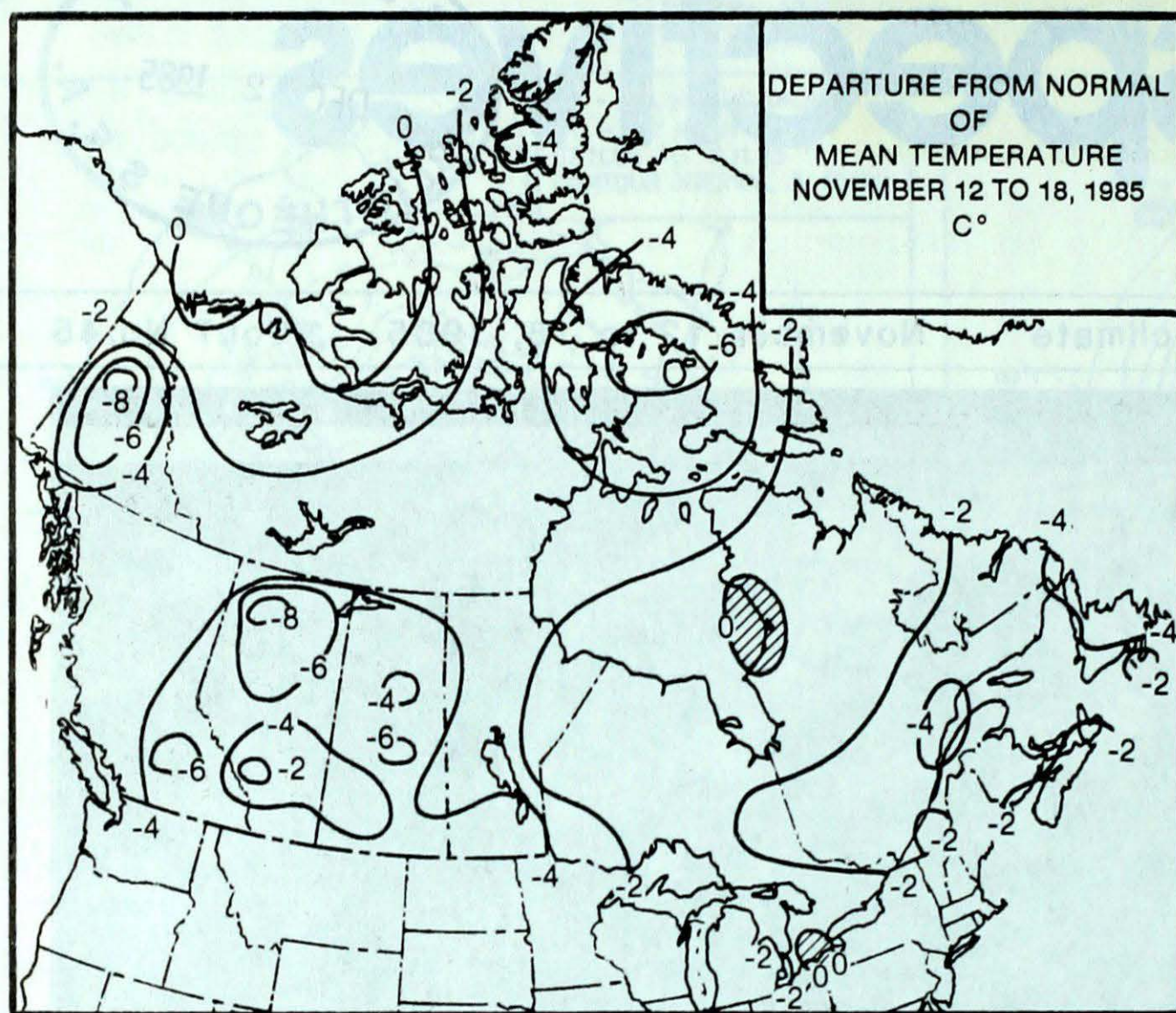


This NOAA 9 satellite photo taken during the afternoon of November 13, 1985 distinctly shows the geographical features of southern British Columbia.

- **Lower Great Lakes and St. Lawrence Valley hit by freezing rain**
- **Bitter cold, blizzards and snow in the West**

Canada

TEMPERATURE



ACROSS THE COUNTRY...

Yukon and Northwest Territories

Weather conditions were changeable in the Yukon and Mackenzie District, but predominantly unsettled in the east. A low pressure disturbance moved across the Territories during the middle of the week, producing significant snowfalls. Amounts ranged from 5 to 20 centimetres, but the mountainous regions of the west received 30 to 50 centimetres. Strong winds caused heavy blowing snow in the Keewatin District. In its wake, a cold spell gripped the Yukon and temperatures plunged to the minus forties. Larger lakes and rivers have not yet frozen over and stratus and fog hampered aviation near areas of open water, especially in the Yukon.

British Columbia

Under partly sunny skies temperatures moderated during the early part of the week. By mid-week, thickening cloud was associated with heavy snowfalls in the north, while showers occurred in the south. An Arctic high pressure cell settled across northern B.C., allowing record cold air to penetrate southwards over the weekend. Blizzards were reported in the Peace River District on November 15. In the central interior the logging industry has geared up to full winter operation.

Prairies

There was a brief respite in the cold weather during the middle of the week. In fact, the weather conditions were relatively pleasant. A southerly flow allowed maximum temperatures in southern Alberta to reach the double digits, while to the east temperatures hovered close to freezing. The weekend saw another cold wave flood across the prairies. Strong winds and low temperatures resulted in dangerously low wind chills, and prompted the issuance of travellers advisories. Drifting and blowing snow were common in rural areas of Alberta. Temperatures dropped as low as -36°C . Snowfalls were generally light.

WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM		MINIMUM
BRITISH COLUMBIA	SMITHERS 16	DEASE LAKE	-30
YUKON TERRITORY	CARCROSS 3	ROSS RIVER	-44
NORTHWEST TERRITORIES	CAPE DORSET A -2	EUREKA	-41
ALBERTA	WHITECOURT 13	HIGH LEVEL	-36
SASKATCHEWAN	KINDERSLEY 9	CREE LAKE	-31
MANITOBA	DAUPHIN 7	THOMPSON	-32
ONTARIO	WINDSOR 18	BIG TROUT LAKE	-23
QUEBEC	MONTREAL INT'L 9	SCHEFFERVILLE	-22
NEW BRUNSWICK	SAINT JOHN 10	CHARLO	-15
NOVA SCOTIA	SHELBURNE 13	TRURO	-10
PRINCE EDWARD ISLAND	EAST POINT 9	CHARLOTTETOWN	-7
NEWFOUNDLAND	ARGENTIA 9	CHURCHILL FALLS	-19

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	7	WINDSOR	ONT
		SATURNA ISL.	BC
COOLEST MEAN TEMPERATURE	-36	EUREKA	NWT

Ontario

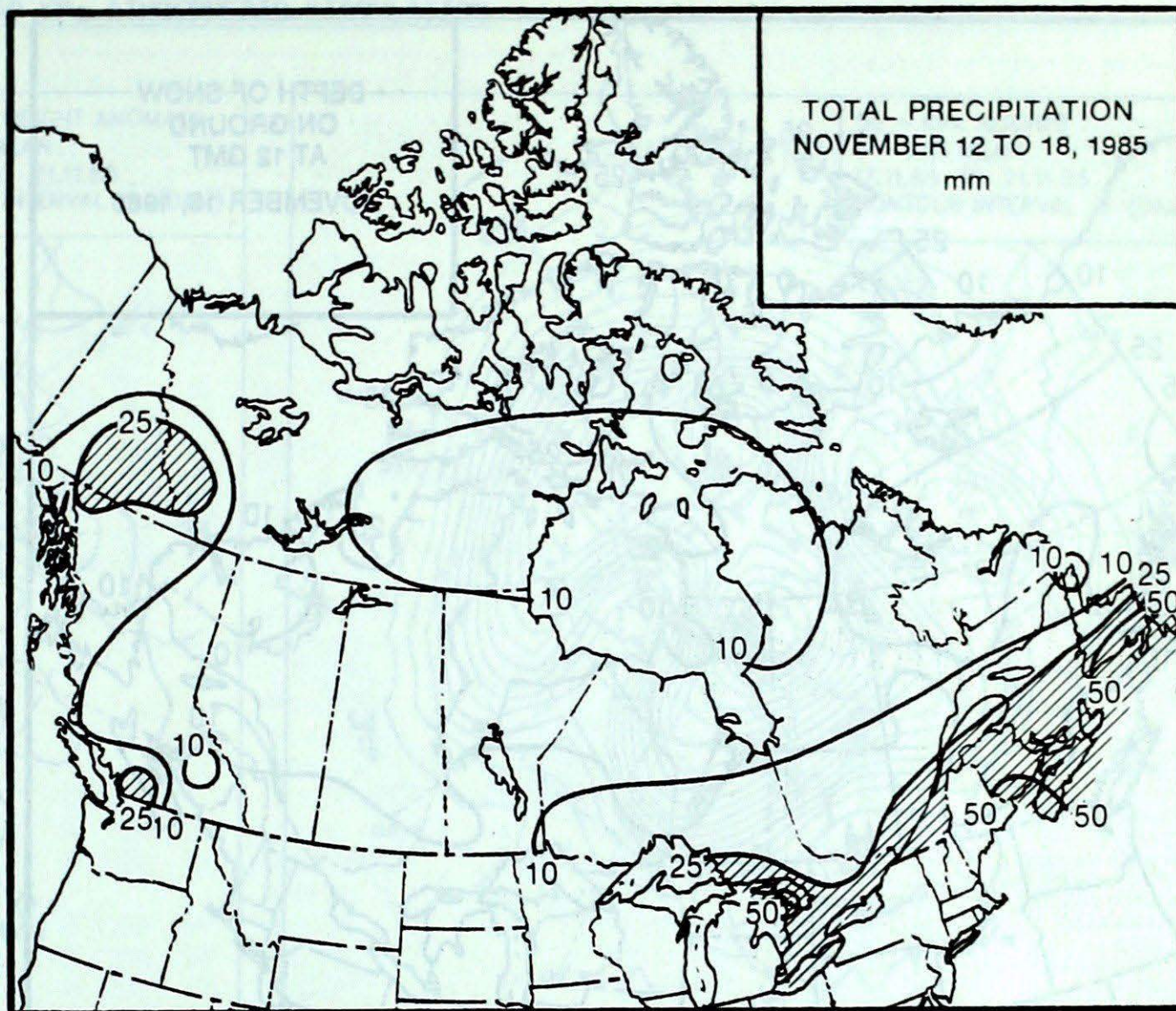
Dull and wet weather continued to plague southern Ontario as a series of weather systems tracked out of the American midwest. Precipitation fell nearly every day in southern and central Ontario, and this was the third weekend in a row ruined by inclement weather. On November 16, freezing rain along the lower Great Lakes caused numerous traffic tie-ups. Rainfalls in southern Ontario have already surpassed previous November records. Toronto City has received 164 mm of rain to-date this month. In northern Ontario, the weather was cold, but relatively more settled. Most communities picked up additional amounts of snow. Temperatures began to moderate near the end of the week.

Quebec

Several disturbances affected southern Quebec, giving a mixture of snow and rain. The lower St. Lawrence Valley received 10 cm of snow. On November 12 freezing conditions caused numerous accidents in Montreal, Quebec City and Sherbrooke. In Montreal alone there were more than one thousand fender benders due to slippery roads. Sunshine was scarce in the south this week. A cold Arctic airmass remained well entrenched across northern Quebec, giving changeably sunny weather, but also some snow.

Atlantic

The weather in the Maritimes was mostly cloudy and wet, although there were several sunny days. Temperatures were on the cool side. On the evening of the 14th, many locations received their first measurable snowfall, ranging from 5 to 15 centimetres. Later it changed to rain. A vigorous disturbance affected Newfoundland on November 15. The Avalon Peninsula was hardest hit with 20 to 30 centimetres of snow and blowing snow, causing power outages and road closures. In its wake, new daily low temperature records were set. Labrador was dominated by an area of high pressure most of the week; hence, only snow flurries were reported.

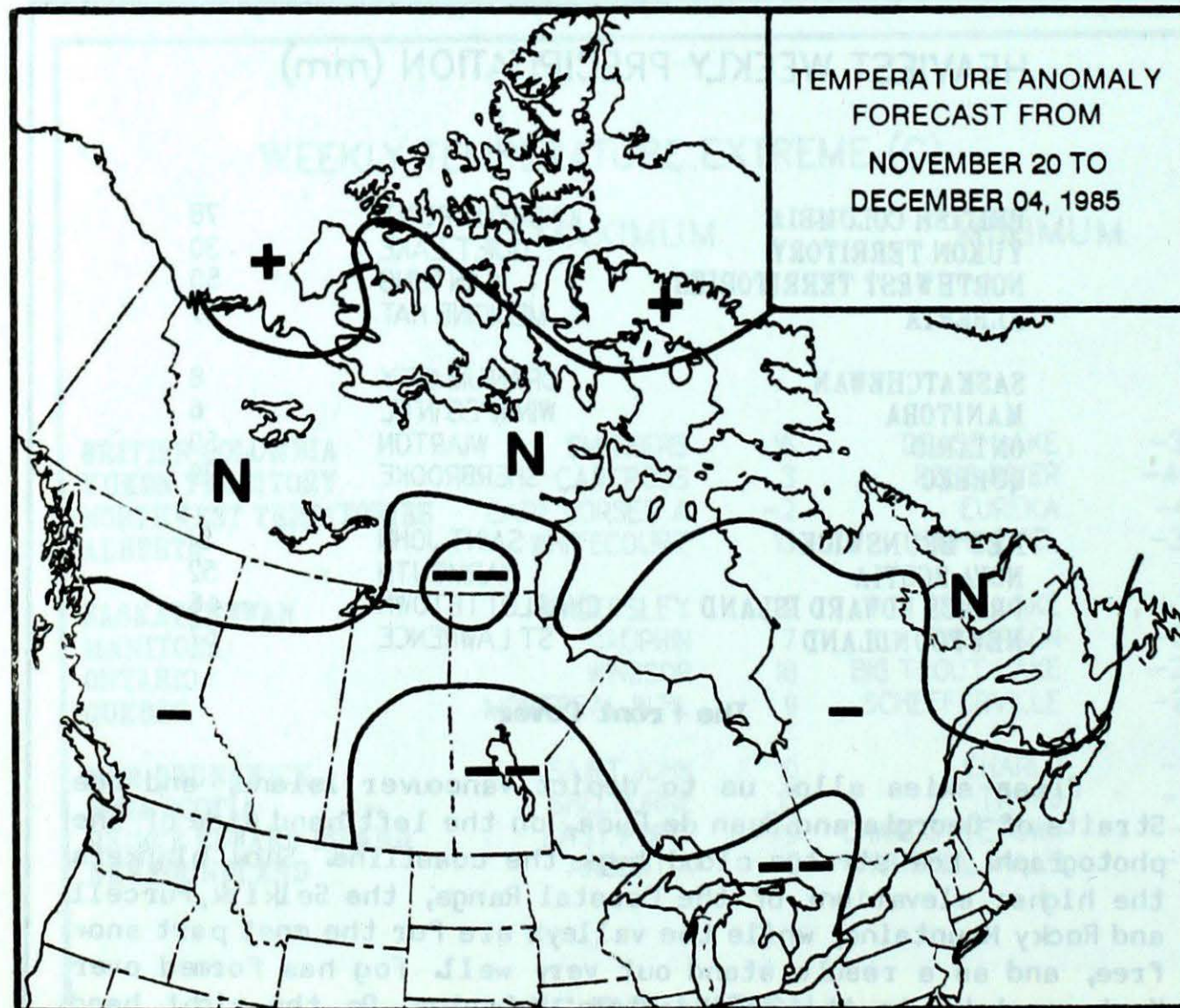
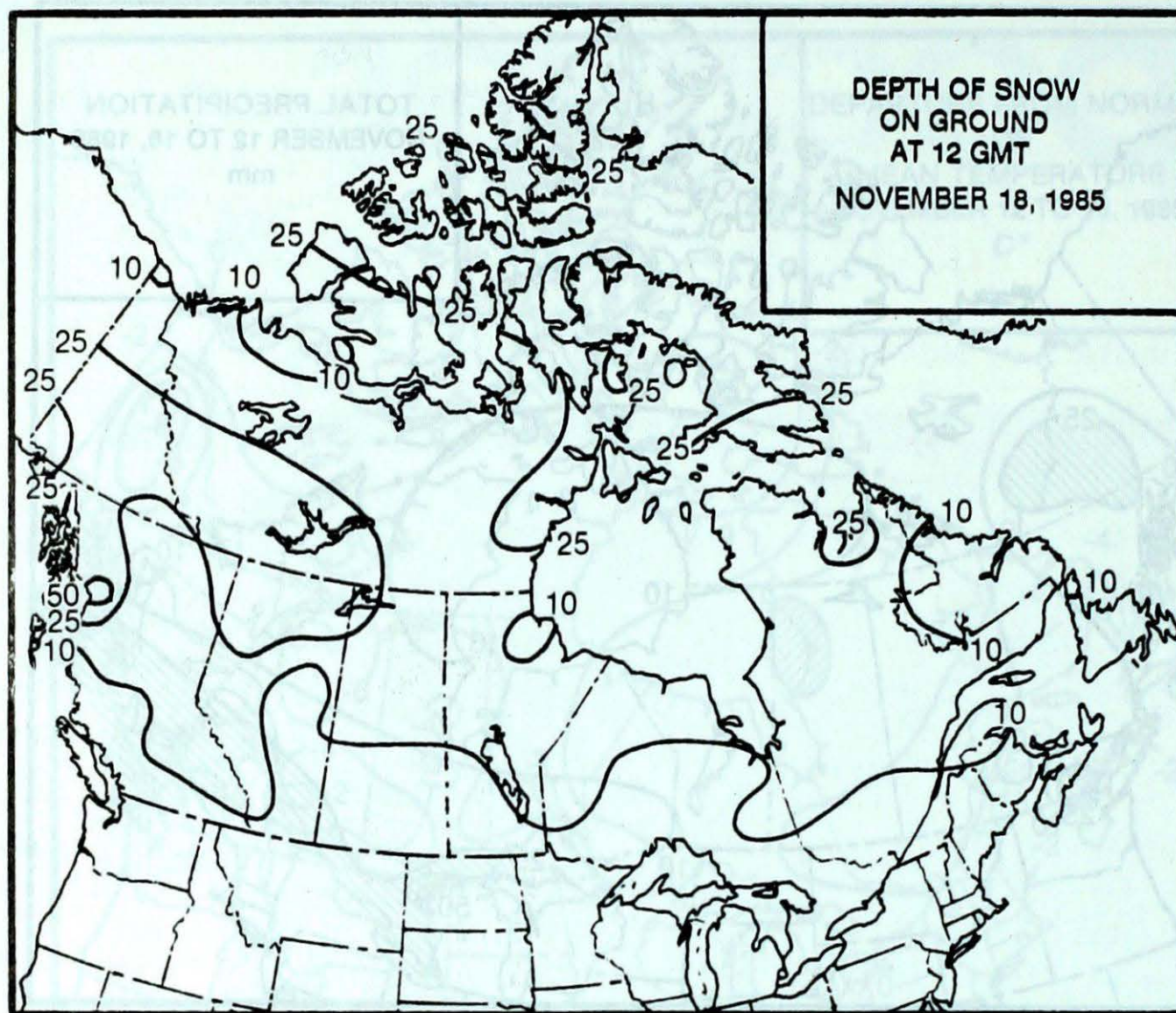
**HEAVIEST WEEKLY PRECIPITATION (mm)**

BRITISH COLUMBIA	KINDAKUN POINT	78
YUKON TERRITORY	QUIET LAKE	30
NORTHWEST TERRITORIES	CANTUNG	50
ALBERTA	MEDICINE HAT	7
SASKATCHEWAN	URANIUM CITY	8
MANITOBA	WINNIPEG INT'L	6
ONTARIO	WIARTON	59
QUEBEC	SHERBROOKE	39
NEW BRUNSWICK	SAINT JOHN	51
NOVA SCOTIA	YARMOUTH	52
PRINCE EDWARD ISLAND	CHARLOTTETOWN	46
NEWFOUNDLAND	ST LAWRENCE	67

The Front Cover

Clear skies allow us to depict Vancouver Island, and the Straits of Georgia and Juan de Fuca, on the left hand side of the photograph. Low stratus cloud hugs the coastline. Snow blankets the higher elevations of the Coastal Range, the Selkirk, Purcell and Rocky Mountains, while the valleys are for the most part snow free, and as a result stand out very well. Fog has formed over Kootenay Lake in the southeastern interior. On the right hand side of the photo, a large area of snow covers Alberta and Montana, and the rivers can be seen meandering across the landscape. Areas of heavy snow are evident in the plateau region of Idaho and Washington States.

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.

CLIMATIC PERSPECTIVES VOLUME 7

Managing Editor M.J. Newark
 Editor (English) A. Radomski
 Editor (French) A.A. Gaillet
 Staff Writer M. Skarpathiotakis
 Art Layout K. Czaja
 Cartography J. Strecansky
 G. Young/T. Chivers
 B. Taylor
 Word Processing U. Ellis
 N. Khaja/P. Hare

Regional Correspondents

Atl.: F. Amrault; Que.: J. Miron
 Central: F. Luciw; Ont.: W. Christian
 Western: W. Prusak; Pac.: N. Penny
 Yukon Weather Centre; Yellowknife
 Weather Office; Ice Central Ottawa
 AES Satellite Data Lab

ISSN 0225-5707 UDC 551.506.1(71)

Climatic Perspectives is a weekly bilingual publication of the Canadian Climate Centre, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ont. Canada M3H 5T4. Phone (416)667-4906/4711.

The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socio-economic impact.

Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. Black and white photographs can be used, but not colour. The contents may be reprinted freely with proper credit.

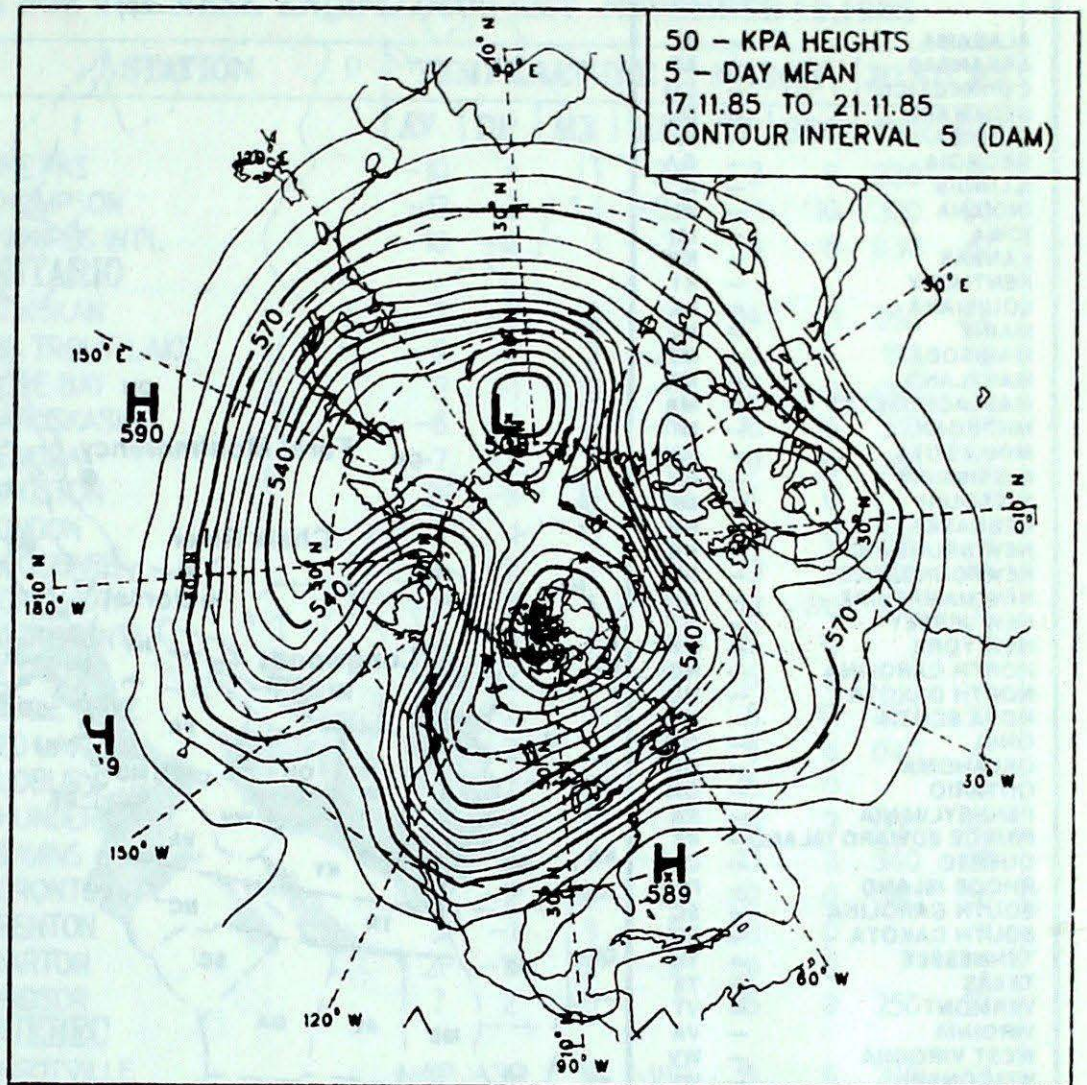
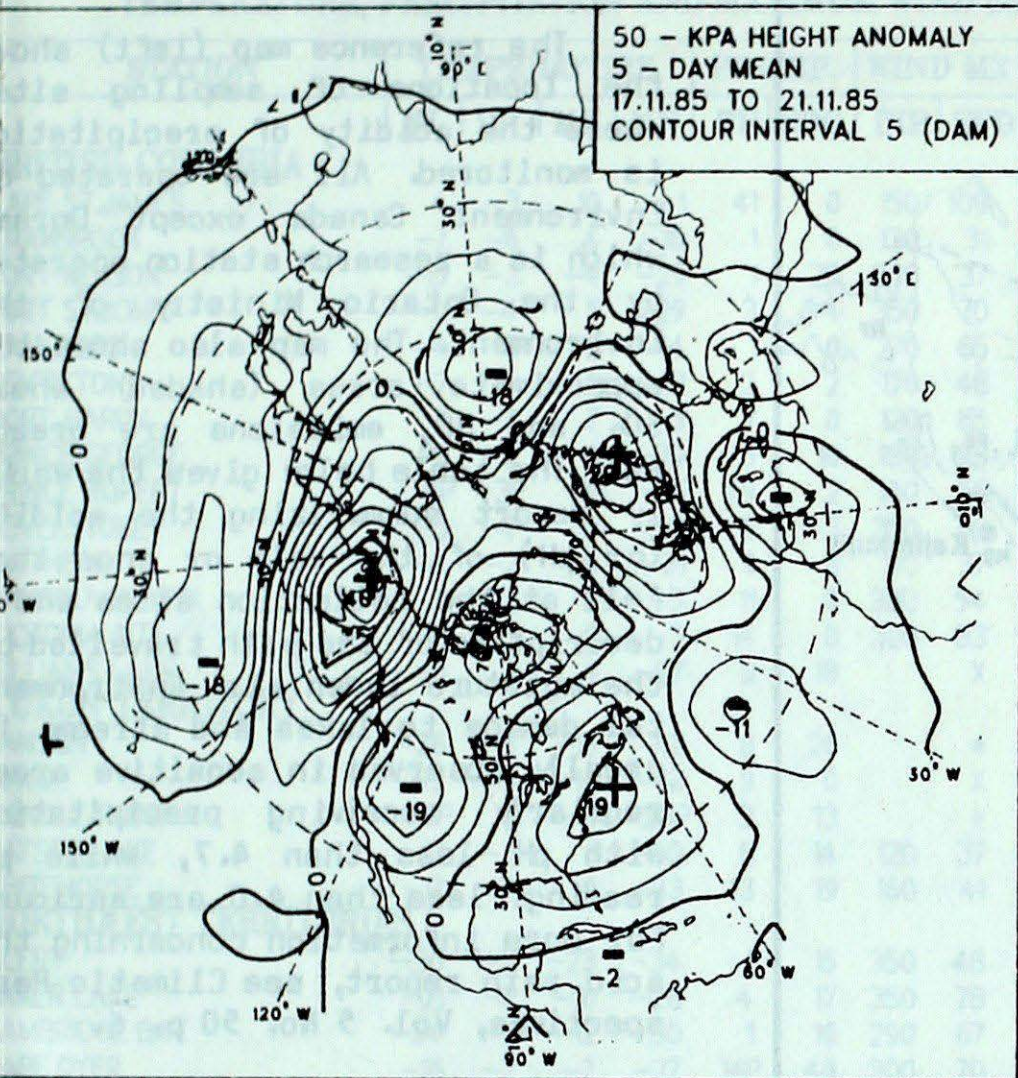
The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service.

Annual Subscriptions

Weekly issue including
 monthly supplement: \$35.00
 Monthly issue only: \$10.00

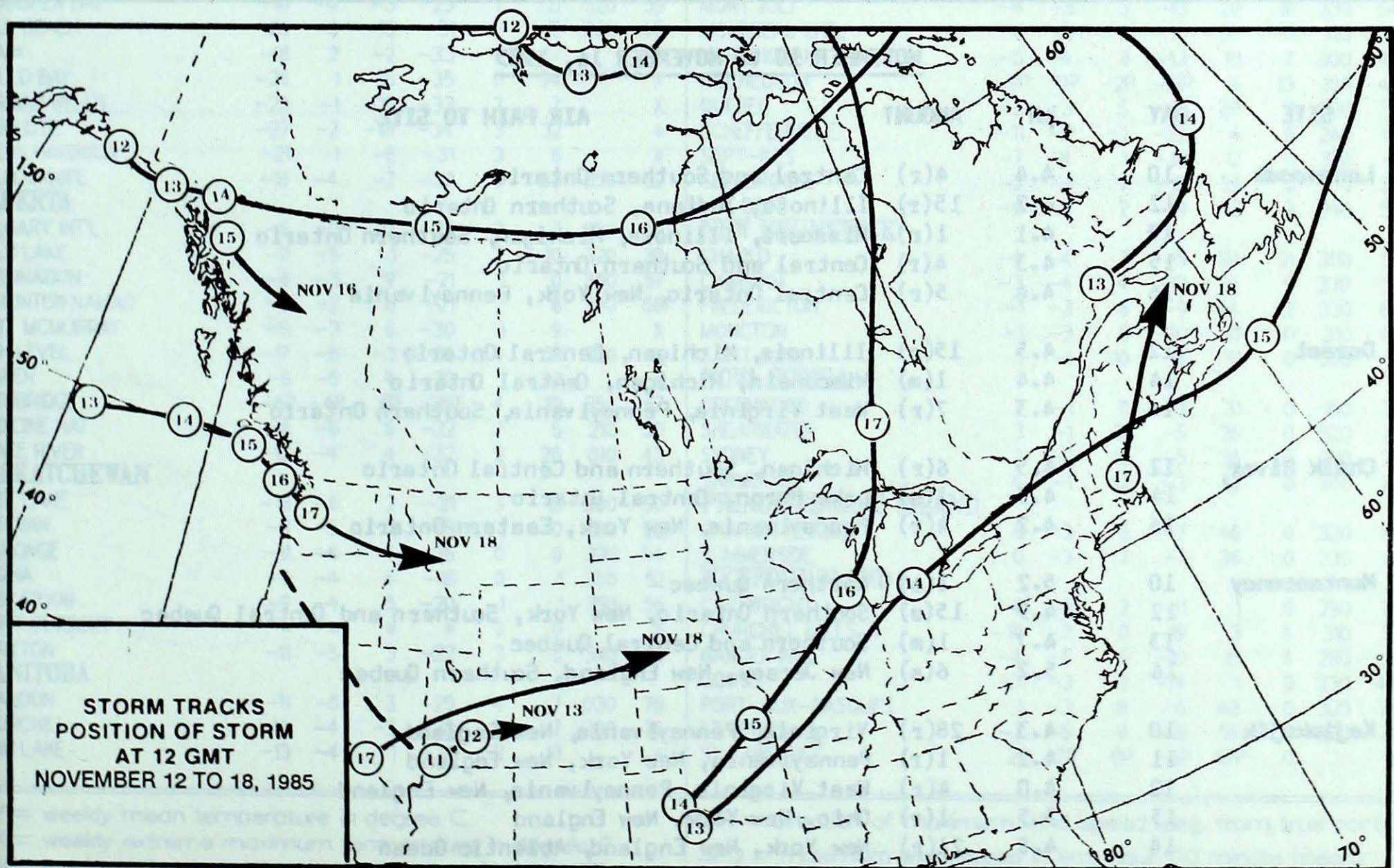
Subscription enquiries: Supply and Services Canada, Publishing Centre, Ottawa, Ontario, Canada, K1A 0S9. Phone (613)994-1495

50 KPa ATMOSPHERIC CIRCULATION



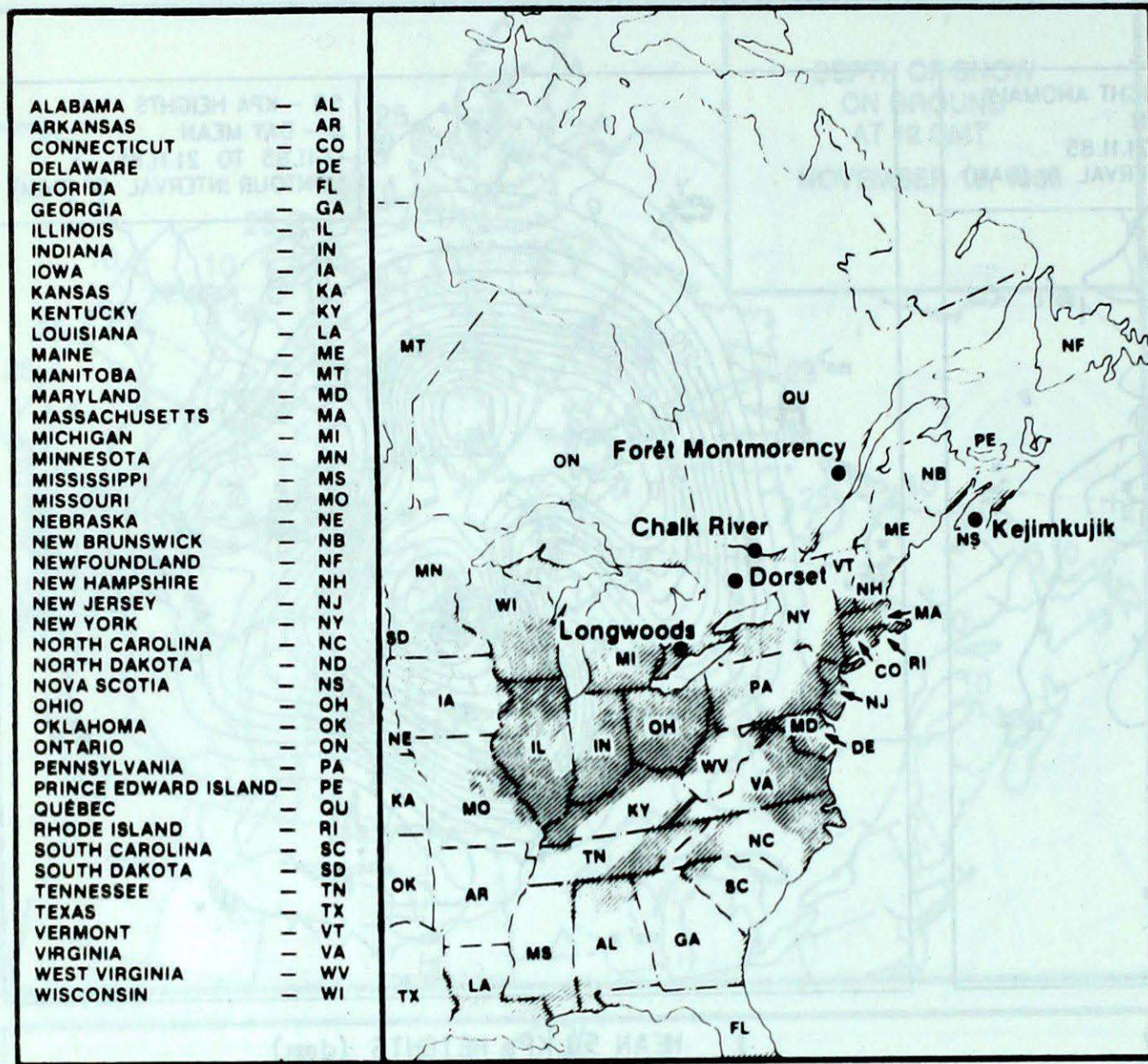
MEAN 50 KPa HEIGHT ANOMALY (dam)
November 17 to November 21, 1985

MEAN 50 KPa HEIGHTS (dam)
November 17 to November 21, 1985



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 SO₂ and 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.

NOVEMBER 10 to NOVEMBER 16, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	10	4.4	4(r)	Central and Southern Ontario
	12	4.2	15(r)	Illinois, Indiana, Southern Ontario
	13	4.1	1(r)	Missouri, Illinois, Michigan, Southern Ontario
	15	4.3	4(r)	Central and Southern Ontario
	16	4.4	5(r)	Central Ontario, New York, Pennsylvania
Dorset	12	4.5	15(r)	Illinois, Michigan, Central Ontario
	14	4.4	1(m)	Wisconsin, Michigan, Central Ontario
	16	4.3	7(r)	West Virginia, Pennsylvania, Southern Ontario
Chalk River	12	4.5	6(r)	Michigan, Southern and Central Ontario
	14	4.3	1(s)	Lake Huron, Central Ontario
	16	4.2	4(r)	Pennsylvania, New York, Eastern Ontario
Montmorency	10	5.2	1(s)	Northern Quebec
	12	4.9	15(s)	Southern Ontario, New York, Southern and Central Quebec
	13	4.7	1(m)	Southern and Central Quebec
	16	5.2	6(s)	New Jersey, New England, Southern Quebec
Kejimikujik	10	4.3	28(r)	Virginia, Pennsylvania, New England
	11	4.2	1(r)	Pennsylvania, New York, New England
	12	4.0	4(r)	West Virginia, Pennsylvania, New England
	13	3.5	1(r)	Ohio, New York, New England
	14	4.8	21(r)	New York, 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 NOVEMBER 19, 1985

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
BRITISH COLUMBIA									THE PAS	-10	*	1	-23	2	9	330	59
CAPE ST. JAMES	4	-3	10	-1	41	0	150	109	THOMPSON	-12	-3	-1	-32	1	10	320	50
CRANBROOK	-7	-6	4	-16	1	0	130	31	WINNIPEG INT'L	-10	-6	1	-21	6	6	030	67
FORT NELSON	-15	-3	-4	-29	1	20	330	37	ONTARIO								
FORT ST. JOHN	-11	-4	5	-29	3	4	350	70	ATIKOKAN	-7	-2	3	-16	24	1	050	44
KAMLOOPS	-4	-6	5	-14	1	0	270	65	BIG TROUT LAKE	-9	*	3	-23	5	4	190	48
PENTICTON	-2	-5	5	-12	2	2	170	48	GORE BAY	2	-1	8	-5	26	0	090	56
PORT HARDY	2	-2	7	-5	7	0	120	65	KAPUSKASING	-6	-2	2	-15	16	16	310	37
PRINCE GEORGE	-11	*	5	-29	3	10	180	93	KENORA	-7	-3	3	-13	19	10	050	57
PRINCE RUPERT	0P	-3P	8P	-8P	69	2	140	56	KINGSTON	2P	-1P	8P	-6P	24	0		X
REVELSTOKE	-3	-4	2	-10	11	5	350	69	LONDON	5	1	15	-2	33	0	240	52
SMITHERS	-4	-2	16	-21	9	8	170	37	MOOSONEE	-6	-2	2	-13	3	2	300	46
VANCOUVER INT'L	2	-3	8	-5	11	0	280	54	NORTH BAY	-2	-2	5	-12	18	170	100	59
VICTORIA INT'L	3	-3	9	-3	14	0	320	33	OTTAWA INT'L	-1	-3	7	-10	25	0		X
WILLIAMS LAKE	-8	*	4	-27	0	18		X	PETAWAWA	-3	-2	6	-14	15	0		X
YUKON TERRITORY									PICKLE LAKE	-9	-2	1	-21	5	12	060	57
DAWSON	-26	*	-13	-42	8	26		*	RED LAKE	-7	-2	2	-20	6	6	040	41
MAYO	-25	-9	-10	-42	9	0		X	SUDBURY	-3	-2	5	-11	15	0		X
SHINGLE POINT A	-16P	1P	-1P	-28P	2	13		*	THUNDER BAY	-3P	-1P	3P	-13P	19	2	060	48
WATSON LAKE	-17	-3	1	-40	6	14	120	37	TIMMINS	-6	-3	3	-16	13	11	340	37
WHITEHORSE	-17	-7	0	-33	13	19	160	41	TORONTO INT'L	3P	-1P	9P	-2P	42	0	090	56
NORTHWEST TERRITORIES									TRENTON	3	-1	9	-5	38	0		X
ALERT	-30	-3	-23	-34	1	15	350	48	WIARTON	2P	-1P	6P	-3P	59	0		X
BAKER LAKE	-21	-2	-10	-28	4	17	350	78	WINDSOR	7	2	18	1	35	0	250	57
CAMBRIDGE BAY	-24	-1	-12	-30	1	10	290	67	QUEBEC								
CAPE DYER	-16	-2	-7	-27	14P	48	300	70	BAGOTVILLE	-5P	-3P	3P	-18P	15	5	290	52
CLYDE	-22	-5	-12	-31	4	24	310	43	BLANC SABLON	-6P	*	3P	-14P	4P	1		X
COPPERMINE	-19	*	-4	-29	7P	17	270	56	INUKJUAK	-6	1	1	-19	18	15	260	70
CORAL HARBOUR	-21P	-5P	-5P	-33P	3	26		X	KUUJUAQ	-11	-2	-1	-20	5	28	240	54
EUREKA	-36	-5	-27	-41	2	12		*	KUUJUJARAPIK	-5	0	0	-10	19	14	170	57
FORT SMITH	-14	-3	-2	-28	3	0		X	MANIWAKI	-4	-3	5	-14	11	0	340	41
FROBISHER BAY	-16	-4	-3	-25	7	15	320	59	MONT JOLI	-4	-3	3	-13	20	10	330	54
HALL BEACH	-26	-6	-13	-31	2	15	300	46	MONTREAL INT'L	0	-2	9	-10	35	0	120	41
NUVIK	-18	2	-2	-33	4	17		X	NATASHQUAN	-5	-4	3	-13	18	7	300	43
MOULD BAY	-26	1	-15	-35	6	34		X	NITCHEQUON	-9P	0P	-2P	-15P	4	13	180	46
NORMAN WELLS	-20	-1	-10	-33	7	7		X	QUEBEC	-3	-3	5	-13	28	11	320	39
RESOLUTE	-27	-2	-18	-34	3	32		*	SCHEFFERVILLE	-11	-2	-2	-22	4	6	240	67
SACHS HARBOUR	-21	1	-6	-31	3	6		X	SEPT-ILES	-7	-4	3	-18	12	11	320	41
YELLOWKNIFE	-16	-4	-2	-30	9	33	350	52	SHERBROOKE	-2	-1	7	-16	39	0	270	35
ALBERTA									VAL D'OR	-6	-3	2	-19	13	2	340	50
CALGARY INT'L	-6	-2	12	-22	2	2	350	63	NEW BRUNSWICK								
COLD LAKE	-11	-5	1	-25	2	10	320	39	CHARLO	-4	-4	3	-15	24	21	300	57
CORONATION	-8	-3	9	-21	1	0	340	57	CHATHAM	-3	-4	4	-12	26	9	330	59
EDMONTON NAMAQ	-8	-2	8	-21	2	6	330	56	FREDERICTON	-1	-3	6	-9	44	2	330	63
FORT MCMURRAY	-11	-3	6	-30	1	9		X	MONCTON	-1	-3	8	-10	30	0	310	69
HIGH LEVEL	-17	-8	-3	-36	4	31	350	41	SAINT JOHN	1	-1	10	-8	51	0	330	61
JASPER	-9	-5	4	-30	1	23		X	NOVA SCOTIA								
LETHBRIDGE	-6P	-4P	6P	-25P	4	10	250	67	GREENWOOD	2	-1	11	-7	31	0	150	74
MEDICINE HAT	-8	-6	6	-22	7	5	210	50	SHEARWATER	3	-1	12	-5	26	0	320	76
PEACE RIVER	-12	-4	4	-32	2	26	010	43	SYDNEY	2	-2	10	-5	36	0	290	72
SASKATCHEWAN									YARMOUTH	4	-1	12	-3	52	0	340	74
DREE LAKE	-13	-6	2	-31	3	15	300	50	PRINCE EDWARD ISLAND								
ESTEVAN	-8	-5	7	-18	1	0	310	50	CHARLOTTETOWN	0	-3	8	-7	46	0	320	65
LA RONGE	-11	-4	6	-26	0	0	320	54	SUMMERSIDE	0	-3	7	-7	36	0	230	81
REGINA	-9	-4	4	-18	0	1	350	52	NEWFOUNDLAND								
SASKATOON	-9	-4	5	-20	1	1	350	56	CARTWRIGHT	-6	-4	2	-11	1	0	290	70
SWIFT CURRENT	*	*	*	*	0	0		X	CHURCHILL FALLS	-10	-3	0	-19	3	4	310	52
YORKTON	-11	-5	3	-22	3	5	340	48	GANDER INT'L	-4	-5	6	-10	15	4	280	57
MANITOBA									GOOSE	-7	-3	3	-14	1	0	230	44
IRANDON	-11	-5	3	-25	4	7	030	78	PORT-AUX-BASQUES	1	-3	8	-6	43	0	320	74
THURCHILL	-14	-4	-2	-26	5	7	300	76	ST JOHN'S	-2	-5	8	-8	56	12	330	74
WYNN LAKE	-13	-4	1	-28	3	18		*	ST LAWRENCE	2P	-2P	8P	-6P	67P	0		X

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 (10 minute mean)

X = not observed

P = value based on less than 7 days

* = missing