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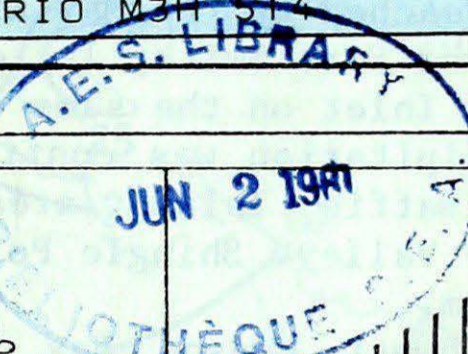
A WEEKLY REVIEW OF CANADIAN CLIMATE

CLIMATIC PERSPECTIVES

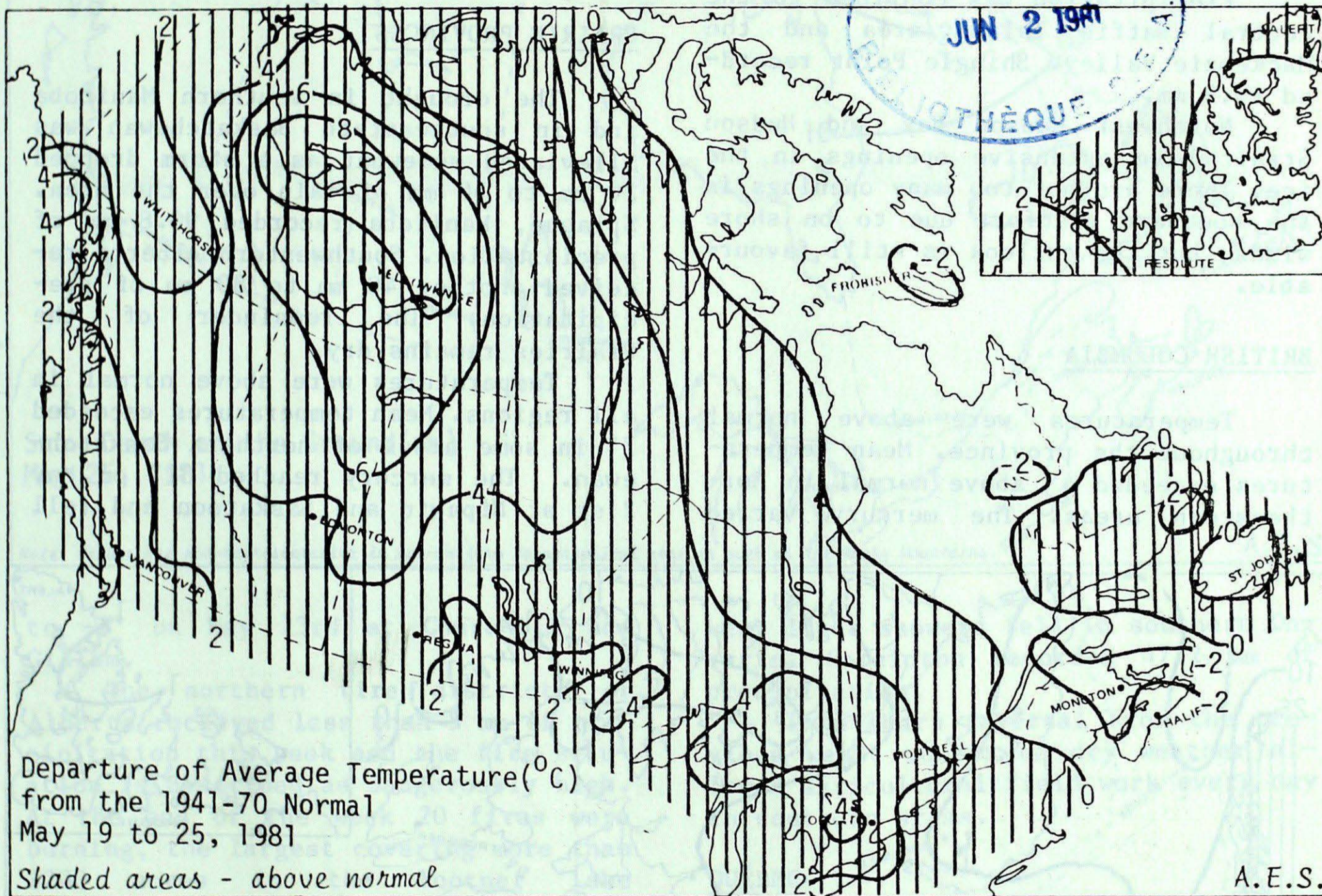
THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE,
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4

MAY 29, 1981

(Aussi disponible en français)



VOL.3 NO.21



Departure of Average Temperature ($^{\circ}\text{C}$)
from the 1941-70 Normal
May 19 to 25, 1981

Shaded areas - above normal

WEATHER HIGHLIGHTS FOR THE PERIOD - MAY 19 TO 25, 1981

Southern Manitoba receives rain

The drought in southern Manitoba was alleviated somewhat by rainfalls of 20 mm to 50 mm over the weekend. South-eastern Alberta received more precipitation in the predominately open rangeland regions. The rest of the Prairies remain dry.

The fire situation in southern Alberta is described as dangerously dry and 20 fires were burning at week's end the largest covering 2200 acres.

A weekend storm produced heavy rains in central and eastern Nova Scotia giving amounts generally in excess of 50 mm. Severe flooding was reported in Cape Breton where the greatest rainfalls occurred.

The mercury varied from 31° at Saskatoon, Saskatchewan to -18° at Mackar Inlet, Northwest Territories. The highest weekly precipitation total was 109.2 mm at Sydney, Nova Scotia.

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

YUKON AND NORTHWEST TERRITORIES

Mean temperatures were above normal with the exception (again this week) of the Baffin Island area. Mean temperatures exceeded 8° above normal in the Great Bear Lake region. The mercury reached 27° on May 25th at Fort Simpson and Fort Smith. It fell to -18° at Mackar Inlet on the same day.

Precipitation was confined to the central Baffin Island area and the Mackenzie Valley. Shingle Point recorded 19.9 mm.

Northwest Hudson Bay and Hudson Strait have extensive openings in the ice. There are not too many openings in the southern Beaufort due to on shore winds, but the outlook is still favourable.

BRITISH COLUMBIA

Temperatures were above normal throughout the province. Mean temperatures exceeded 4° above normal in northeastern areas. The mercury varied

from 28° at Revelstoke on the 20th to -2° at Dease Lake on the 23rd.

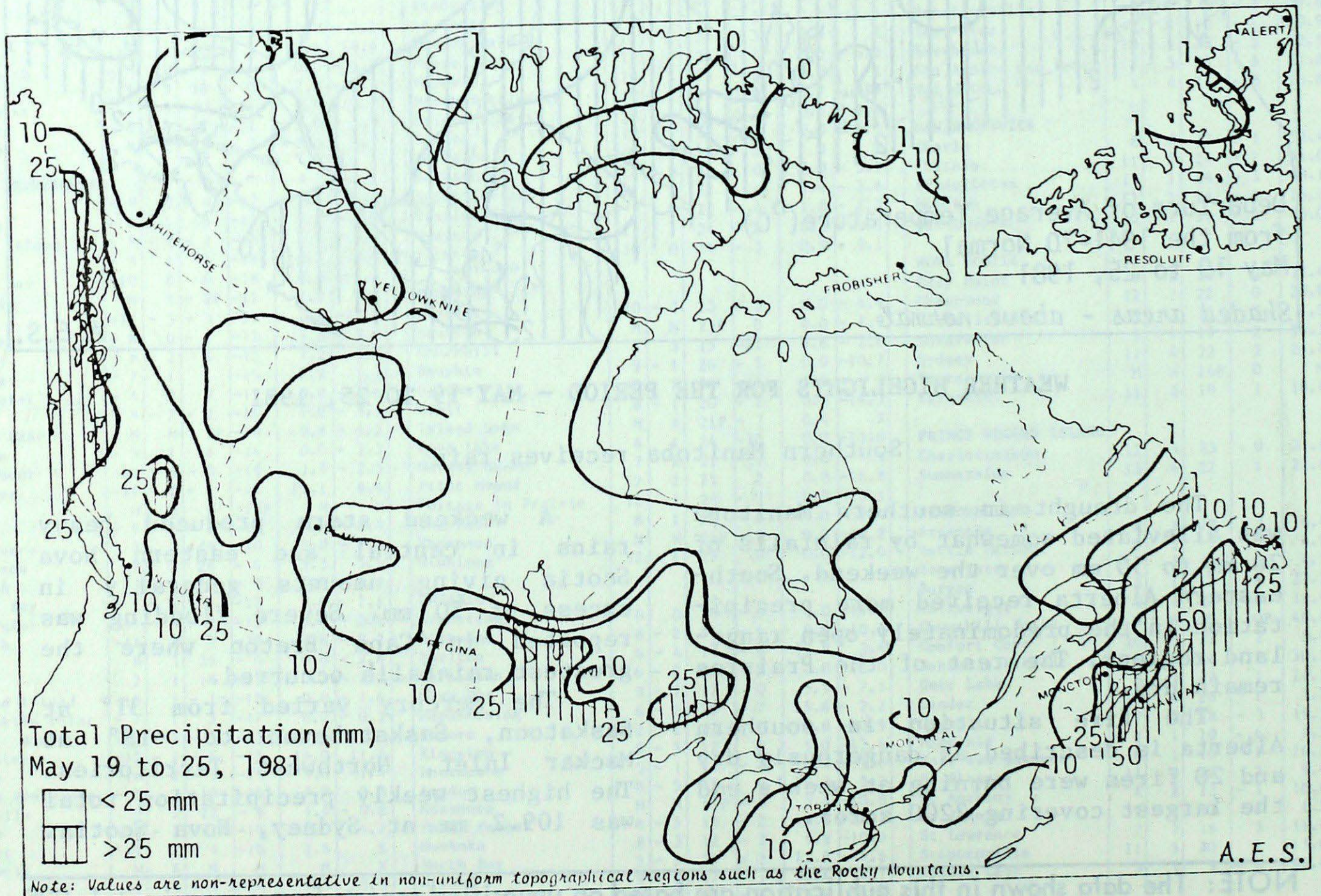
Southern areas continued to receive above normal precipitation amounts while northern areas remained dry. The greatest precipitation total, 50.2 mm, was recorded at Quesnel.

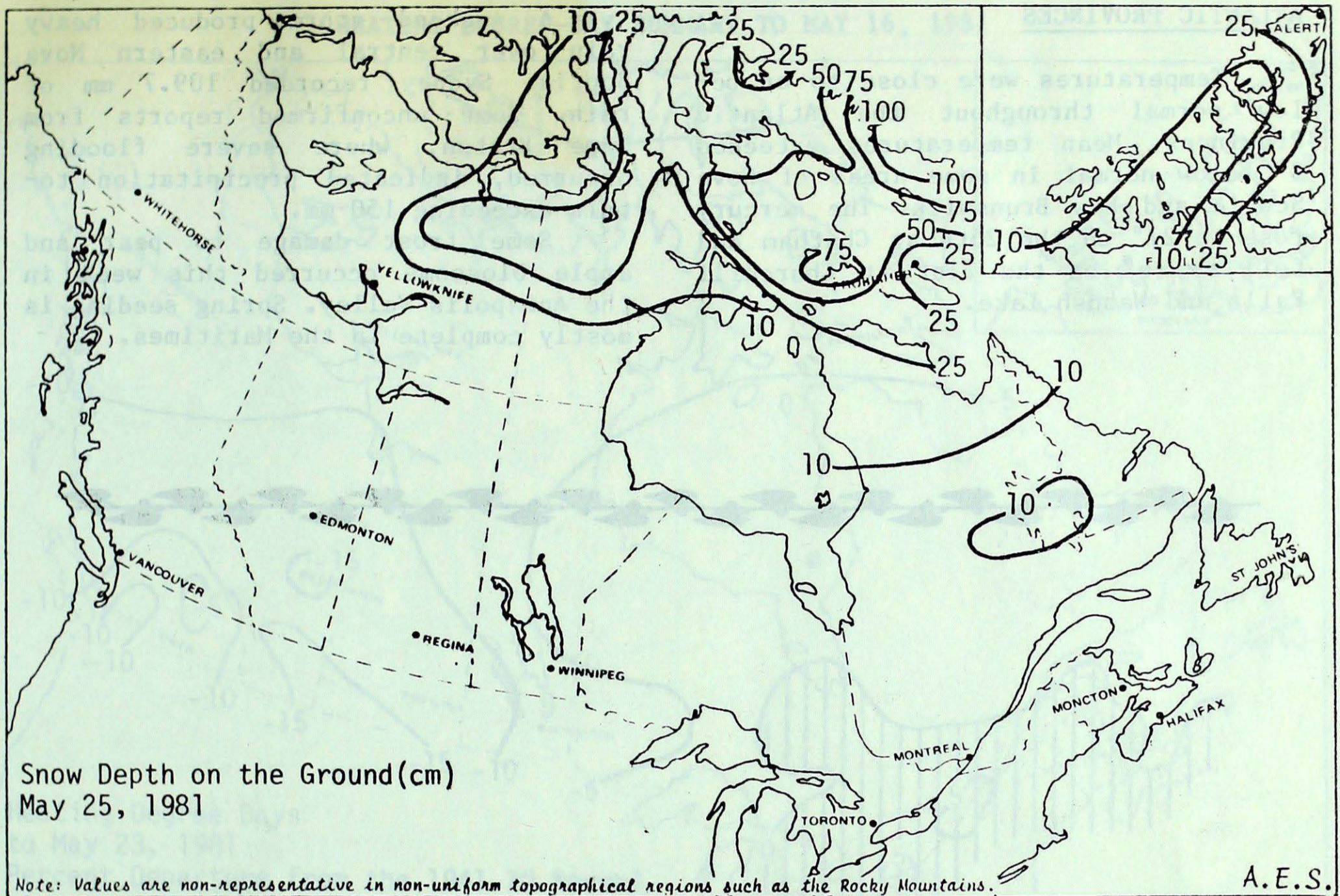
The fire hazard decreased in central areas as showers occurred for most of the week.

PRAIRIE PROVINCES

The drought in southern Manitoba and in southeastern Saskatchewan was alleviated somewhat as a storm dropped 20 mm to 50 mm of rain over the area. Sprague, Manitoba recorded 90.8 mm of precipitation. Southwestern Alberta received another 40 mm to 80 mm of precipitation. The remainder of the Prairies remains dry.

Temperatures were above normal in all regions. Mean temperatures exceeded 7° in some areas of northern Saskatchewan. The mercury reached 31° on May 21st at Nipawin and Saskatoon and fell





to -4° on May 23rd at Churchill and Gillam.

The northern fire districts of Alberta received less than 5 mm of precipitation this week and the fire situation is described as dangerously high. At the end of the week 20 fires were burning, the largest covering more than 2200 acres in the Footner Lake district.

ONTARIO

Temperatures soared into the mid to high twenties during the latter part of the week. Some high temperature records were set. Mean weekly temperatures were above normal exceeding 5° above normal in some central areas. The mercury reached 30° at Sioux Lookout on the 20th and at Kapuskasing two days later. It fell to -4° at Wawa on the 19th.

Rains in northwestern Ontario over the weekend helped dampen down forest fires that had broken out due to the previously tinder dry conditions. Only

very light showers fell in southern Ontario. Geraldton recorded 47.2 mm of precipitation.

In a sharp reversal from the previous week, sunny and dry weather allowed agricultural field work every day in southern areas.

QUÉBEC

Mean temperatures were above normal in southern areas, but clear skies produced large diurnal variations in temperatures. Some temperature records were set. The mercury varied from 30° at Maniwaki on May 24th to -10° at Nitchecun on May 21st.

In contrast to the preceding week, this week was marked by well below normal precipitation. Most stations recorded less than 6 mm of precipitation. Cap-aux-Meules (station Grindstone Island) reported 25.6 mm.

ATLANTIC PROVINCES

Temperatures were close to or below normal throughout the Atlantic Provinces. Mean temperatures exceeded 3° below normal in some areas of Nova Scotia and New Brunswick. The mercury rose to 27° on the 25th at Chatham and fell to -6° on the 21st at Churchill Falls and Wabush Lake.

A weekend storm produced heavy rain over central and eastern Nova Scotia. Sydney recorded 109.7 mm of rain. Some unconfirmed reports from Cape Breton, where severe flooding occurred, indicated precipitation totals exceeding 150 mm.

Some frost damage to pear and apple blossoms occurred this week in the Annapolis Valley. Spring seeding is mostly complete in the Maritimes.



CLIMATIC PERSPECTIVES

Staff

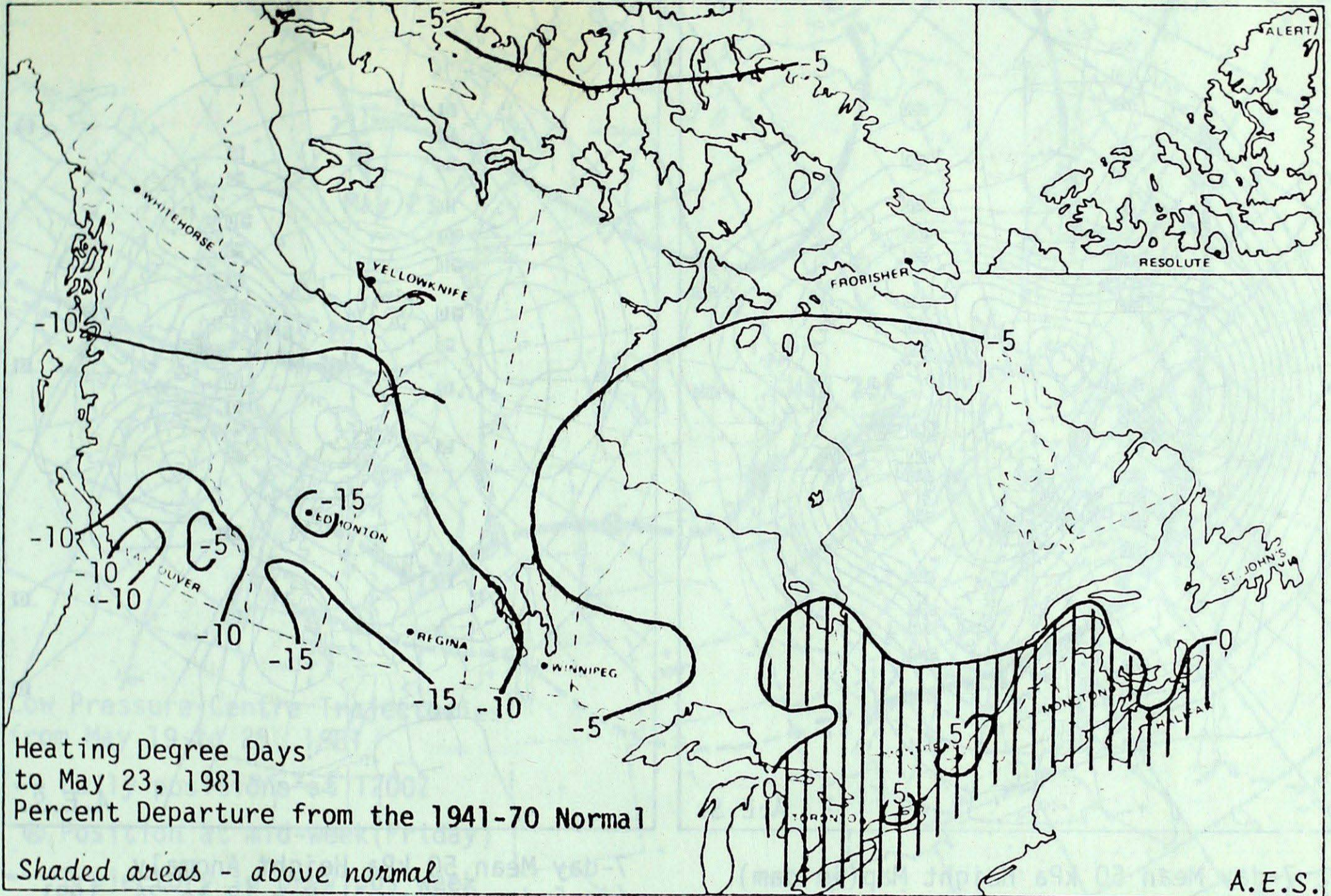
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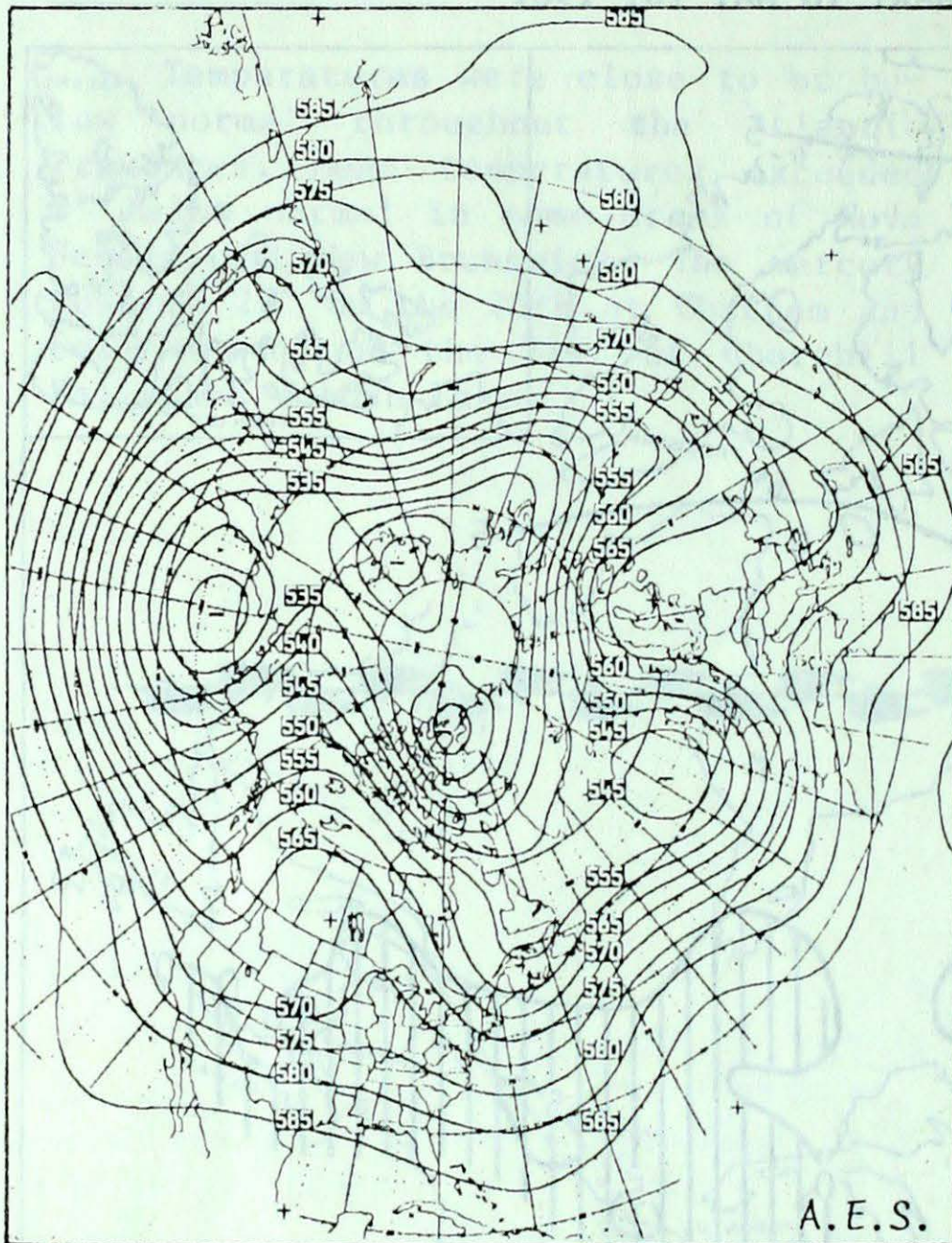
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HEATING DEGREE-DAY SUMMARY TO MAY 16, 1981

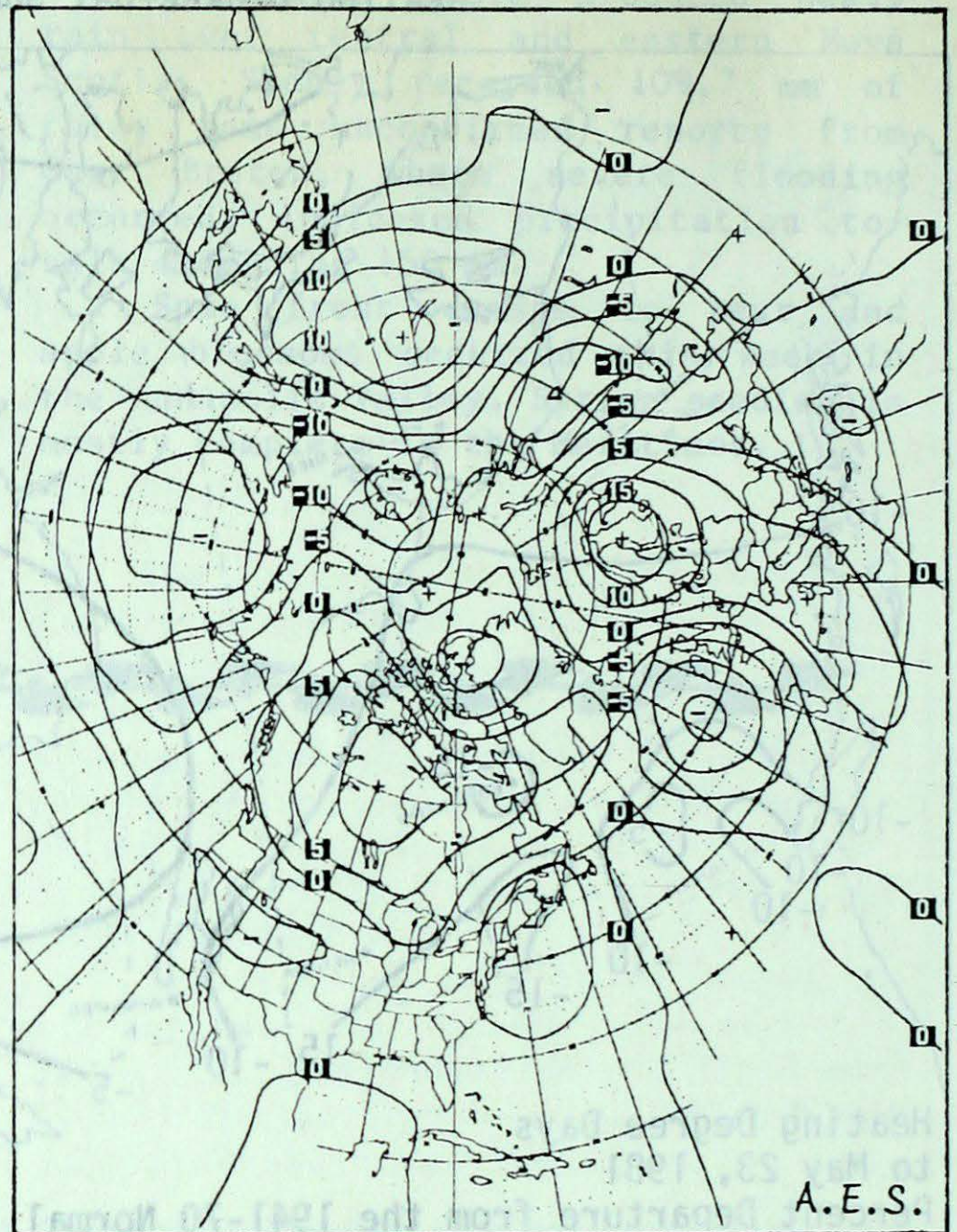


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	665.5	-22.5	11399.5	-399.5	97
Inuvik	355.0	-122.0	8976.5	-846.5	91
Whitehorse	233.5	-35.5	6157.0	-482.0	93
Vancouver	152.0	12.0	2685.5	-202.5	93
Edmonton Mun	140.5	-40.5	4586.5	-852.5	84
Calgary	214.5	-0.5	4355.0	-786.0	85
Regina	151.5	-43.5	4963.0	-821.0	86
Winnipeg	176.5	-15.5	5289.0	-480.0	92
Thunder Bay	220.0	-15.0	5373.5	-175.5	97
Windsor	141.0	21.0	3648.0	108.0	103
Toronto	184.5	26.5	4183.0	178.0	104
Ottawa	155.0	3.0	4703.5	103.5	102
Montreal	153.0	8.0	4684.5	274.5	106
Quebec	202.5	13.5	5213.5	252.5	105
Saint John, N.B.	205.0	-27.0	4681.5	99.5	102
Halifax	217.5	-8.5	4109.5	171.5	104
Charlottetown	190.0	-46.0	4464.5	23.5	101
St. John's, Nfld.	213.5	-89.5	4447.5	-43.5	99

Atmospheric Circulation



7-day Mean 50 kPa Height Map (in dam)
May 18 to 24, 1981



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) May 18 to 24, 1981

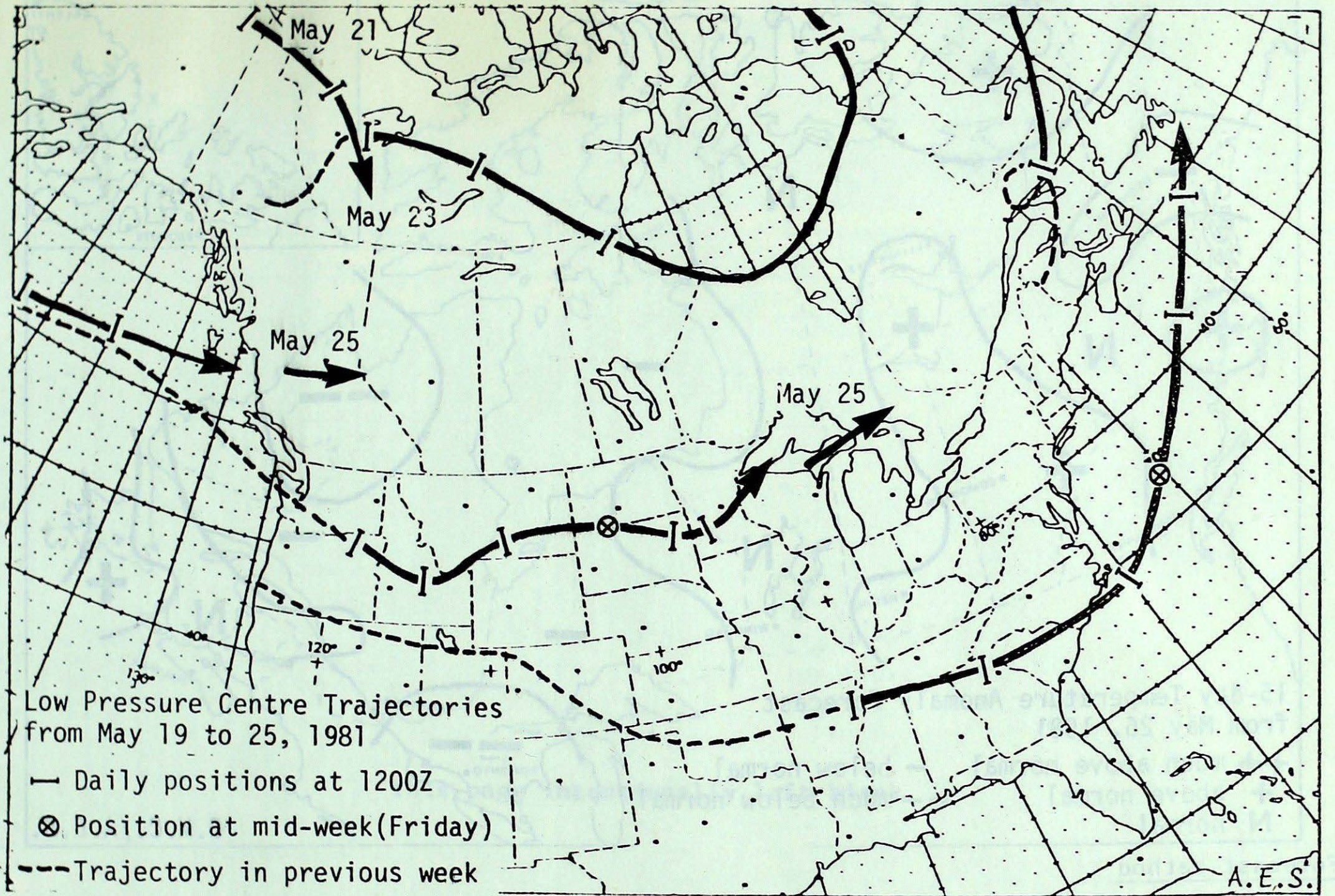
A major 50 kPa ridge persisted over central Canada and extended its influence northwestward across the Yukon continuing a trend of mild dry weather. Positive 50 kPa height anomalies coincided well with above normal mean temperatures.

A major upper trough and closed low remained entrenched over the southern regions of western Canada resulting in a split flow in the upper circulation. A surface low pressure system associated with the upper feature strengthened over the northwestern United States early in the period and moved slowly eastward across the northern plains reaching the upper great lakes by the weekend. Shower and thunderstorm activity was prevalent in southern British Columbia and Alberta. The drought stricken areas of southern Manitoba and northwestern Ontario received most of the precipitation.

An area of strong high pressure originating in northern Canada drifted southward early in the period. Preceding the weather system approaching from the west, it encompassed the Great Lakes Basin giving sunny dry conditions. Temperatures were cool at first but modified rapidly to above seasonal values by mid period and became humid and unsettled in the southerly flow preceding the approaching weather system.

The weather pattern in the Atlantic Provinces continued to vary considerably. No sooner does one weather system depart than another disturbance approaches from the southwest. The latest in the series moved off the Carolina coast and tracked along the eastern sea-board south of Nova Scotia and Newfoundland, during the weekend.

LOW PRESSURE CENTRE TRAJECTORIES

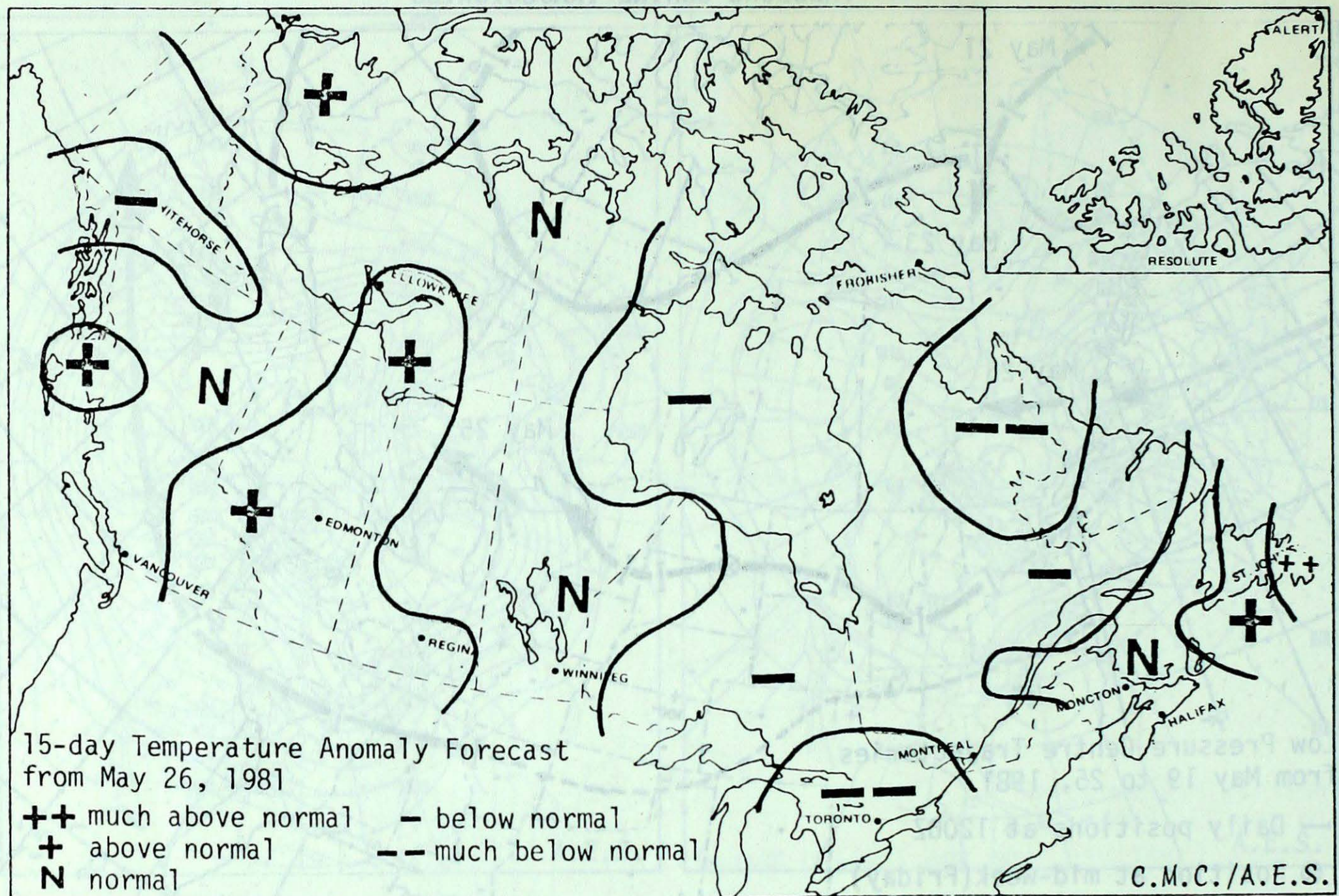


Current Temperature Anomaly Forecast

Station	Forecast
Whitehorse	Below Normal
Victoria	Near Normal
Vancouver	Near Normal
Edmonton	Above Normal
Regina	Above Normal
Winnipeg	Near Normal
Thunder Bay	Below Normal
Toronto	Much Below Normal
Ottawa	Much Below Normal
Montreal	Below Normal
Quebec	Below Normal
Fredericton	Near Normal
Halifax	Near Normal
Charlottetown	Near Normal
St. John's	Both Above Normal
Goose Bay	Below Normal
St. John's Bay	Below Normal
Inuvik	Above Normal

Note: Anomaly denotes departure from the 1961-73 mean.

15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

<u>Station</u>	<u>Current Temperature Anomaly Forecast</u>	<u>Current Temperature Anomaly Forecast</u>
Whitehorse	Below Normal	From 0.5° to 1.6° below Normal
Victoria	Near Normal	Within 0.3° of Normal
Vancouver	Near Normal	Within 0.3° of Normal
Edmonton	Above Normal	From 0.5° to 1.6° above Normal
Regina	Above Normal	From 0.5° to 1.8° above Normal
Winnipeg	Near Normal	Within 0.6° of Normal
Thunder Bay	Below Normal	From 0.4° to 1.4° below Normal
Toronto	Much Below Normal	More than 1.6° below Normal
Ottawa	Much Below Normal	More than 1.6° below Normal
Montreal	Below Normal	From 0.5° to 1.6° below Normal
Quebec	Below Normal	From 0.4° to 1.4° below Normal
Fredericton	Near Normal	Within 0.4° of Normal
Halifax	Near Normal	Within 0.3° of Normal
Charlottetown	Near Normal	Within 0.4° of Normal
St. John's	Much Above Normal	More than 1.7° above Normal
Goose Bay	Below Normal	From 0.5° to 1.7° below Normal
Frobisher Bay	Below Normal	From 0.5° to 1.8° below Normal
Inuvik	Above Normal	From 0.7° to 2.3° above Normal

Note: Anomaly denotes departure from the 1949-73 mean.

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. MAY 26, 1981

Table with columns for Station, Temperature (°C) (Average, Departure from Normal, Extreme Maximum, Extreme Minimum, Total), and Precip. (mm) (Departure from Normal, Total). Rows are categorized by province/territory: BRITISH COLUMBIA, YUKON, NORTHWEST TERRITORIES, ALBERTA, SASKATCHEWAN, MANITOBA, ONTARIO, SIMCOE, QUÉBEC, NEW BRUNSWICK, NOVA SCOTIA, PRINCE EDWARD ISLAND, and NEWFOUNDLAND.

P = extreme value based on less than 7 days X = no normal due to short period M = not available at press time