



Environment
Canada

Environnement
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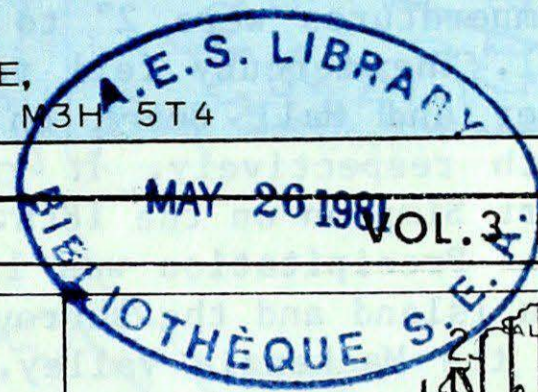
A WEEKLY REVIEW OF CANADIAN CLIMATE

Atmospheric
Environment

Environnement
atmosphérique

CLIMATIC PERSPECTIVES

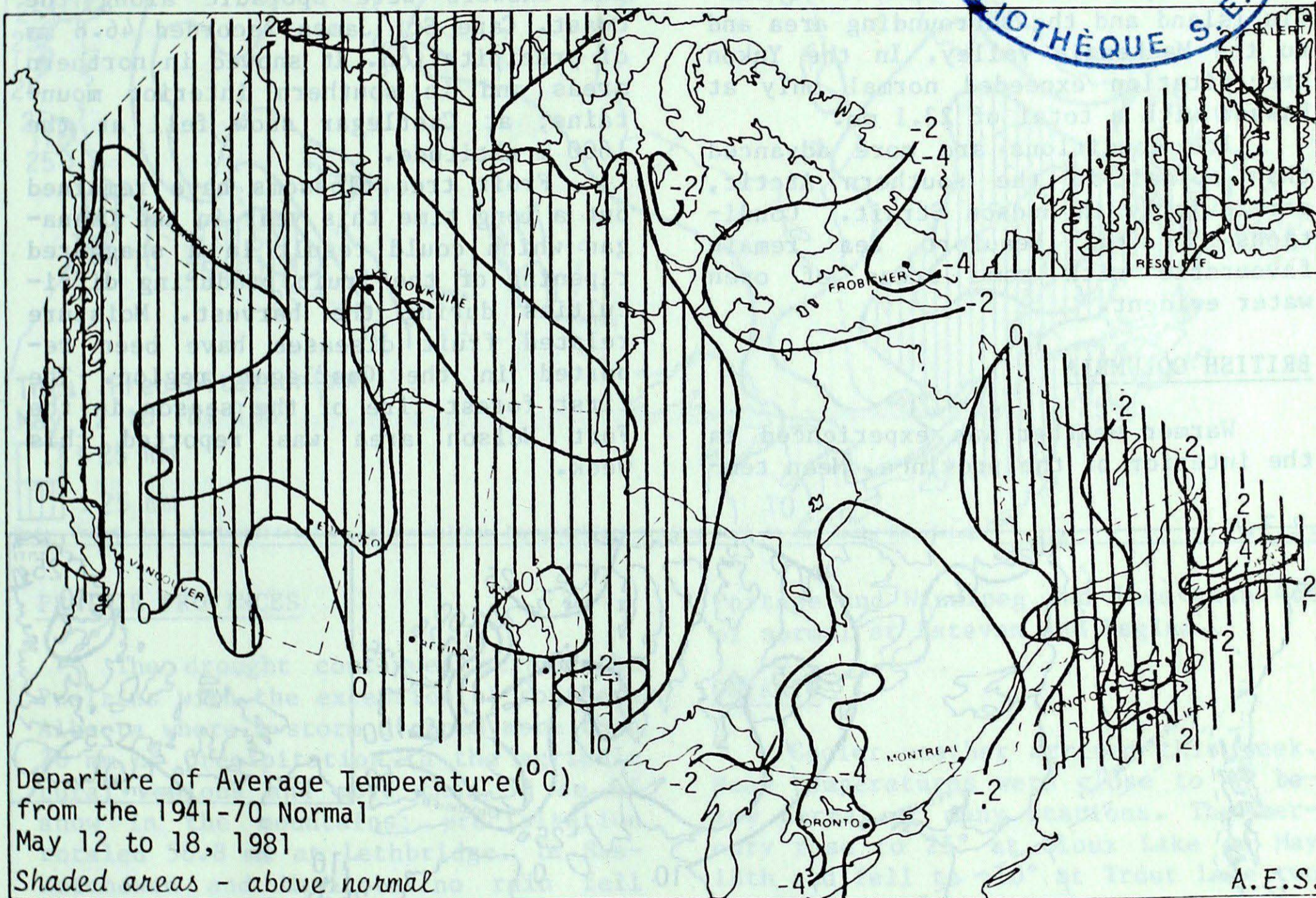
THE CANADIAN CLIMATE CENTRE,
ATMOSPHERIC ENVIRONMENT SERVICE,
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4



MAY 22, 1981

(Aussi disponible en français)

VOL. 3 NO. 20



WEATHER HIGHLIGHTS FOR THE PERIOD - MAY 12 TO 18, 1981

Most of Prairies in drought as Southern Alberta receives more rain

A drought continues in the area north-east of Edmonton, in southern Saskatchewan and in Manitoba. Spring precipitation in these areas is 20% to 40% of normal.

A storm brought more precipitation to southern Alberta. Amounts varied from 20 mm to 57 mm and more than 30 cm of snow fell in the mountains. The crop situation was much improved, especially for pasture and forage crops.

Cool weather in the Okanagan has caused an extended blossoming time for the fruit trees. This may result in a staggered ripening of the fruit and cause problems at harvest time.

The mercury reached its maximum of 27° at Sherbrooke, Québec and its minimum of -20° at Cape Dyer and Hall Beach, Northwest Territories. The highest precipitation total, 110.9 mm, was recorded at Sept-Îles, Québec.

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 in all regions with the exception of the Baffin Island area where mean temperatures were 2° to 5° below normal. The mercury fell to -20° at Cape Dyer and Hall Beach on the 13th and 14th respectively. It rose to 26° at Fort Simpson on the 18th.

Precipitation was limited to Baffin Island and the surrounding area and to the Mackenzie Valley. In the Yukon precipitation exceeded normal only at Dawson with a total of 23.1 mm.

Ice conditions are more advanced than normal in the southern Arctic, particularly in Hudson Strait. Conditions in the Beaufort Sea remain favourable with some areas of open water evident.

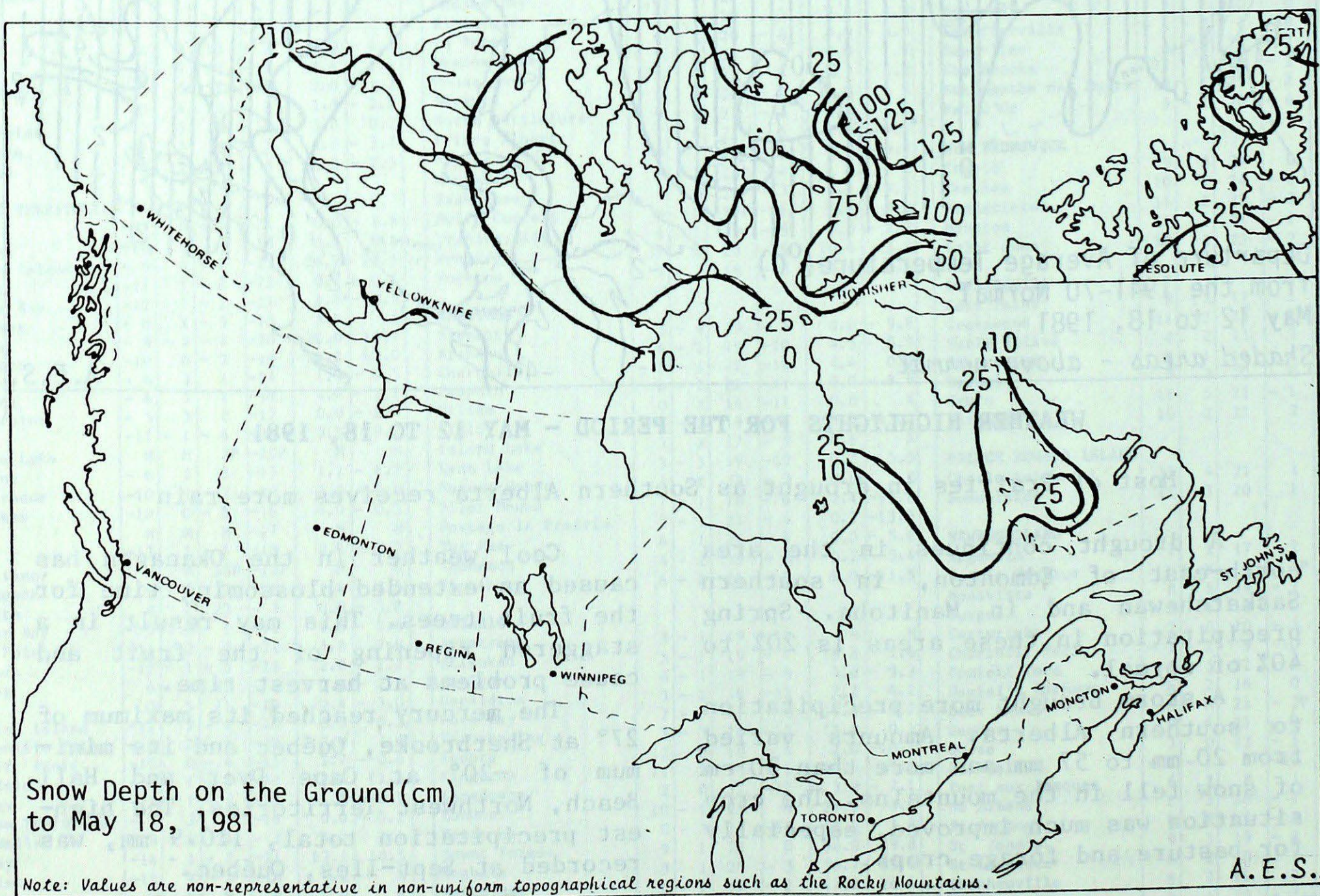
BRITISH COLUMBIA

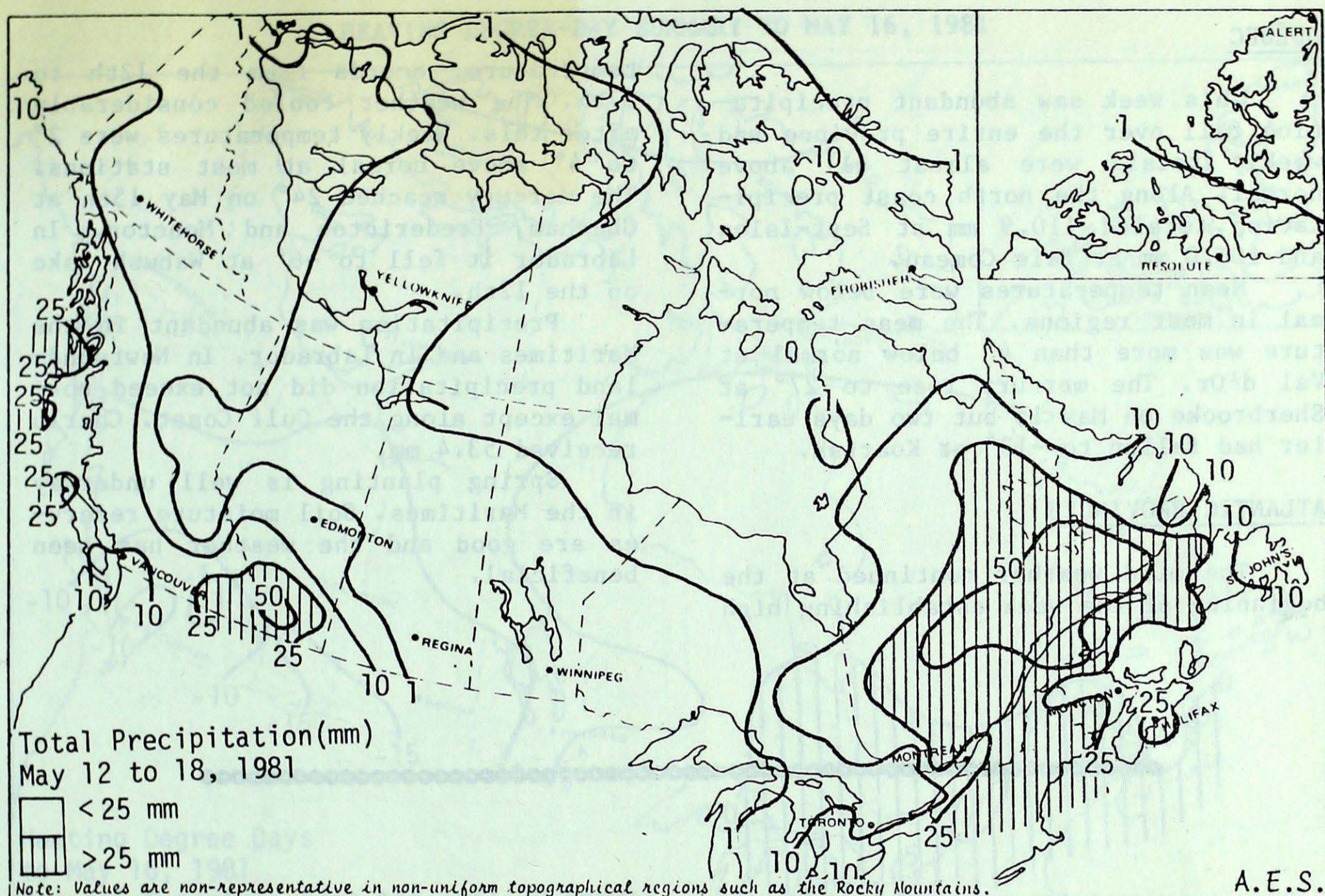
Warmer weather was experienced in the interior of the province. Mean tem-

peratures were close to normal in the peripheral areas and reached 2° to 3° above normal in the interior. After falling to -4° at Mackenzie on the 12th, the mercury rose to 25° on the same day at Lytton and at Kamloops and Revelstoke on the 18th.

Showers were numerous this week pushing weekly precipitation totals to above normal values at many stations. The showers were sporadic along the coast. Cape St. James recorded 46.8 mm of precipitation. It snowed in northern areas and in southern interior mountains; at Castlegar snow fell at the 1600 m altitude.

Fruit tree blossoms have remained out a long time this year in the Okanagan which could result in a staggered ripening of the fruit producing difficulties during the harvest. Moisture related fruit diseases have been reported in the Castlegar region. The first forest fire of the season in the Fort Nelson area was reported this week.





PRAIRIE PROVINCES

The drought continued across the Prairies with the exception of southern Alberta where a storm dropped more than 20 mm of precipitation in the agricultural regions and more than 30 cm of snow in the mountains; precipitation totaled 56.8 mm at Lethbridge. In Saskatchewan and Manitoba no rain fell this week at most stations and where rain did fall less than 5 mm was recorded.

Temperatures were above normal in most regions. The mercury reached 26° at Dauphin on the 18th and fell to -11° at Churchill and Gillam on the 14th and 15th respectively.

The precipitation from the storm of the 15th and 16th and from the storm of the previous week has resulted in a much improved crop situation in southern Alberta, especially for pasture and forage crops. The drought continues north-east of Edmonton, in southern Saskatchewan and in Manitoba. Spring precipitation is 20% of normal at

Portage and Winnipeg and less than 40% of normal at Estevan and Regina.

ONTARIO

Cooler weather arrived this week. Mean temperatures were close to 4° below normal at many stations. The mercury rose to 25° at Sioux Lake on May 18th and fell to -10° at Trout Lake two days later.

The beginning of the week saw precipitation fall in most areas, but weekly totals did not exceed normal at most stations. Ottawa recorded 35.4 mm.

Extremely dry conditions in extreme northwestern Ontario has forced fire crews to remain on alert status. The forests and their soils are reported as 'tinder dry'.

Cold, wet and windy weather has hampered farm field work and spraying in southern regions but a sunny weekend helped conditions. Frost was common across agricultural areas on the weekend causing some damage to unprotected plants.

QUÉBEC

This week saw abundant precipitation fall over the entire province and weekly totals were almost all above normal. Along the north coast precipitation totaled 110.9 mm at Sept-Isles and 106.0 mm at Baie Comeau.

Mean temperatures were below normal in most regions. The mean temperature was more than 4° below normal at Val d'Or. The mercury rose to 27° at Sherbrooke on May 15 but two days earlier had fallen to -13° at Koartak.

ATLANTIC PROVINCES

The mild weather continued at the beginning of the week establishing high

temperature records from the 12th to 17th. The weather cooled considerably after this. Weekly temperatures were 2° to 4° above normal at most stations. The mercury reached 24° on May 15th at Chatham, Fredericton and Moncton. In Labrador it fell to -6° at Wabush Lake on the 12th.

Precipitation was abundant in the Maritimes and in Labrador. In Newfoundland precipitation did not exceed normal except along the Gulf Coast. Charlo received 53.4 mm.

Spring planting is well underway in the Maritimes. Soil moisture reserves are good and the weather has been beneficial.



CLIMATIC PERSPECTIVES

Staff

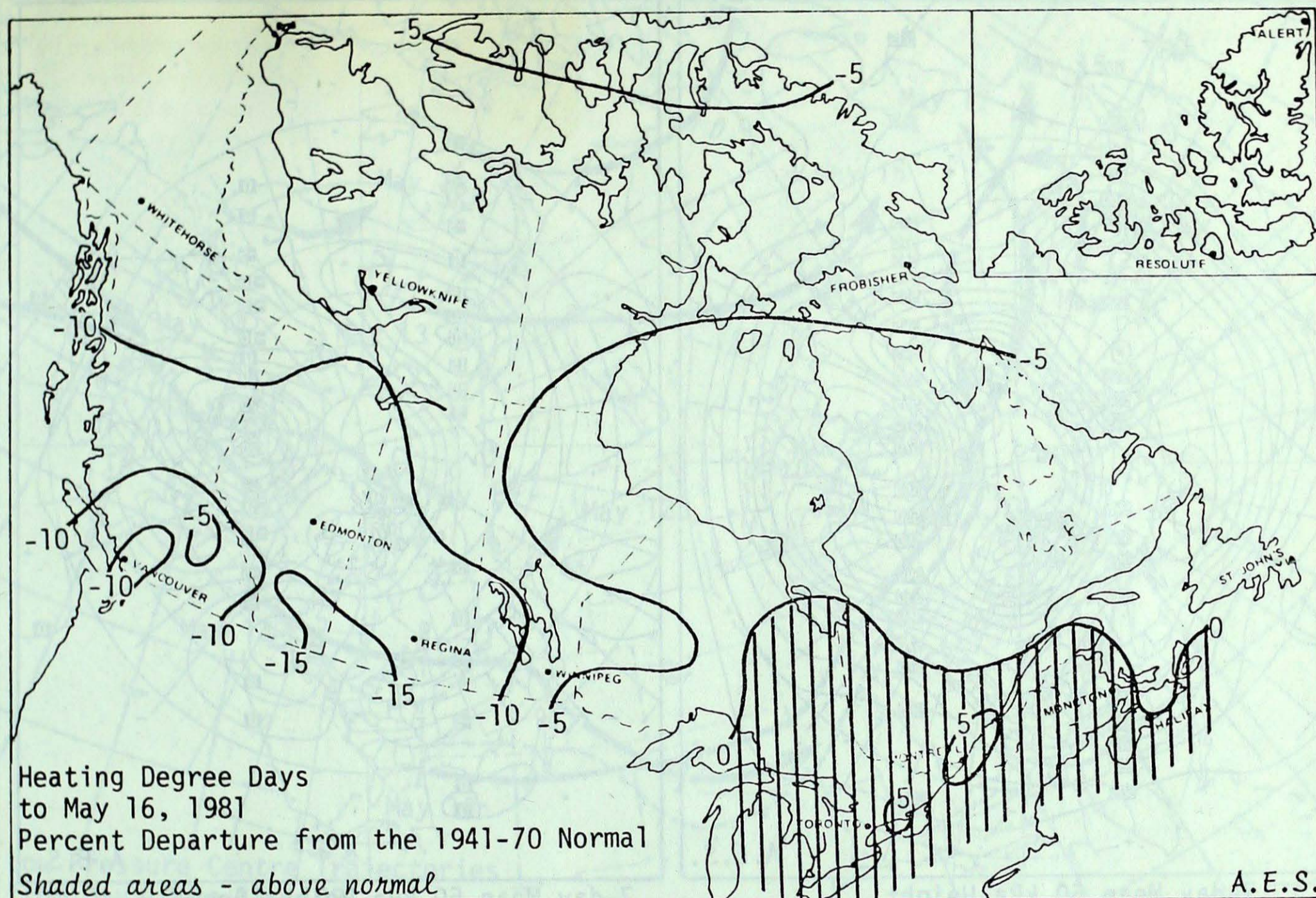
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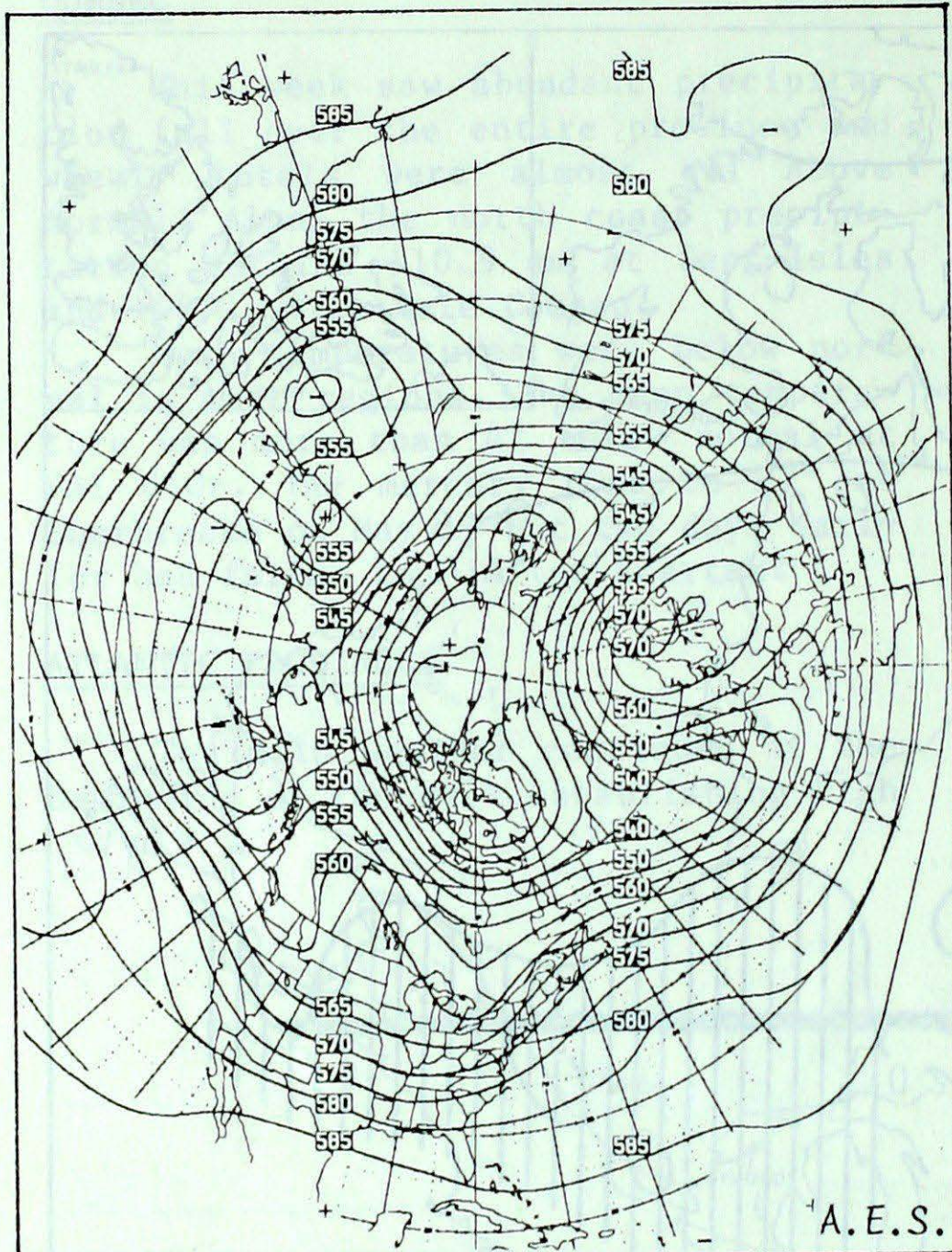
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HEATING DEGREE-DAY SUMMARY TO MAY 16, 1981

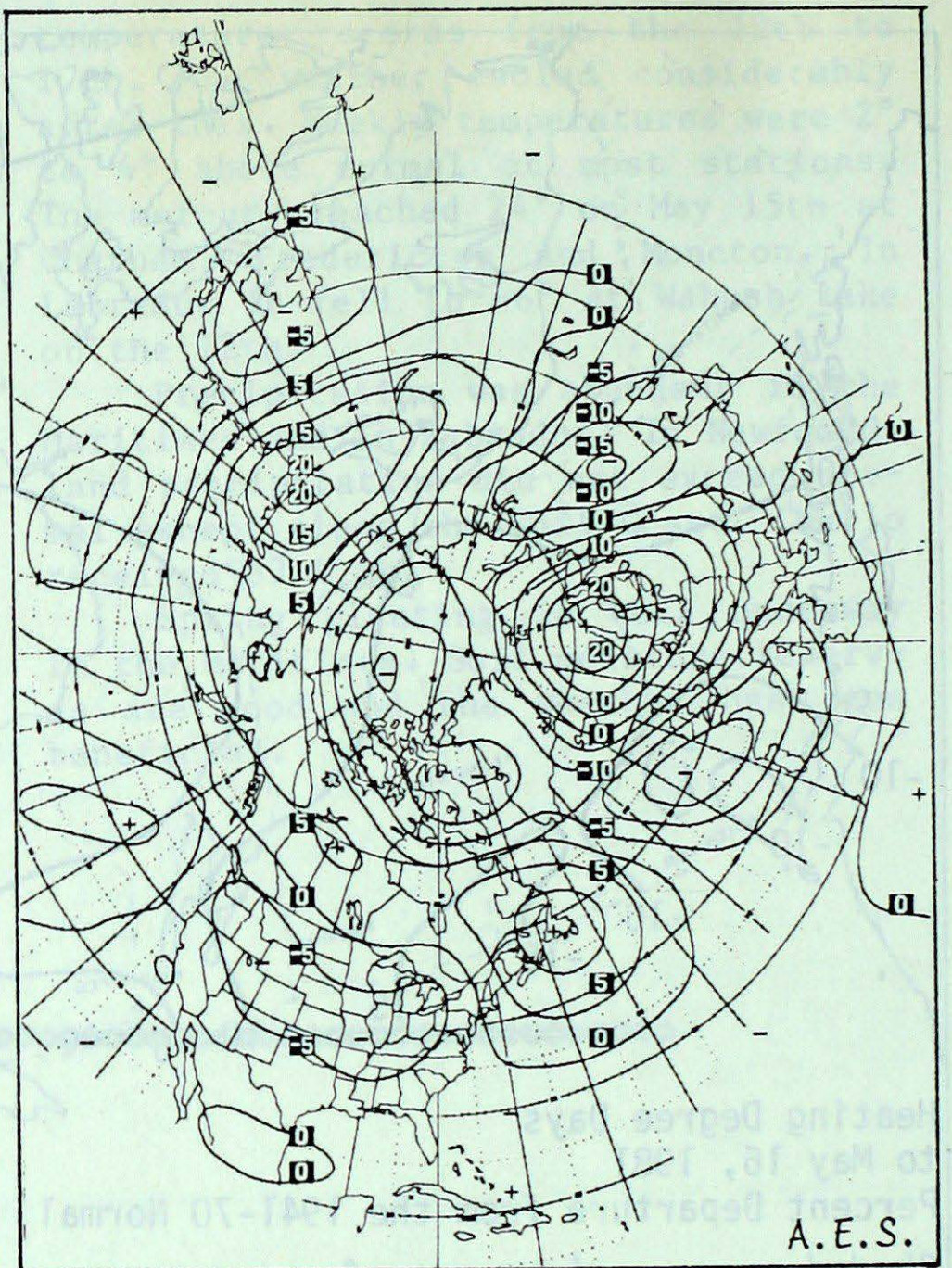


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	479.0	-17.0	11213.0	-394.0	97
Inuvik	277.5	-82.5	8899.0	-807.0	92
Whitehorse	170.5	-27.5	6094.0	-474.0	93
Vancouver	119.0	14.0	2652.5	-200.5	93
Edmonton Mun	126.0	-10.0	4572.0	-822.0	85
Calgary	177.5	19.5	4318.0	-766.0	85
Regina	133.5	-13.5	4945.0	-791.0	86
Winnipeg	154.5	9.5	5267.0	-455.0	92
Thunder Bay	178.5	10.5	5332.0	-150.0	97
Windsor	111.5	19.5	3618.5	106.5	103
Toronto	146.5	26.5	4145.0	178.0	104
Ottawa	114.5	-2.5	4663.0	98.0	102
Montreal	109.0	-2.0	4640.5	264.5	106
Quebec	136.0	-6.0	5147.0	233.0	105
Saint John, N.B.	129.0	-45.0	4605.5	81.5	102
Halifax	147.5	-20.5	4039.5	159.5	104
Charlottetown	115.0	-67.0	4389.5	2.5	100
St. John's, Nfld.	142.5	-74.5	4376.5	-28.5	99

Atmospheric Circulation



7-day Mean 50 kPa Height
(in dam) May 11 to 17, 1981



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) May 11 to 17, 1981

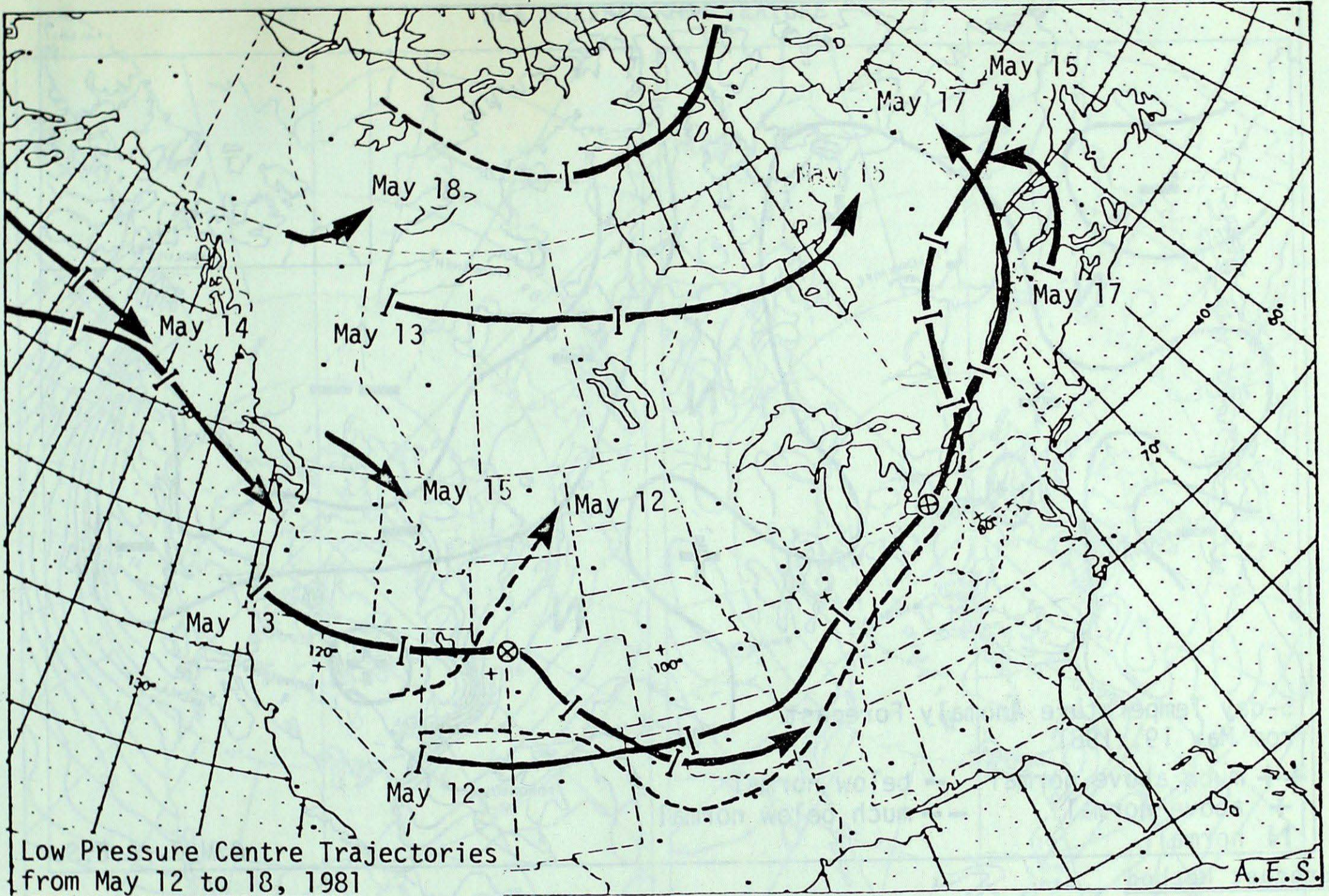
A major upper ridge rebuilt across central Canada and extended northwestward into the Yukon. Its strong influence once again produced dry, sunny, mild weather. On the other hand, southern British Columbia and Alberta remained under the influence of a 50 kPa upper trough and closed low. This resulted in unsettled showery conditions again this week.

A second cell of Arctic air and its associated area of strong high pressure drifted slowly southeastwards following the trajectory of the upper stream and became nearly stationary west of the Great Lakes basin. This forced the storm track, which previously crossed the Great Lakes, further to

the south. Unsettled, wet conditions experienced earlier in the period were replaced by a northwesterly flow of cool Arctic air which dropped daily temperature readings to below normal values. Clear, cold nights across Ontario resulted in record low temperatures and frost.

The Atlantic Provinces and the southern portion of Québec continued to be wet as a series of low pressure systems approached from the southwest. Temperatures across the province of Québec were below normal. Only Labrador, the Maritimes and Newfoundland received above normal temperatures due to the northward push of mild air associated with each weather system.

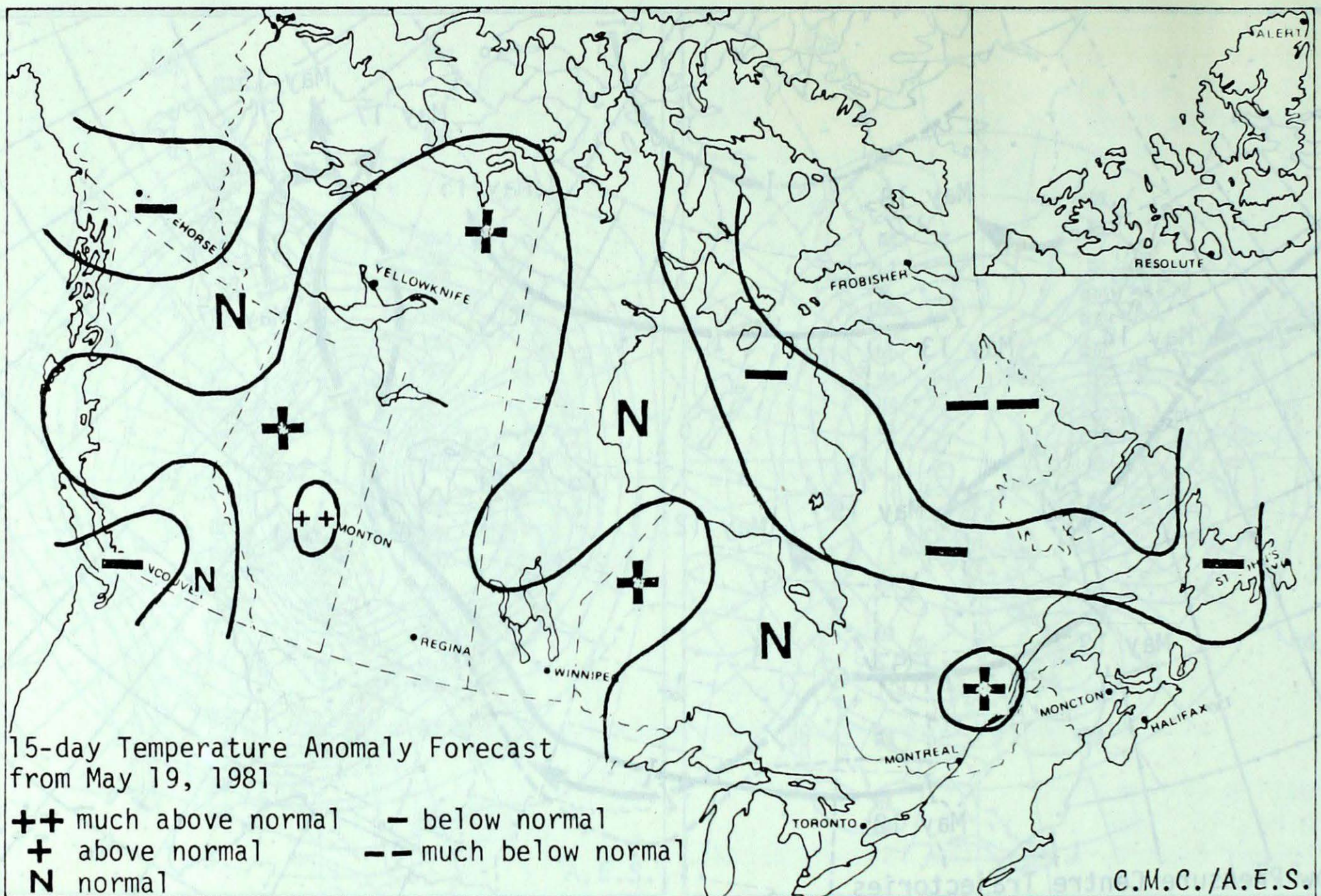
LOW PRESSURE CENTRE TRAJECTORIES



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

Station	Current Temperature Anomaly Forecast
Whitehorse	below normal
Victoria	below normal
Vancouver	below normal
Edmonton	Much Above Normal
Regina	Above Normal
Winnipeg	Above Normal
Thunder Bay	near normal
Toronto	near normal
Ottawa	near normal
Montreal	near normal
Quebec	Above Normal
Fredericton	near normal
Halifax	near normal
Charlottetown	near normal
St. John's	near normal
Goose Bay	much below normal
Profisher Bay	much below normal
Inuvik	near normal

15 DAY TEMPERATURE ANOMALY FORECAST

Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

Temperature Scale

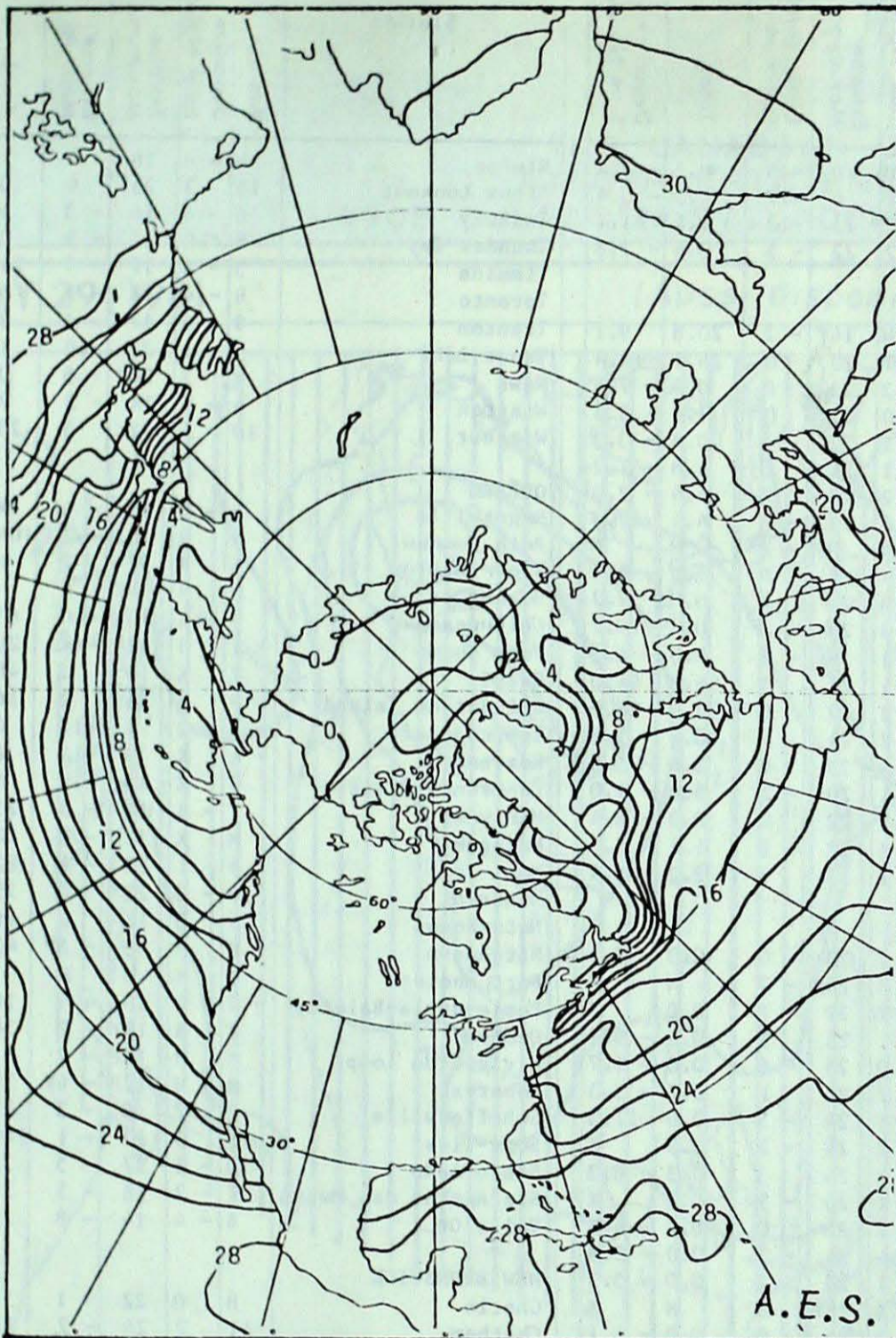
Each temperature class is designed to contain 20% of the historically observed 15 day means pertinent to specific location and time of year:

StationCurrent Temperature Anomaly Forecast

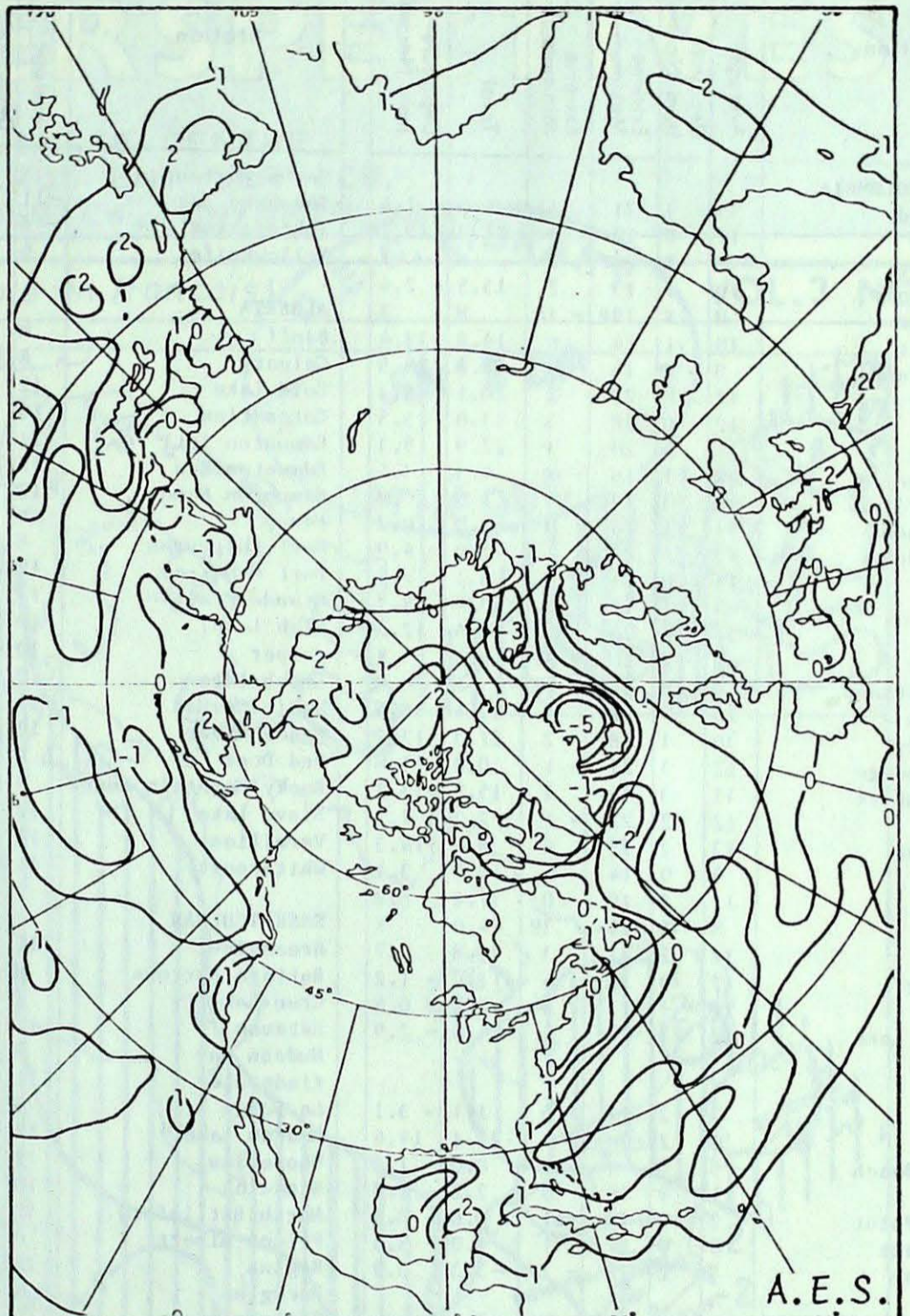
<u>Station</u>	<u>Current Temperature Anomaly Forecast</u>
Whitehorse	Below Normal From 0.5° to 1.6° below Normal
Victoria	Below Normal From 0.3° to 1.1° below Normal
Vancouver	Below Normal From 0.3° to 1.1° below Normal
Edmonton	Much Above Normal More than 1.7° above Normal
Regina	Above Normal From 0.6° to 1.9° above Normal
Winnipeg	Above Normal From 0.6° to 2.0° above Normal
Thunder Bay	Near Normal Within 0.4° of Normal
Toronto	Near Normal Within 0.5° of Normal
Ottawa	Near Normal Within 0.5° of Normal
Montreal	Near Normal Within 0.5° of Normal
Quebec	Above Normal From 0.4° to 1.5° above 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	Near Normal Within 0.5° of Normal
Goose Bay	Much Below Normal More than 1.7° below Normal
Frobisher Bay	Much Below Normal More than 2.0° below Normal
Inuvik	Near Normal Within 0.7° of Normal

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

SEA SURFACE TEMPERATURE



Monthly Mean Sea Temperature for mid-April to mid-May, 1981



Sea Surface Temperature Anomalies for mid-April to mid-May, 1981

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

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. MAY 19, 1981

Table with 4 columns of station names and 16 columns of temperature and precipitation data. It is divided into three main sections: BRITISH COLUMBIA/YUKON/NORTHWEST TERRITORIES, ALBERTA/SASKATCHEWAN/MANITOBA/ONTARIO, and QUEBEC/NEW BRUNSWICK/NOVA SCOTIA/PRINCE EDWARD ISLAND/NEWFOUNDLAND.

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