

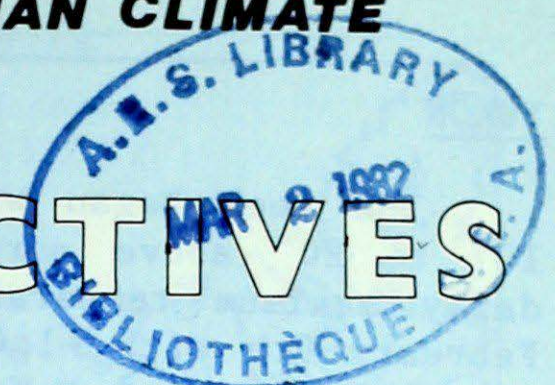


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A WEEKLY REVIEW OF CANADIAN CLIMATE

CLIMATIC PERSPECTIVES



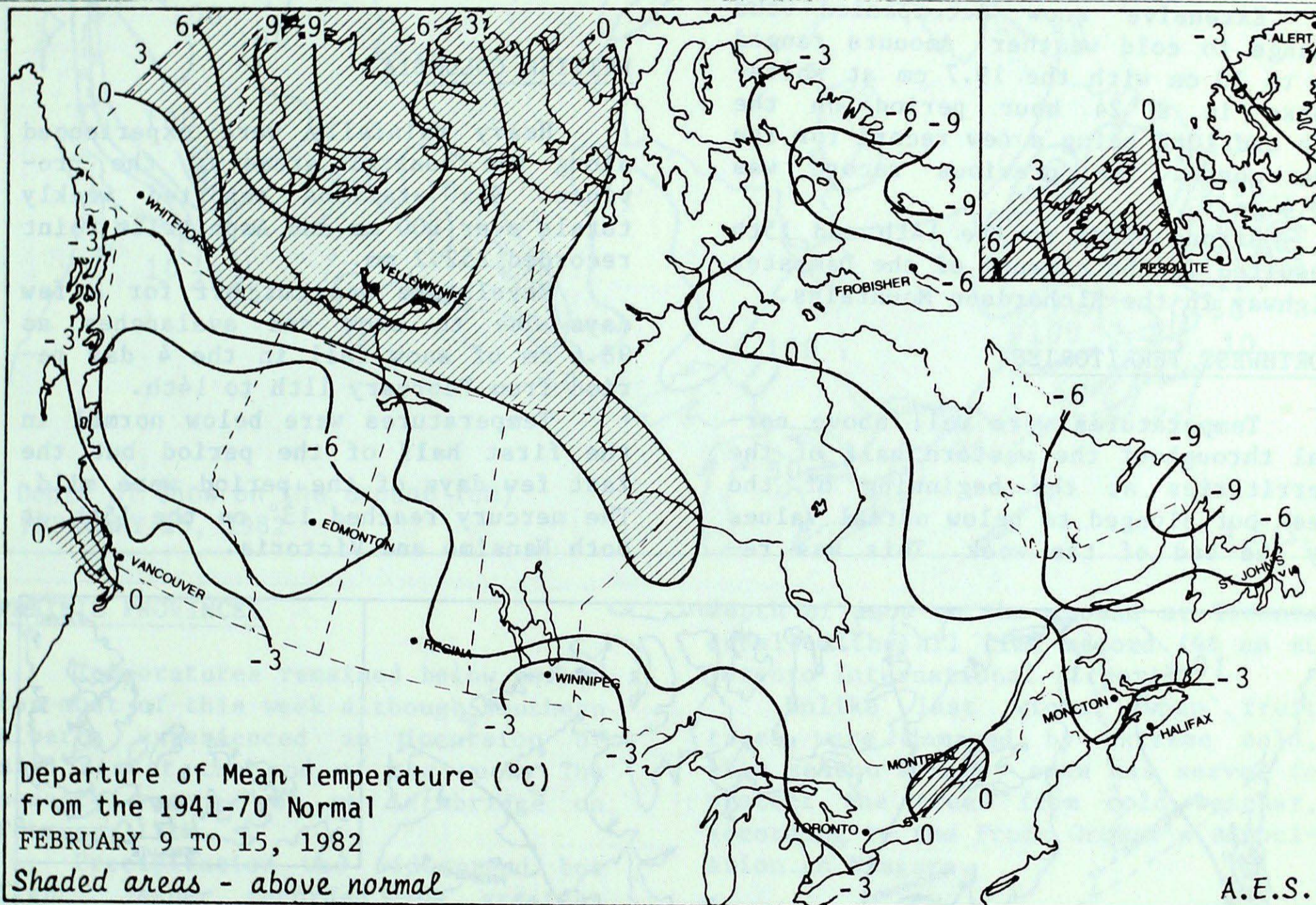
Canada

THE CANADIAN CLIMATE CENTRE,
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FEBRUARY 19, 1982

(Aussi disponible en français)

VOL.4 NO. 6



WEATHER HIGHLIGHTS FOR THE PERIOD - FEBRUARY 9-15, 1982

Disaster strikes the east coast

An intense storm struck the Atlantic Coast on February 13th and 14th. Wind gusts of 175 km/h were measured and winds in excess of 100 km/h over the water were common. The drilling platform Ocean Ranger sank in the Hibernia area off the coast of Newfoundland with the loss of 84 lives. A Russian container ship sank about 60 km from the Ocean Ranger. Only 5 crew members were rescued.

Heavy rainfalls were recorded along the British Columbia coastline. Many stations reported precipitation amounts in excess of 100 mm for the week. Amphitrite Point measured the greatest weekly total in the country, 252.2 mm.

Temperatures varied from a maximum of 13° at Victoria and Nanaimo, B.C. to a minimum of -48° at Shepherd Bay, N.W.T.

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

YUKON

The week began with temperatures 10° to 20° above normal. Dawson set daily maximum temperature records on February 9th with -1.4° (previous -6° in 1952) and on February 10th with -4.4° (previous -6° in 1923). By the end of the week temperatures were 15° below normal.

Extensive snow accompanied the change to cold weather. Amounts ranged up to 20 cm with the 19.7 cm at Whitehorse in a 24 hour period on the 9th and 10th being a new record for the month. The previous record was 10.4 cm.

Strong winds on the 14th and 15th resulted in the closure of the Dempster Highway in the Richardson Mountains.

NORTHWEST TERRITORIES

Temperatures were well above normal throughout the western half of the territories at the beginning of the week but plunged to below normal values by the end of the week. This was re-

flected in the maximum and minimum temperatures. The mercury reached -3° at Norman Wells on the first day of the week. The temperature fell to -48° at Shepherd Bay on the last day of the week.

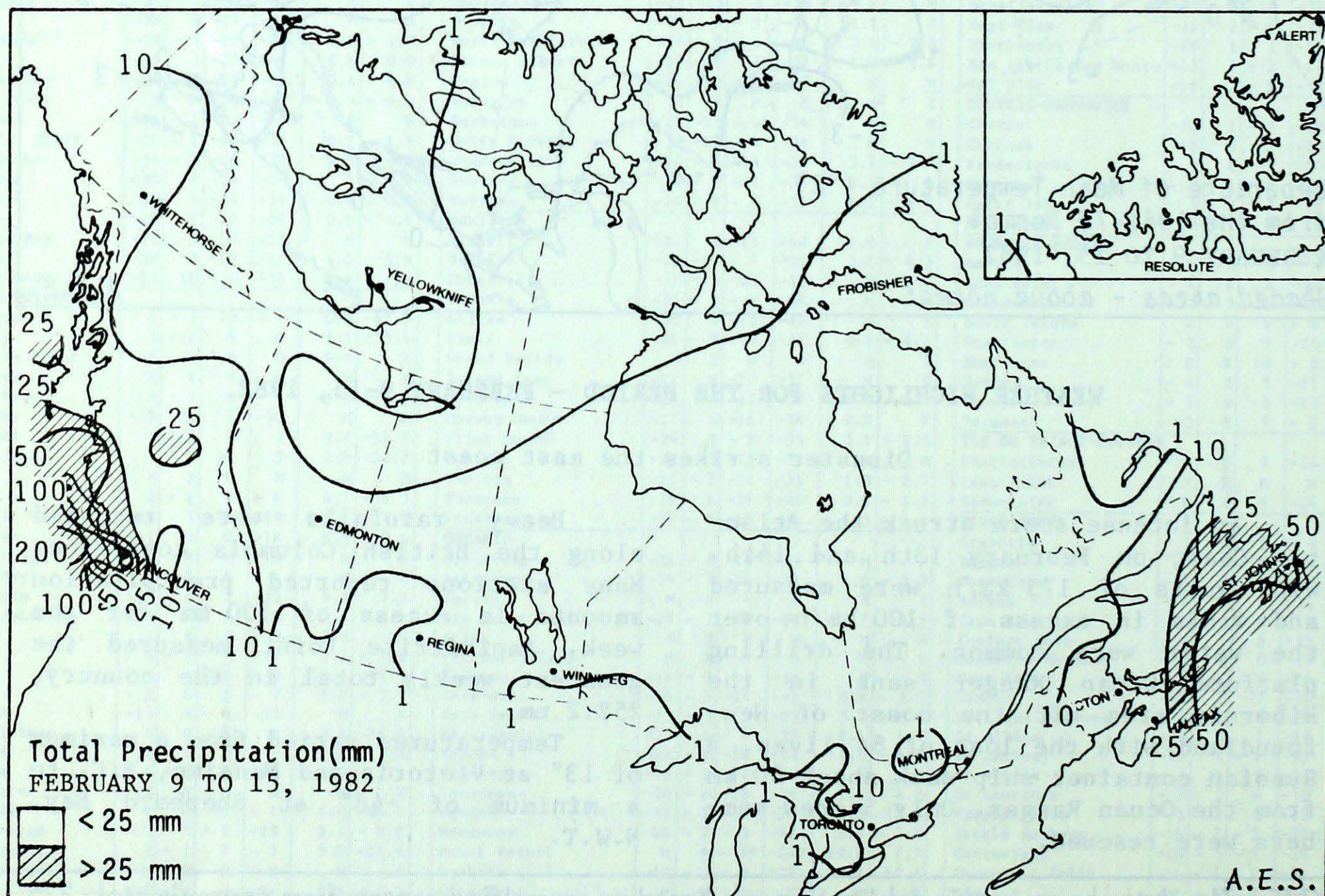
Precipitation was very light throughout the Northwest Territories. Cape Parry recorded the highest total with only 4.8 mm.

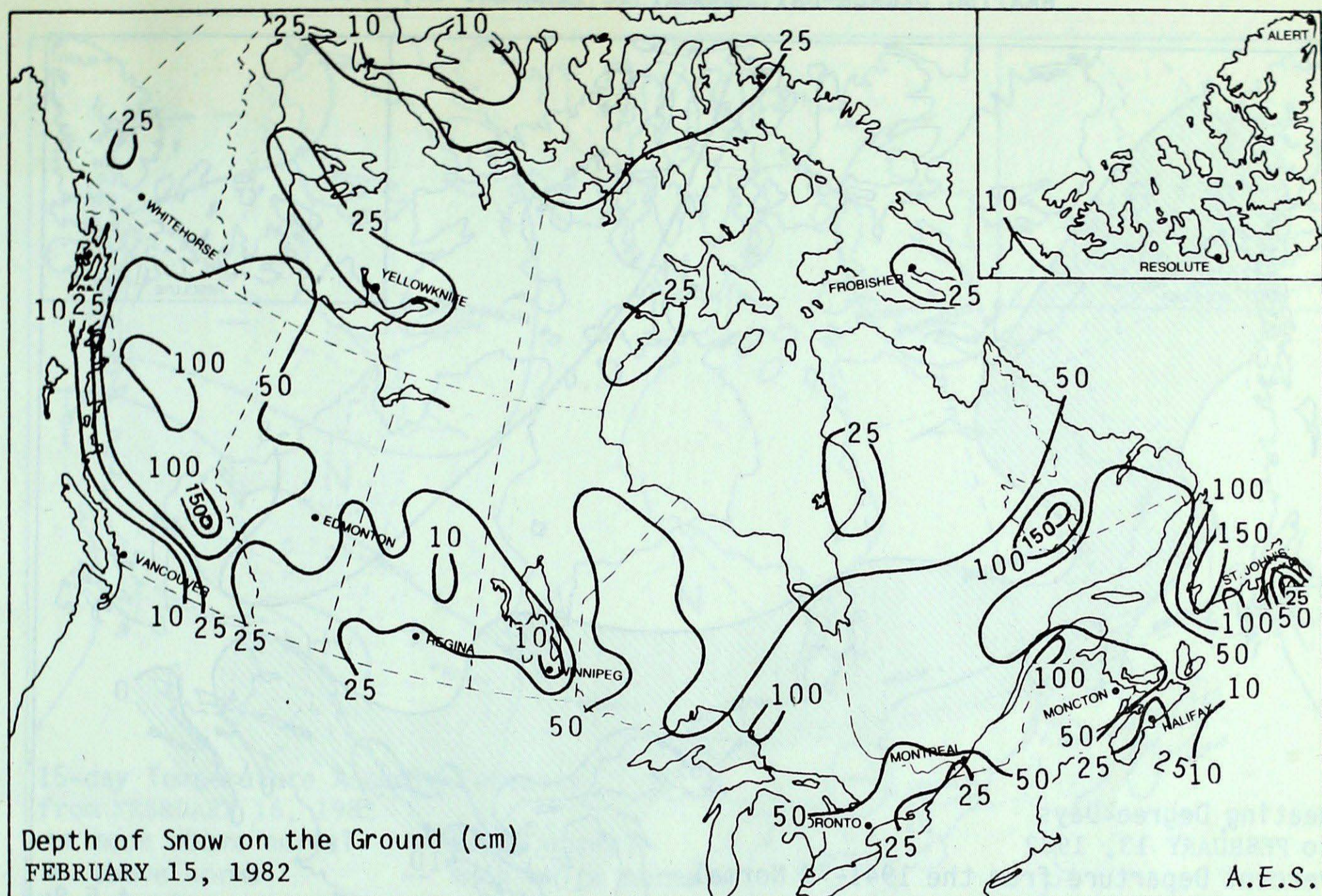
BRITISH COLUMBIA

Heavy rainfalls were experienced along the coastal areas of the province. Six stations reported weekly totals over 100 mm and Amphitrite Point recorded 252.2 mm.

Revelstoke was cut off for a few days due to snow and avalanches as 98.6 cm of snow fell in the 4 day period from February 11th to 14th.

Temperatures were below normal in the first half of the period but the last few days of the period were mild. The mercury reached 13° on the 15th at both Nanaimo and Victoria.





PRAIRIE PROVINCES

Temperatures remained below normal for most of this week although southern Alberta experienced an incursion of mild air at the end of the week. The mercury reached 6° at Lethbridge on February 15th.

Precipitation was widespread but light. Jasper recorded the greatest weekly total, 10.5 mm.

ONTARIO

The grip of winter loosened across Ontario this week. No major storms crossed through the province and by the end of the week temperatures had moderated to near freezing in southern areas. The mercury rose to 6° at Toronto and Trenton on the 15th.

Snowfalls have followed one another in rapid succession this year without any opportunity for melting until this week. Although the total snowfall is only slightly greater than normal (95.3 cm to February 15th compared to a normal 90 cm to the same date), the

depth of snow on the ground at Toronto equalled the all time record (46 cm at Toronto International Airport).

Unlike last winter when fruit trees were damaged by extreme cold, this season's heavy snow has served to protect the trees from cold weather, according to the Fruit Grower's Association in Niagara.

QUEBEC

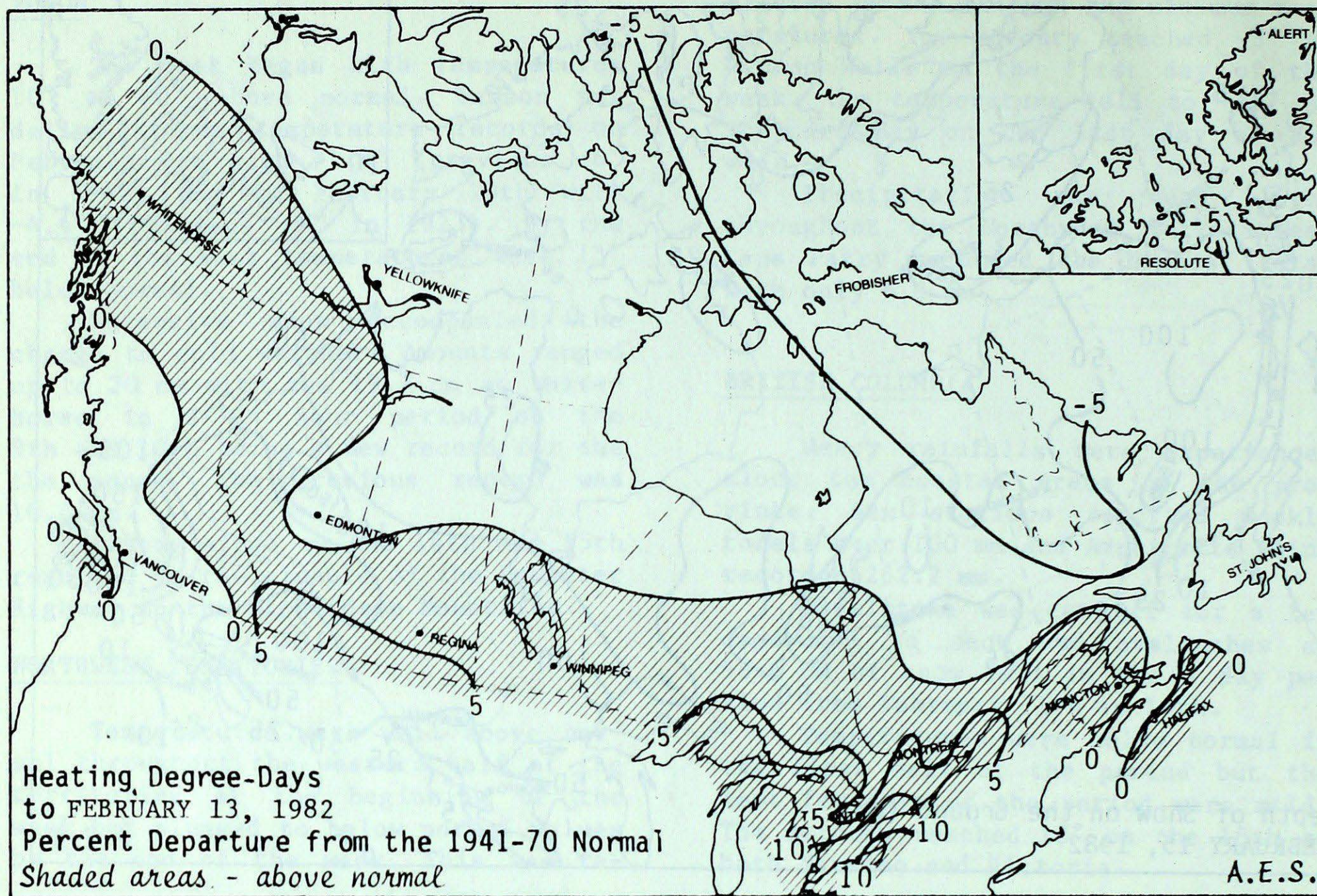
Cool but uneventful weather prevailed throughout the province. Mean temperatures varied from close to normal in southern areas to more than 9° below normal in extreme eastern areas. The mercury varied from 5° at Montreal on the 15th to -34° at Nitchequon on the 9th.

Precipitation was well below normal at most stations. Natashquan reported 11.2 m.

ATLANTIC PROVINCES

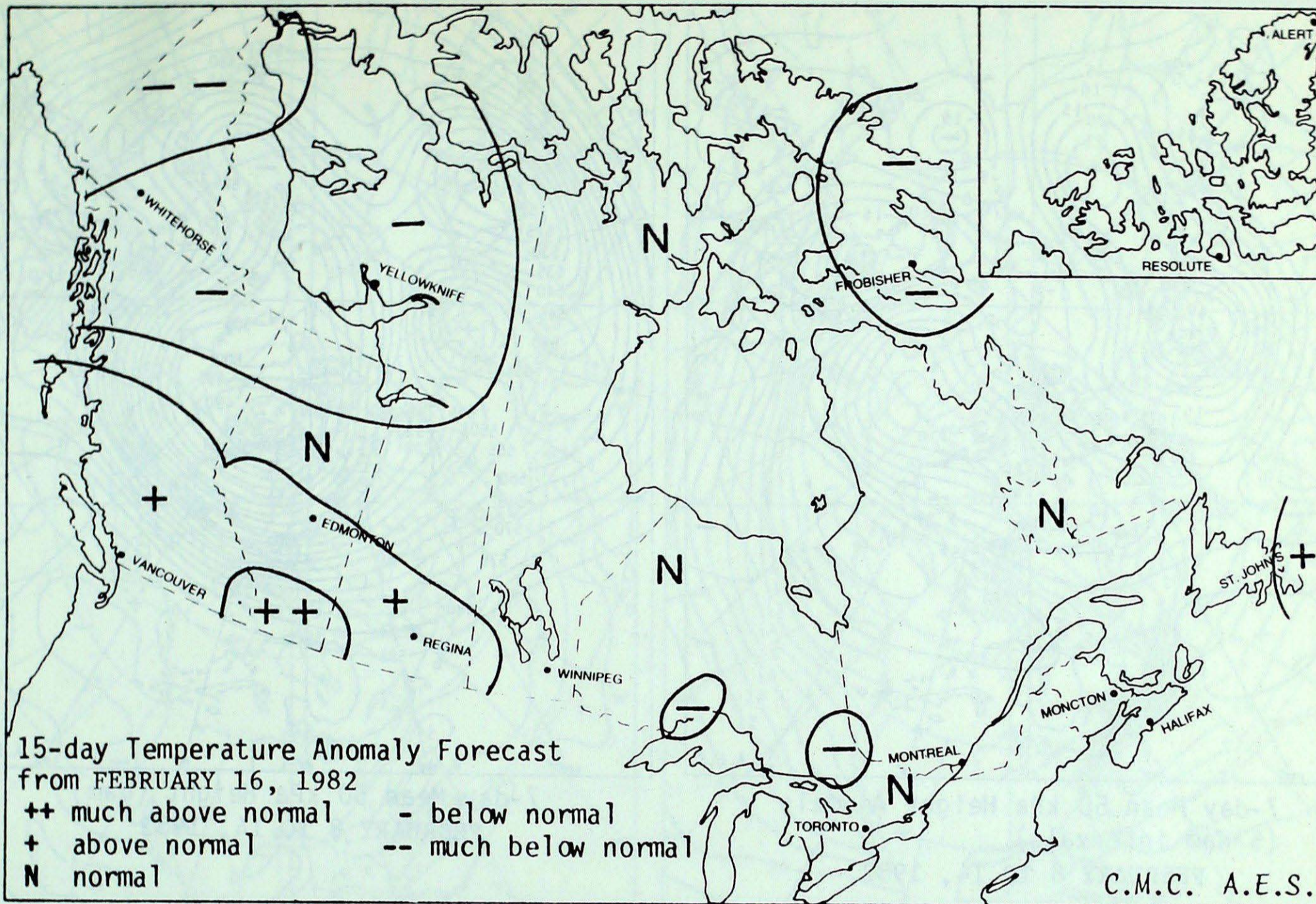
An intense storm struck the Atlantic coast on February 13th and
(continued on page 7)

HEATING DEGREE-DAY SUMMARY TO FEBRUARY 13, 1982

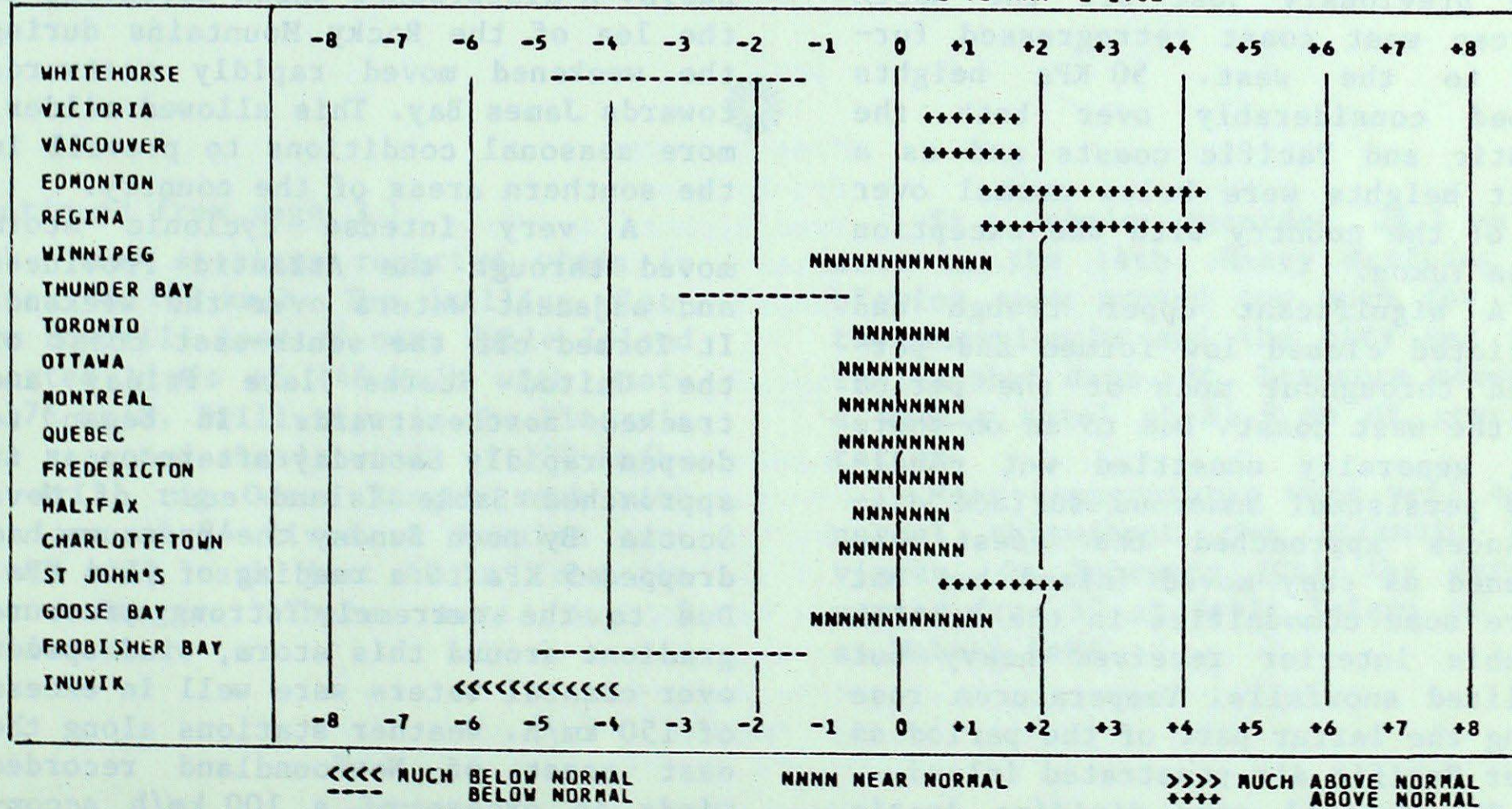


STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	640.5	-35.5	7176.0	-396.0	95
Inuvik	436.5	-199.5	6110.0	-249.0	96
Whitehorse	403.5	-29.5	4789.0	208.0	105
Vancouver	204.5	19.5	1869.5	-31.5	98
Edmonton Mun'	452.0	69.0	3644.5	-42.5	99
Calgary	432.5	81.5	3569.0	141.0	104
Regina	534.0	95.0	4027.5	171.5	104
Winnipeg	528.0	69.0	3929.5	97.5	103
Thunder Bay	504.0	82.0	3827.0	186.0	105
Windsor	386.0	93.0	2576.0	284.0	112
Toronto	383.0	62.0	2848.0	286.0	111
Ottawa	380.0	9.0	3177.0	161.0	105
Montreal	368.0	0.0	3113.5	242.5	108
Quebec	393.5	0.5	3375.5	153.5	105
Saint John, N.B.	330.0	-18.0	2948.5	58.5	102
Halifax	280.5	-18.5	2422.0	40.0	102
Charlottetown	331.0	-12.0	2711.0	4.0	100
St. John's, Nfld.	309.0	4.0	2666.0	-57.0	98

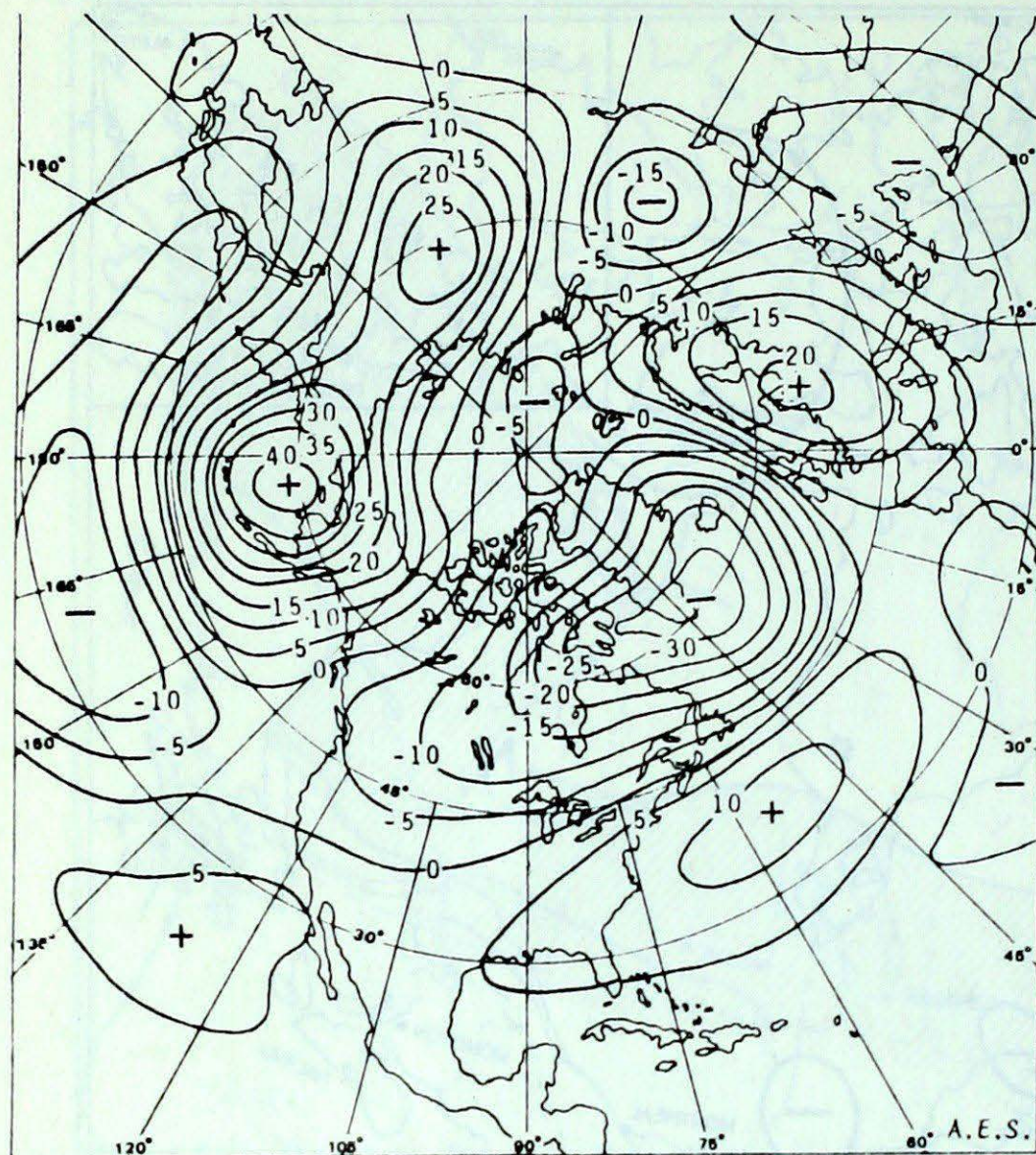
TEMPERATURE ANOMALY FORECAST



TEMPERATURE ANOMALY FORECAST FOR FEB 16 1982 TO MAR 2 1982

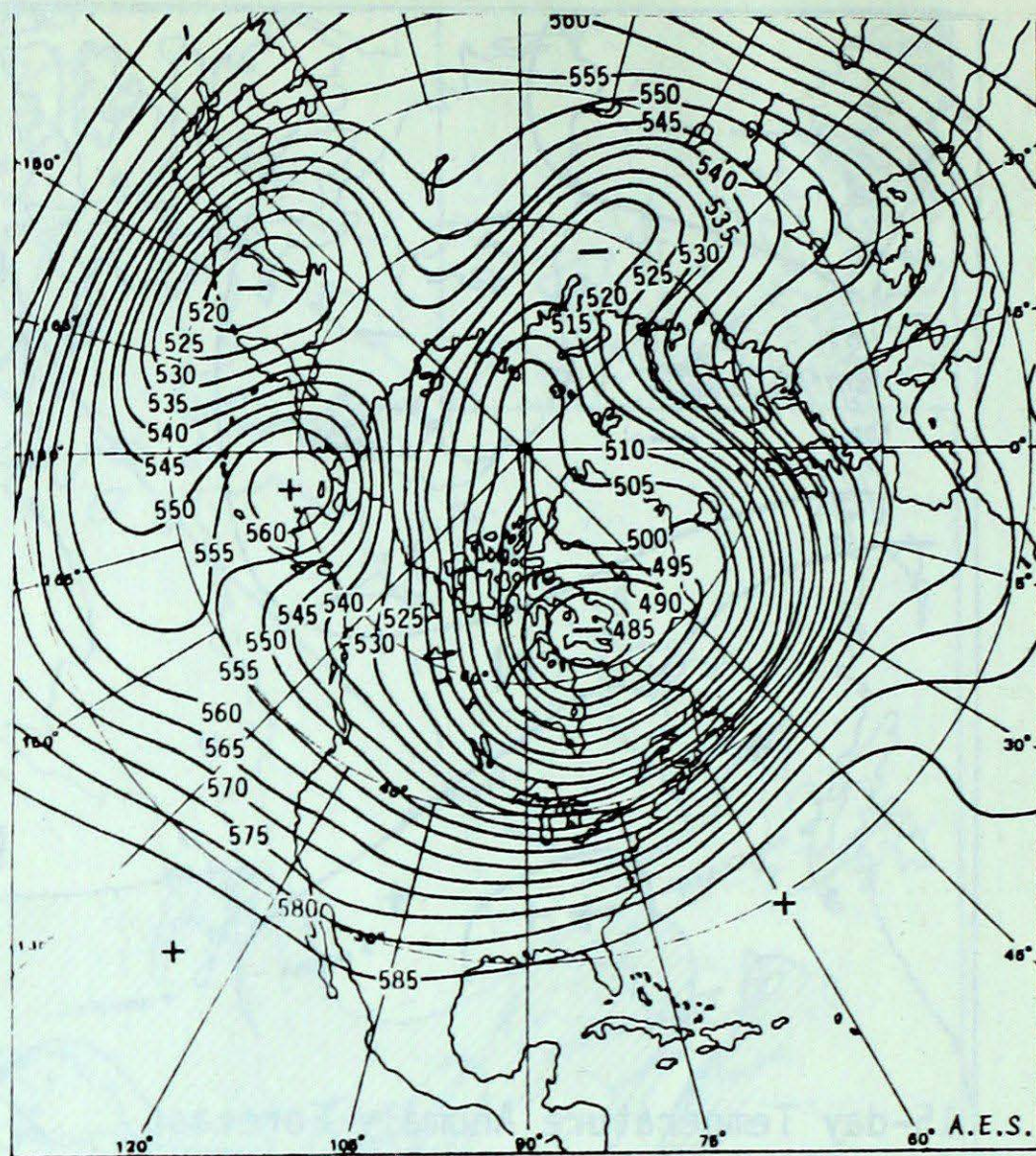


Atmospheric Circulation



7-day Mean 50 kPa Height Anomaly
(5 dam intervals)

FEBRUARY 8 TO 14, 1982



7-day Mean 50 kPa Height (dam)
FEBRUARY 8 TO 14, 1982

The main Arctic vortex remained nearly stationary in the vicinity of northern Hudson Bay. The major 50 KPa ridge previously just off the North American west coast retrogressed further to the west. 50 KPa heights dropped considerably over both the Atlantic and Pacific coasts and as a result heights were below normal over much of the country with the exception of the Yukon.

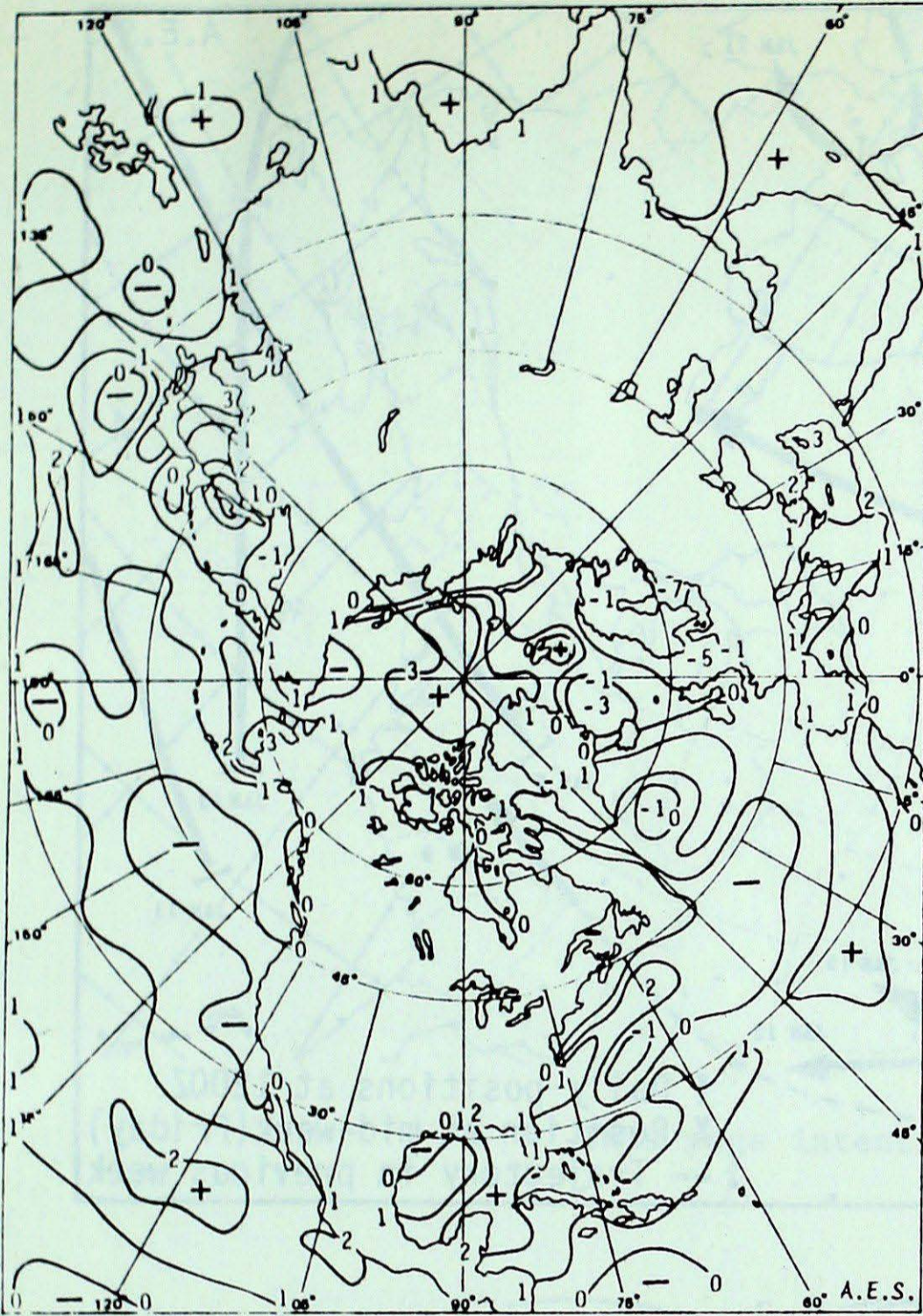
A significant upper trough and associated closed low formed and persisted throughout much of the period over the west coast. Due to an on-shore flow, generally unsettled wet conditions persisted. Numerous surface disturbances approached the coast and weakened as they moved inland but not before some communities in the British Columbia interior received heavy but localized snowfalls. Temperatures rose during the latter part of the period as milder Pacific air penetrated inland.

The frontal zone dividing Arctic and Pacific airmasses remained south of

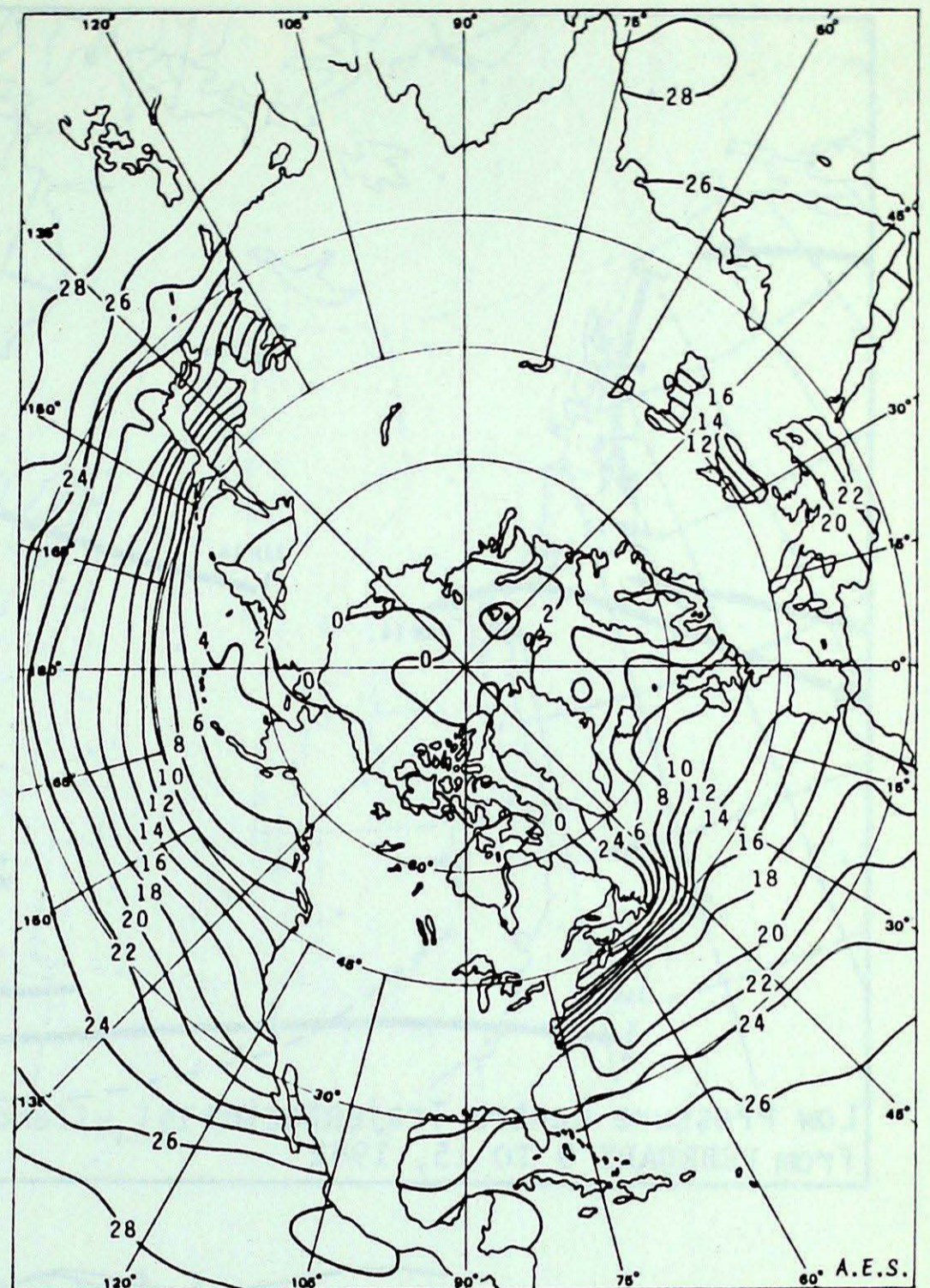
the border during most of the week but a substantial amount of cloud persisted over the prairies and the Great Lakes Basin. A disturbance which developed to the lea of the Rocky Mountains during the weekend moved rapidly eastwards towards James Bay. This allowed milder, more seasonal conditions to prevail in the southern areas of the country.

A very intense cyclonic storm moved through the Atlantic Provinces and adjacent waters over the weekend. It formed off the south-east coast of the United States late Friday and tracked northeastwards. It began to deepen rapidly Saturday afternoon as it approached Sable Island east of Nova Scotia. By noon Sunday the pressure had dropped 5 KPa to a reading of 95.4 KPa. Due to the extremely strong pressure gradient around this storm, wind speeds over coastal waters were well in excess of 150 km/h. Weather stations along the east coast of Newfoundland recorded winds in excess of a 100 km/h accompanied by heavy snow.

SEA SURFACE TEMPERATURE



Sea Surface Temperature Anomaly
JANUARY 1982



Mean Sea Surface Temperature
JANUARY 1982



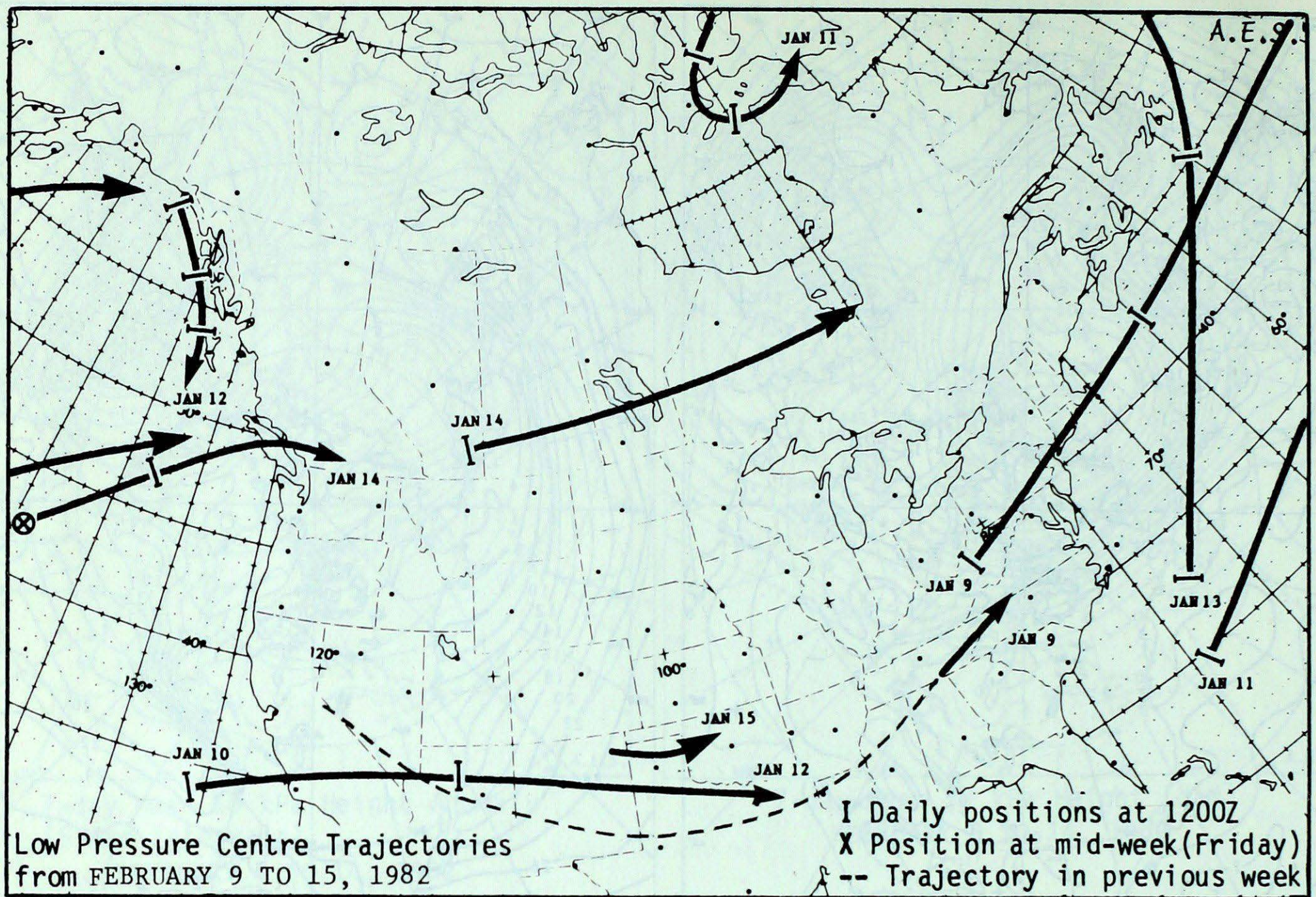
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14th. Many stations reported winds in excess of 100 km/h. The drilling platform Bowdrill located near Sable Island reported winds of 148 km/h with gusts to 176 km/h. Drill rigs in the Hibernia area reported steady winds of 130 km/h. The drill rig Ocean Ranger sank with the loss of 84 lives. A Russian container ship sank just 60 km from the Ocean Ranger. There were only 5 survivors.

St. John's recorded 24.4 cm of snow on the 14th. Heavy drifting and blowing snow proved too much for even the snowploughs and the city was virtually shut down. St. Lawrence measured a weekly total of 81.9 mm of precipitation.

Mean temperatures were well below normal throughout the Atlantic Provinces. On February 10th the mercury varied from 5° at Sable Island to -35° at Wabush Lake.

LOW PRESSURE CENTRE TRAJECTORIES



CLIMATIC PERSPECTIVES

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