...IEW OF CANADIAN CLIMATE ...IAN CLIMATIC PERSPECTIVES

THE CANADIAN CLIMATE CENTRE,
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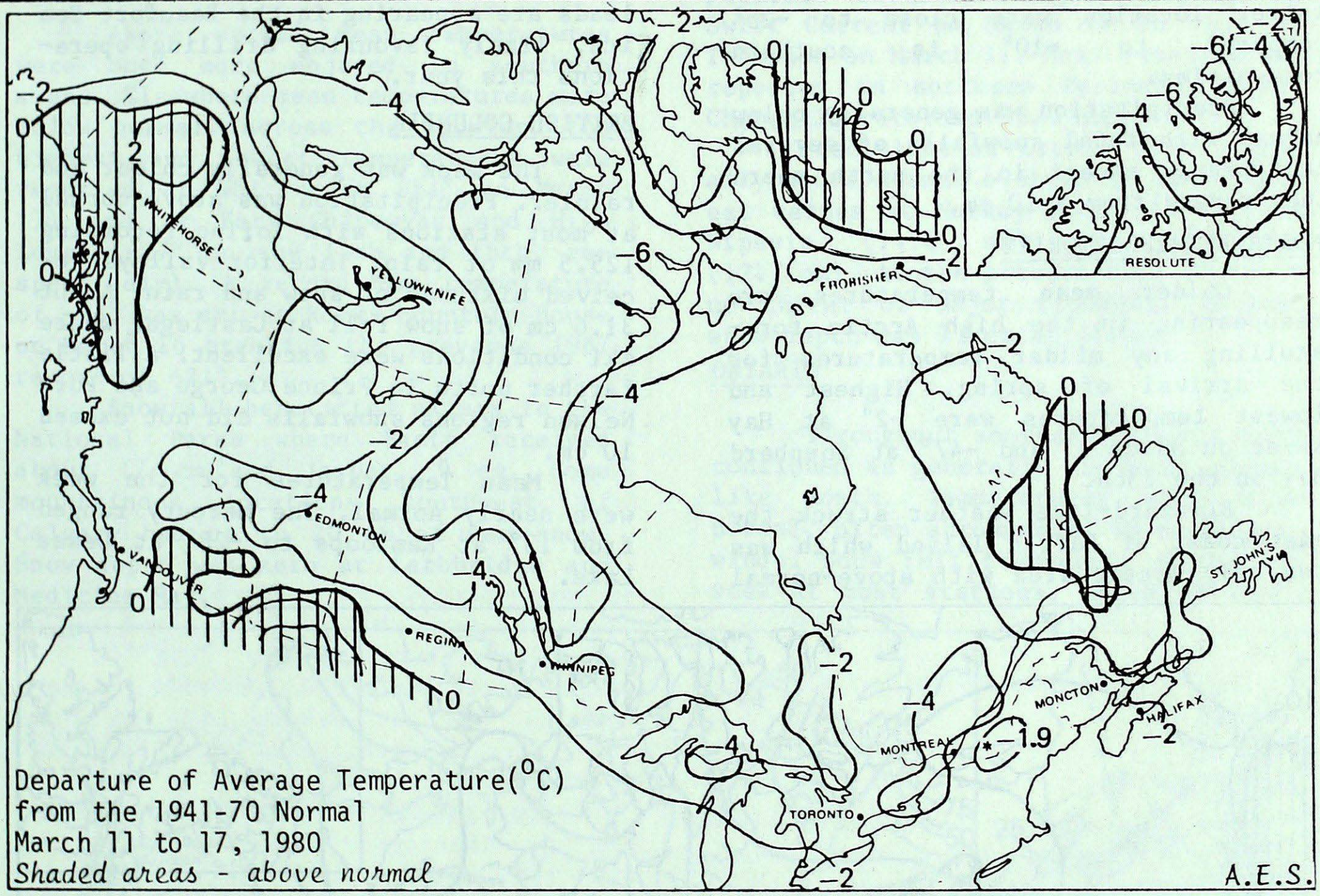
MARCH 21,1980 (Aussi disponible en français) VOL.2 NO.11



Departure of Average Temperature(^{o}C)
from the 1941-70 Normal
March 11 to 17, 1980
Shaded areas - above normal

A.E.S.

WEATHER HIGHLIGHTS FOR THE WEEK - MARCH 11 - 17, 1980

Winter's "Worst" Storm Strikes Eastern Canada

On March 13 and 14 a major storm accompanied by strong winds gusting up to 100 km/h created havoc and near-tragedies in the Atlantic Provinces. The 2500-ton freighter Desgagnés sank about 75 km southeast of Halifax. Twenty-one crew members were rescued by two helicopters just 28 minutes before the sinking. Heavy ice and high winds forced cancellation of ferry services across Northumerland Strait on the 15th. Heavy rains caused minor flooding in the Maritimes while snowfalls forced many schools to close in Quebec.

Almost all Canada experienced mean temperatures below normal, Highest temperature for the week was 13° at Windsor and Kamloops; lowest was -47° at Shepherd Bay.

Ice breaking is generally better than normal in most of Canada. In the Gulf of St. Lawrence and along the coast of Newfoundland island this process has been accelerated by wind action and milder temperatures. Even in the Beaufort Sea many cracks and leads are appearing in ice, likely favouring drilling operations this year.

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

YUKON

Average temperatures in southern Yukon reached values up to 2° above normal but were slightly below normal in the north. However, fairly extreme variations occurred. Watson Lake reported 3° on March 17, while both Ogilvie and Old Crow recorded -40° on the 15th. Mean temperatures at the latter location were close to -25° compared to -10° in southern communities.

Precipitation was generally below normal with total snowfalls of several centimetres except in the north where they ranged from 5-10 cm.

NORTHWEST TERRITORIES

Colder mean temperatures are reappearing in the high Arctic forestalling any milder temperatures for the arrival of spring. Highest and lowest temperatures were -2° at Hay River on March 17 and -47° at Shepherd Bay on the 13th.

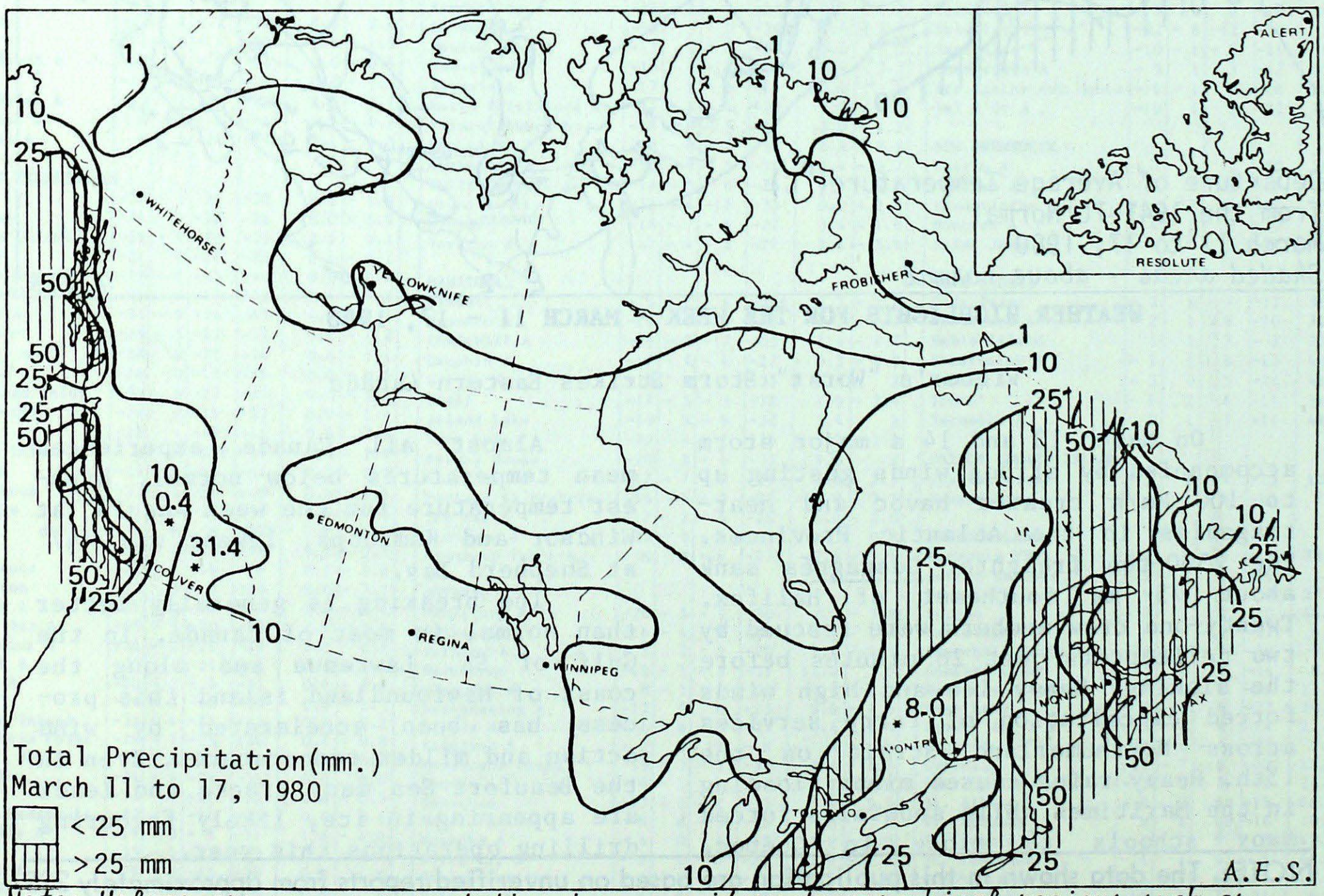
Blizzard-like weather struck the east coast of Baffin Island which was the only Arctic area with above-normal precipitation. Wind speeds exceeded 100 km/h at Cape Hooper on March 12 and 13 when temperatures were close to -25°. Maximum precipitation of the week was recorded at Clyde (13.4 mm) on the same dates.

Ice conditions are generally about normal, but are better than normal in coastal areas. Many cracks and leads are appearing in the Beaufort Sea ice, likely favouring drilling operations this year.

BRITISH COLUMBIA

The week was generally colder and rainier. Precipitation was above normal at most stations with Tofino recording 125.5 mm of rain. Interior valleys received mixtures of snow and rain. About 31.6 cm of snow fell at Castlegar where ski conditions were excellent. A little farther north in Prince George and Fort Nelson regions snowfalls did not exceed 10 cm.

Mean Temperatures for the week were nearly normal. The mercury ranged from 13° at Kamloops to -28° at Dease Lake.



Note: Values are non-representative in non-uniform topographical regions such as the Rocky Mountains.

Despite the week's precipitation, water levels in lakes and reservoirs of the Okanagan Valley still remain low. The lack of snow is becoming more and more apparent in the north; highways are becoming increasingly muddy so that oil companies will probably have to remove their heavy machinery within a few weeks.

ALBERTA

Above normal mean temperatures were once more enjoyed in southern areas. Elsewhere mean temperatures were below normal. Across the province the highest and lowest temperatures were reported at Whitecourt (11° on March 17) and at Fort Chipewyan and High Level (-27° on the 14th and 16th, respectively). A record low temperature of -23° was set at Rocky Mountain House on March 16 breaking the previous 1967 record of -21°.

Snowfall benefitted skiers in the National Parks where Banff received about 17 cm and Jasper, 9 cm. Some mountainous locations southwest of Calgary had up to 20 cm of new snow. Snow depth was zero at Lethbridge and Medicine Hat.

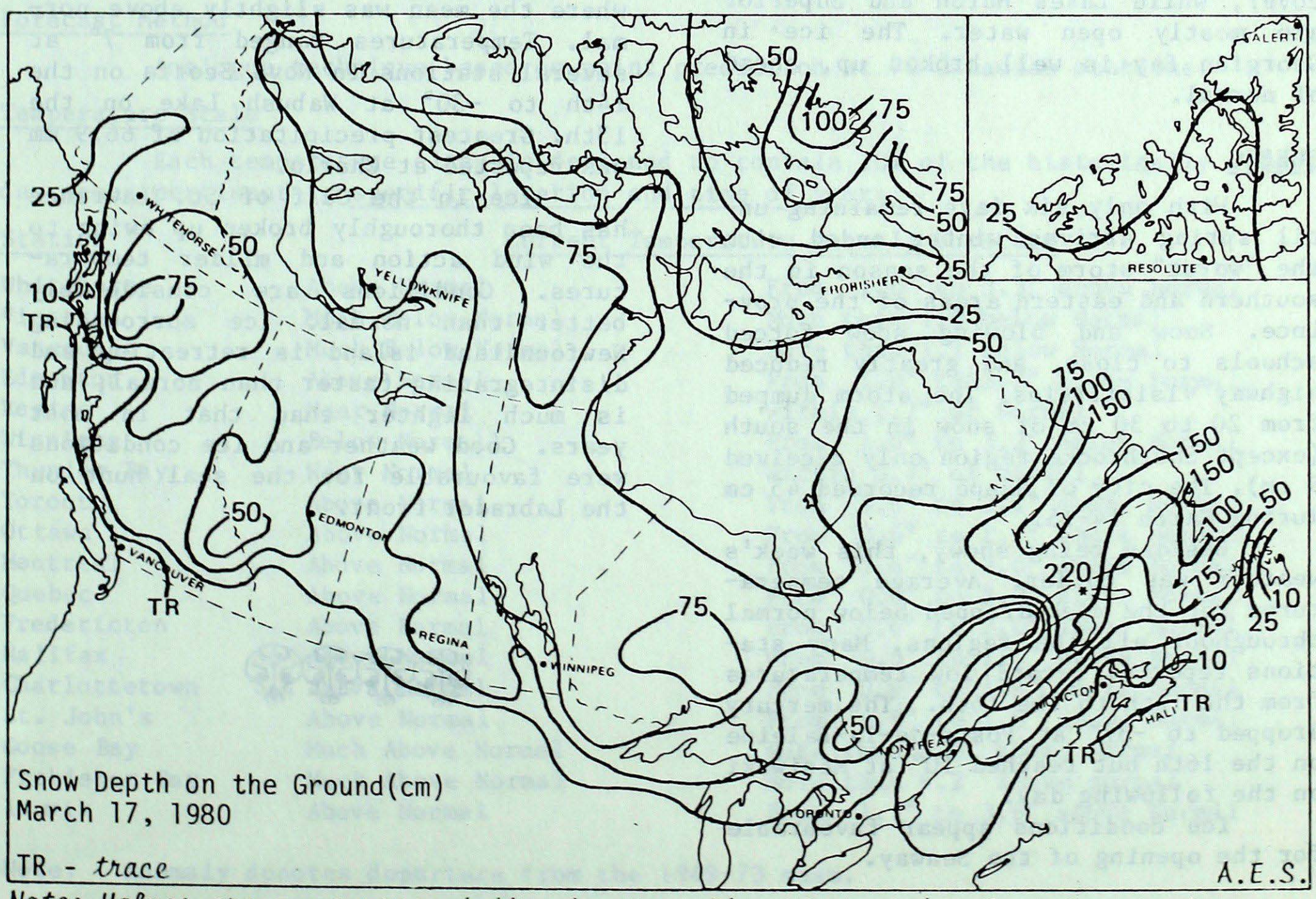
SASKATCHEWAN AND MANITOBA

After experiencing mean temperatures 6° below normal last week, extreme southwestern Saskatchewan returned to above normal values. Everywhere else remained below normal with the lowest departures from normal centred along the boundary between the provinces, reaching -7.7° at Thompson. Temperature extremes ranged from 4° at Swift Current on March 17 to -42° at Thompson on March 11. Most sunshine was reported in northern Manitoba, where Churchill recorded 53.3 hours.

Precipitation totals were generally above normal everywhere with highest values at Norway House (18.8 mm), Nipawin (14.6 mm) and The Pas (12.7 mm). At the present time there is no threat of major flooding. Deepest snow depth was 71 cm at Bissett.

ONTARIO

Throughout southern Ontario March continued as generally the most winter-like month. Temperatures were below normal, often accompanied by cold gusty winds. Snow fell frequently during the week at most stations. March 13 was a



Snow Depth on the Ground(cm)
March 17, 1980

TR - trace

A.E.S.

Note: Values are non-representative in non-uniform topographical regions such as the Rocky Mountains.

particularly nasty day when snow and gusty easterly winds made driving treacherous across southern Ontario. Maximum and minimum temperatures recorded during the week were 13° at Windsor on the 16th and -39° at Geraldton on the 12th.

Winter's accumulated snowfall still remains well below normal in southwestern areas, even with the past week's snow. For example, Toronto International Airport has recorded only 79 cm of the normal accumulation of 110 cm for mid-March. In contrast, because of the affect of Lake Ontario, downtown Toronto has received 118.8 cm, compared with the normal of 123.5 cm for the middle of March.

Snow cover ranges from 50 to 90 cm in the northwest decreasing to 15 to 50 cm in northern and central regions. Snow-belt areas east of Georgian Bay and Lake Huron, including most of Ontario's "ski country" are covered with 10-25 cm of snow while southerly locations have up to 10 cm.

Ice breakup on the Great Lakes is near normal or slightly ahead of normal. Lake Erie has an extensive ice cover, while Lakes Huron and Superior are mostly open water. The ice in Georgian Bay is well broken up, ahead of normal.

QUEBEC

With only six days remaining until spring arrives winter ended with the "worst" storm of the season in the southern and eastern areas of the province. Snow and blowing snow forced schools to close, and greatly reduced highway visibilities. The storm dumped from 20 to 30 cm of snow in the south (except Sherbrooke region only received 9 cm). The city of Gaspé recorded 45 cm during March 14-15.

Besides being snowy, this week's weather was colder. Average temperatures for the week dropped below normal throughout all the regions. Many stations reported record low temperatures from the 12th to the 16th. The mercury dropped to -37° at Poste-de-la-Baleine on the 16th but reached 10° at Maniwaki on the following day.

Ice conditions appear favourable for the opening of the Seaway.

ATLANTIC PROVINCES

The week was wet with major storms creating havoc and several near tragedies. On March 13-14 heavy rain and winds gusting up to 100 km/h caused minor flooding, traffic disruptions and cancelled airline flights. Freezing rain in some areas was an additional hazard.

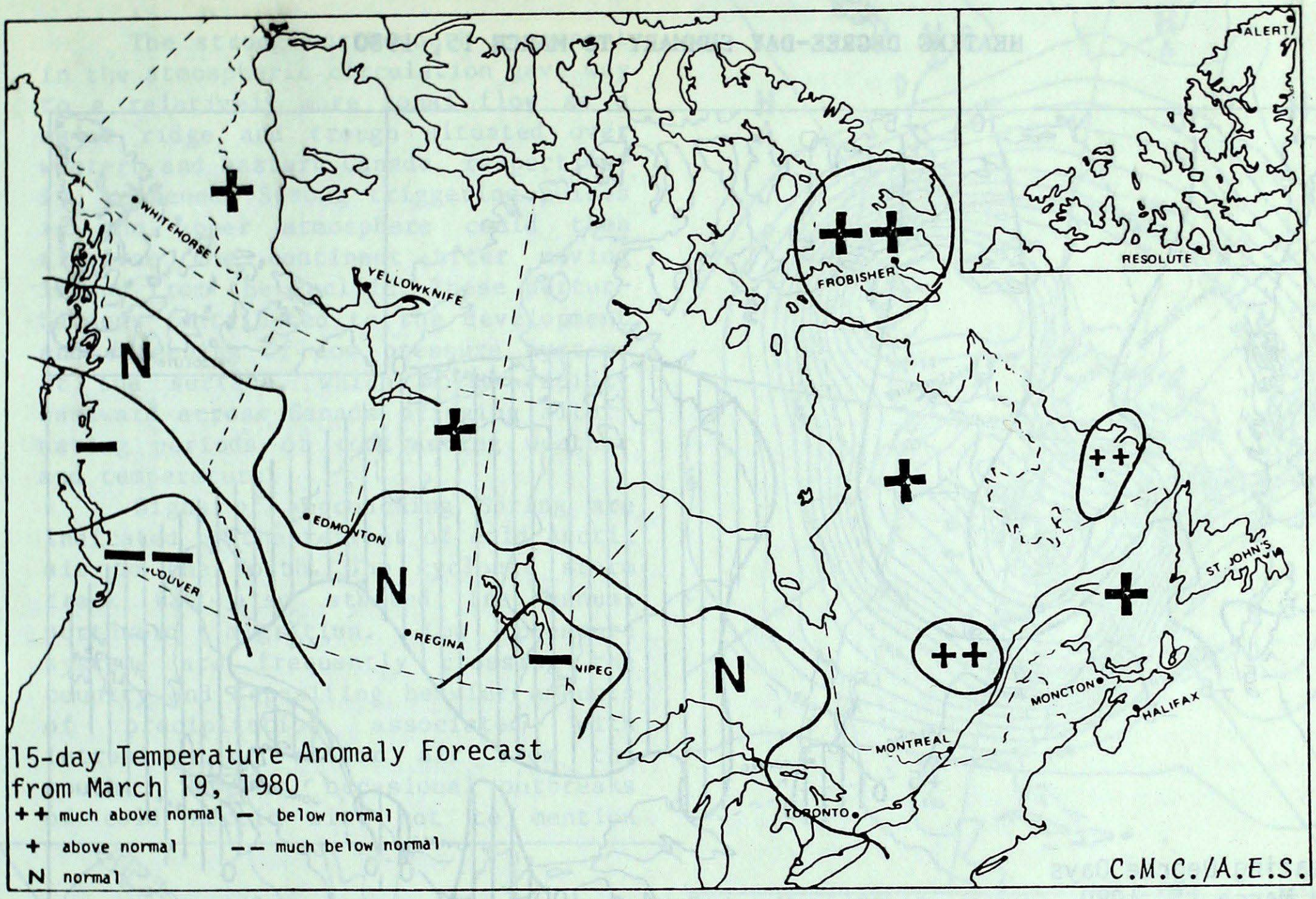
In the high winds and 6-m waves at sea the 2500-ton freighter Desgagnés sank about 75 km southeast of Halifax, taking a $1 million cargo of railway ties to the bottom. Fortunately in spite of the winds the 21 crew members were saved just 28 minutes before the sinking, by 2 helicopters despatched from the rescue ship Huron. The Huron's superstructure was also damaged.

CN ferry service between Borden, P.E.I. and Cape Tormentine, N.B. was chaotic. Heavy ice conditions coupled with the high winds in Northumberland Strait, forced cancellation of 3 crossings to the Island and 3 return trips on March 15.

Temperatures for the week generally averaged about 1 to 3° below normal, except in central Labrador where the mean was slightly above normal. Temperatures ranged from 7° at several stations in Nova Scotia on the 14th to -30° at Wabush Lake on the 13th. Greatest precipitation of 66.9 mm was reported at Charlo.

Ice in the Gulf of St. Lawrence has been thoroughly broken up owing to the wind action and milder temperatures. Conditions are considerably better than normal. Ice surrounding Newfoundland island is retreating and disintegrating faster than normal, and is much lighter than that in most years. Good weather and ice conditions were favourable for the seal hunt on the Labrador front.

15 DAY TEMPERATURE ANOMALY FORECAST



Forecast Method

Analogue technique based on point prediction at 70 Canadian stations.

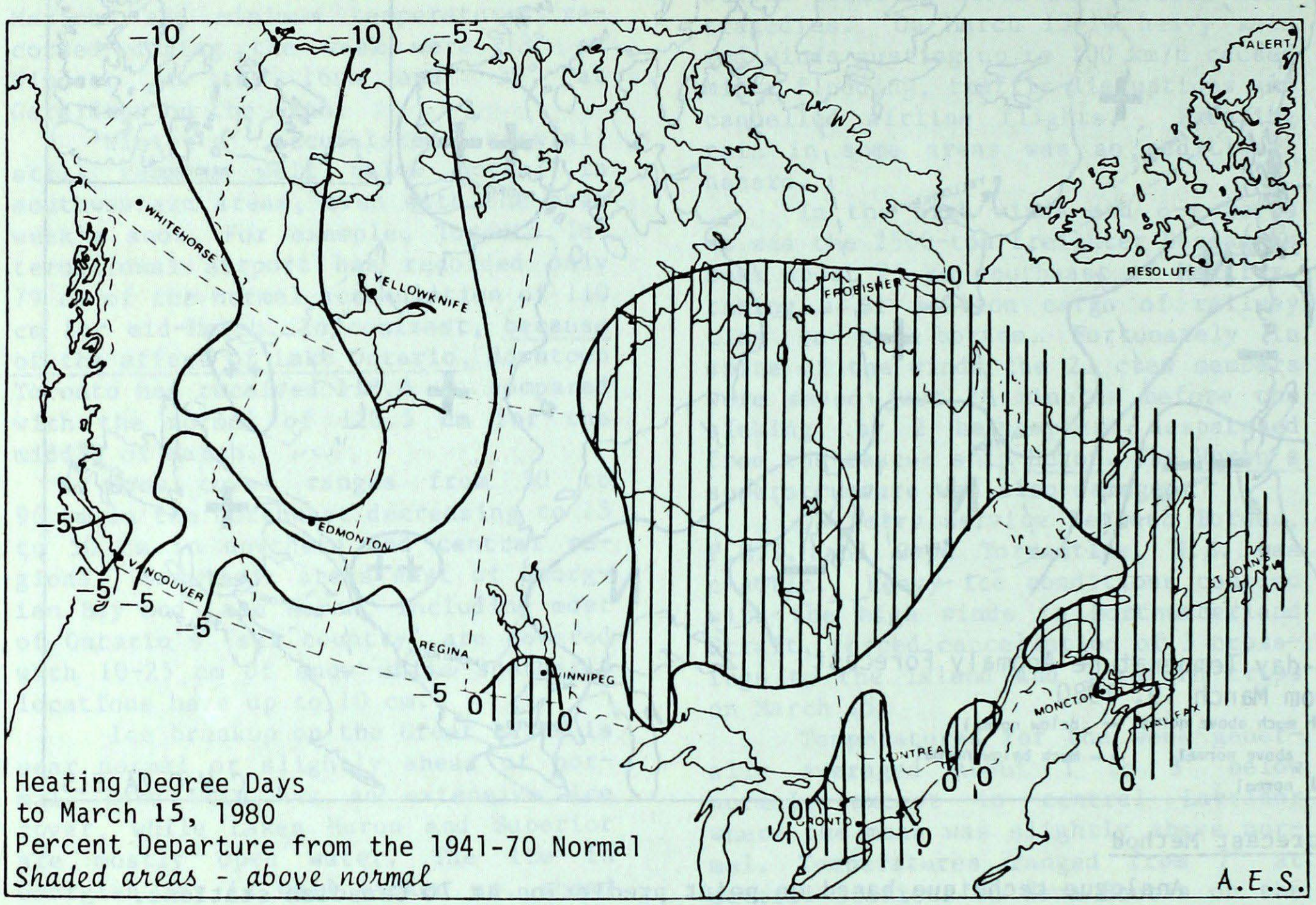
Temperature Scale

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

Station	Current Temperature Anomaly Forecast	
Whitehorse	Above Normal	From 1.0° to 3.3° above Normal
Victoria	Much Below Normal	More than 1.0 below Normal
Vancouver	Much Below Normal	More than 1.1 below Normal
Edmonton	Above Normal	From 1.0° to 3.3° above Normal
Regina	Near Normal	Within 1.1° of Normal
Winnipeg	Below Normall	From 1.0° to 3.2° below Normal
Thunder Bay	Near Normal	Within 0.7° of Normal
Toronto	Above Normal	From 0.6° to 2.1° above Normal
Ottawa	Above Normal	From 0.6° to 2.1° above Normal
Montreal	Above Normal	From 0.6° to 2.0° above Normal
Quebec	Above Normal	From 0.6° to 2.0° above Normal
Fredericton	Above Normal	From 0.6° to 2.0° above Normal
Halifax	Above Normal	From 0.5° to 1.5° above Normal
Charlottetown	Above Normal	From 0.6° to 1.9° above Normal
St. John's	Above Normal	From 0.5° to 1.6° above Normal
Goose Bay	Much Above Normal	More than 3.0° above Normal
Frobisher Bay	Much Above Normal	More than 4.2 above normal
Inuvik	Above Normal	From 1.1° to 3.6° above Normal

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

HEATING DEGREE-DAY SUMMARY TO MARCH 15, 1980

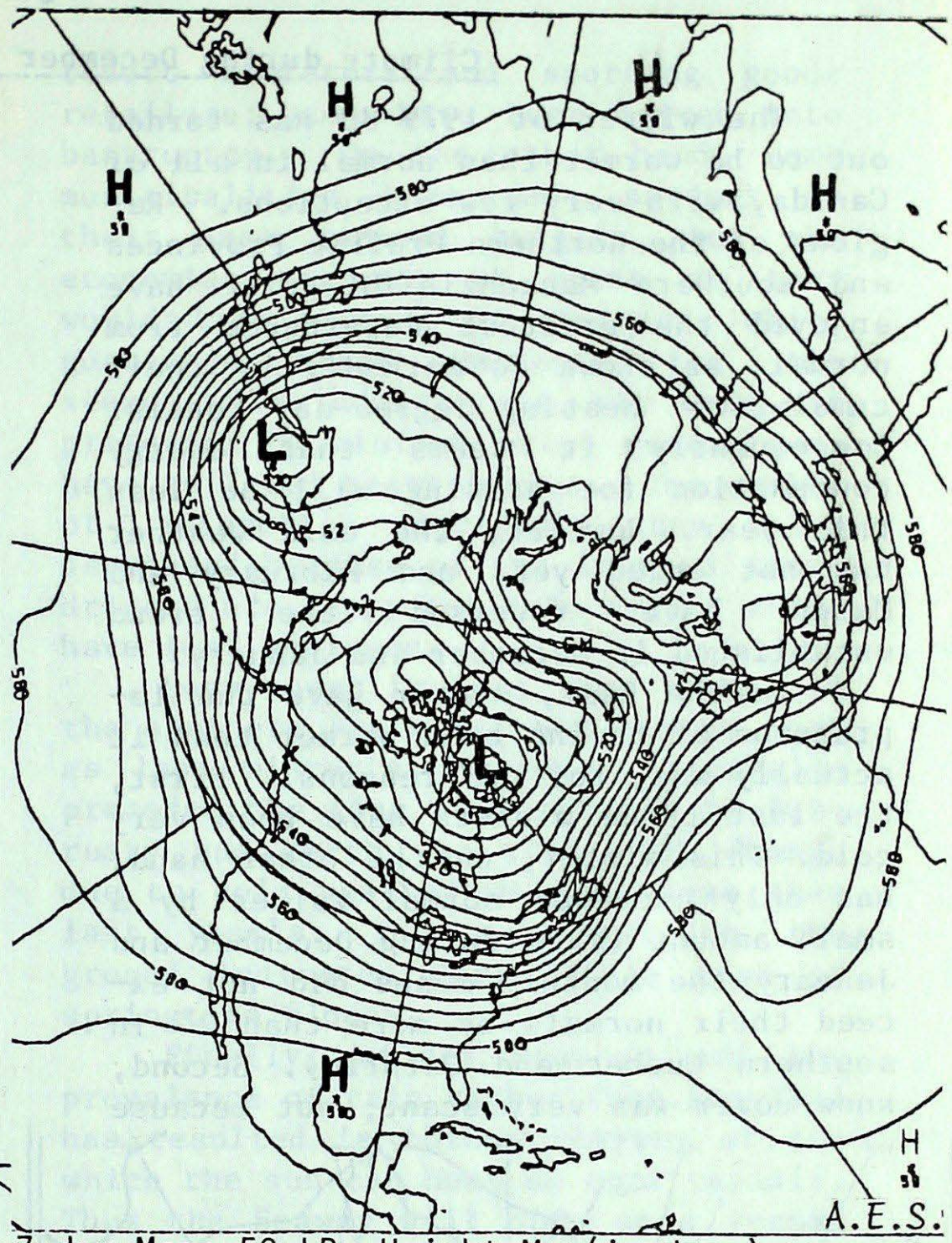


CITY	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SEASONAL TOTAL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
Resolute	764	7	9113	-48	99
Inuvik	704	37	6748	-1025	87
Whitehorse	417	4	5106	-365	93
Vancouver	188	-4	2216	-88	96
Edmonton	411	24	4070	-455	90
Calgary	407	51	3985	-192	95
Regina	489	48	4569	-234	95
Winnipeg	506	68	4839	43	101
Thunder Bay	448	50	4505	-19	100
Windsor	329	51	2927	24	101
Toronto	364	51	3301	53	102
Ottawa	385	34	3701	-78	98
Montreal	385	53	3644	28	101
Quebec	420	54	4119	88	102
Saint John, N.B.	368	32	3545	-78	98
Halifax	327	28	3120	89	103
Charlottetown	370	32	3500	60	102
St. John's, Nfld.	314	-1	3459	76	102

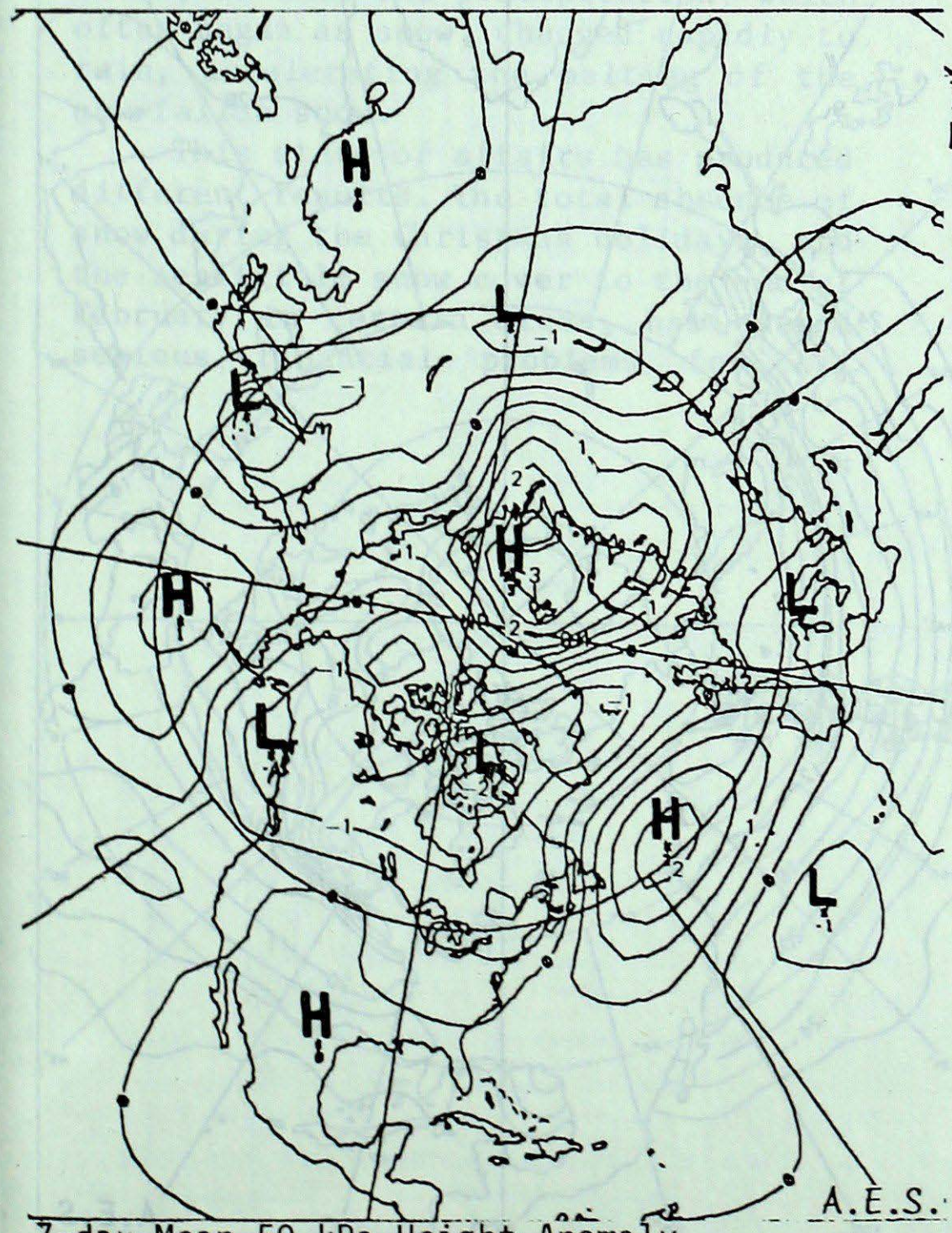
Atmospheric Circulation Features

The strong north-south component in the atmospheric circulation gave way to a relatively more zonal flow as a major ridge and trough situated over western and eastern Canada, respectively, weakened. Strong triggering pulses in the upper atmosphere could then traverse the continent after moving inland from the Pacific. These perturbations contributed to the development and deepening of low pressure systems at the surface, which moved rapidly eastward across Canada bringing alternating periods of contrasting weather and temperature.

Signs of approaching Spring are indicated by the retreat of cold Arctic air to the North. The cyclonic storm track has also started its annual northward migration. Low pressure systems are frequently crossing the country and depositing heavier amounts of precipitation associated with intrusions of milder air from the south. However, occasional outbreaks of cold Arctic air, not to mention heavy snowfalls, are still quite possible well after the beginning of Spring.



7-day Mean 50 kPa Height Map(in dams)
March 10 to 16, 1980



7-day Mean 50 kPa Height Anomaly
(in 5 dam intervals) March 10 to 16, 1980

Andy Radomski

CLIMATIC PERSPECTIVES

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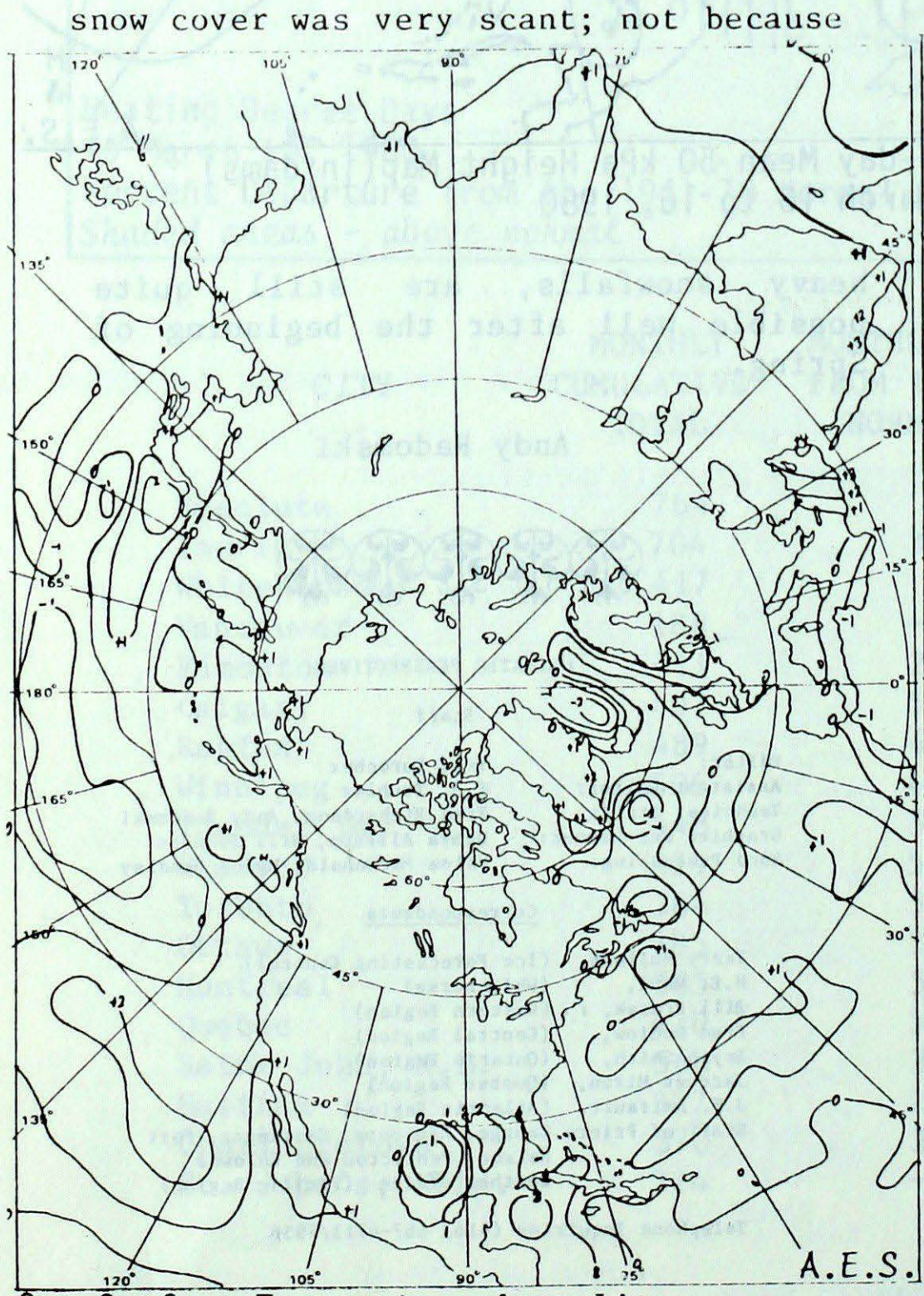
Climate during December 1979 - February 1980

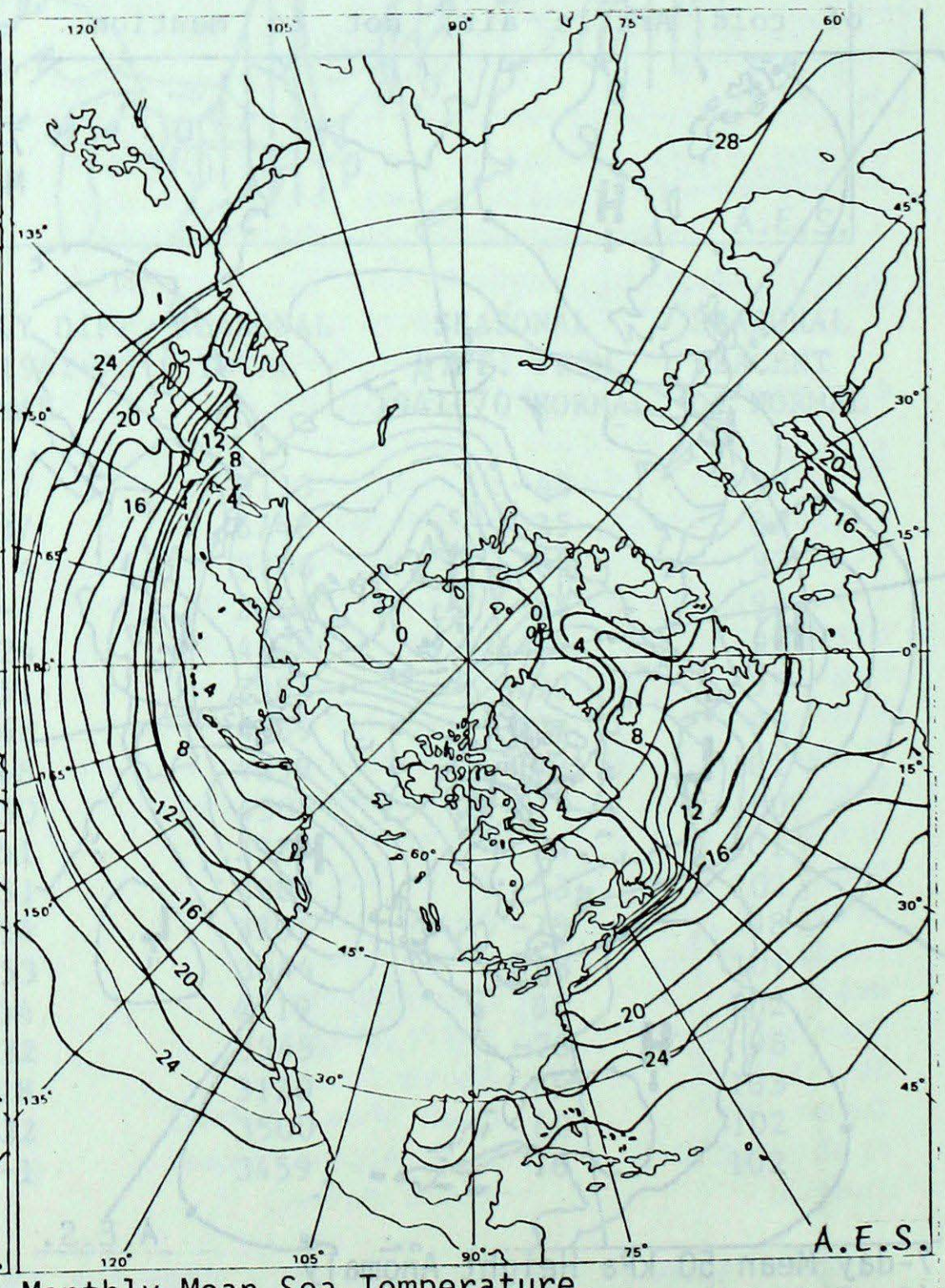
The winter of 1979-80 has turned out to be warmer than normal in all of Canada, with very few exceptions. Regions of the northern Prairie Provinces and southern Mackenzie District have enjoyed the greatest departures from normal, as shown so markedly by their cumulative heating degree-day totals. Consequently it seems that energy consumption for heating will be less this year. However, the cold weather has not ended yet, and February and March have reversed the trend established in December and January.

In the East, winter gave the impression of having been warmer than it actually was, for two reasons. First, the last three winters have been very cold. This winter, on the other hand, has only exceeded normal values by a small amount (even during December and January the monthly means did not exceed their normals by more than 2° in southern Quebec and Ontario). Second, snow cover was very scant; not because the snowfalls were slight, but mainly because the snow melted rapidly afterwards. All southern Ontario regions received more than 50% of normal snowfall, with some stations recording more than 100%. In southern Quebec, snowfalls were rare.

Precipitation has been quite variable across the country. Interior British Columbia warrants some concern. Rains were not frequent in this region during 1979. Summer had record dryness in terms of total rainfall while the lack of water continued throughout the autumn. Precipitation in the three-month period, not only was much less than normal, but fell as rain rather than snow on several occasions. However, on the frozen ground, the rain ran off, while the snowcover would have remained until spring. Moreover, the light snow depth allowed the ground to freeze to greater depths, which will then take longer to thaw in the spring.



Sea Surface Temperature Anomalies
February 16 to March 15, 1980



Monthly Mean Sea Temperature
February 16 to March 15, 1980
(Normals based on 1951-70 period)

Water reserves in the region are at their lowest levels.

This situation worries ranchers who require good irrigation. Fruit-growers in the Okanagan Valley also fear that their irrigation systems will not be adequate if spring does not replenish the water supply. Hydro-electric companies might even be affected, forcing them to decrease electrical generation if the water level continues to drop. Forestry and oil and gas exploration activities have benefited from the dry weather, but now the roads are becoming muddy because of the lack of snow; their seasonal operations may have to be terminated earlier than expected.

In eastern Canada, precipitation was much above normal only in Newfoundland and Labrador, but ranged between 50 and 75% in most regions of the Maritimes and southern Quebec, exceeding 75% in southern Ontario. However, the majority of storms moved on tracks which were a little farther north than usual, so that the precipitation, which often began as snow, changed rapidly to rain, accelerating the melting of the new-fallen snow.

This state of affairs has produced different results. The total absence of snow during the Christmas holidays, and the negligible snow cover to the end of February in certain areas, has caused serious financial problems for ski resort operators and sporting goods retailers; some have been driven into bankruptcy. On the other hand, some municipalities have made savings on their snow removal budgets, but the economies are not as great as they would like because of contracts which guarantee fixed payments for the season. Some contractors, who were not protected by minimum price guarantees, have suffered heavy losses. The number of automobile accidents has also decreased because of the lack of snow; drivers are happy but auto repair shops have lost business.

Snow cover is less than normal in the southern Prairies, but not as much as last winter's. Moreover, snowfalls preceded the long cold periods in February and March, so that crop damage due to cold weather will be less than last year's. The snowcover on the ground indicates very little risk of springtime floods.

Finally, milder weather and the prevalance of rain rather than snowfall has resulted in thinner layers of ice which the sun can heat up more rapidly. Thus the Seaway will open on a record early date this year, while ice breakup in the Great Lakes, the Gulf of St. Lawrence and around Newfoundland is ahead of normal by several weeks. Ice has started to crack and open up leads on the Beaufort Sea, likely favouring drilling operations this year.

TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. MARCH 18, 1980

Station	Temperature (°C) Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Precip. (mm) Total	Departure from Normal
BRITISH COLUMBIA						
Abbotsford A	4	- 1	9	- 1	70.8	41.9
Alert Bay	4	- 1	9	- 1	52.3	30.5
Blue River	M	X	3P	-12	M	X
Bull Harbour	4	- 1	9	- 1	55.1	25.4
Burns Lake	M	X	2P	-15P	M	X
Cape Scott	4	- 1	8	0	63.9	-12.0
Cape St. James	5	0	9	1	33.5	8.4
Castlegar A	2	- 1	8	- 7	31.4	11.8
Comox A	4	- 1	10	- 2	65.0	36.9
Cranbrook A	0	- 1	6	- 8	3.7	0.1
Dease Lake	-10	- 1	3	-28	4.9	0.5
Estevan Point	M	M	9P	0	M	M
Fort Nelson A	-12	- 1	1	-25	2.6	- 1.9
Fort St. John A	- 8	- 1	6	-20	5.5	- 0.7
Kamloops A	4	- 1	13	- 6	0.4	- 1.6
Langara	3	- 1	7	0	60.2	28.5
Lytton	M	M	M	- 2	M	M
Mackenzie A	M	X	1P	-10P	M	X
McInnes Island	5	- 1	10	1	59.1	1.4
Penticton A	4	1	12	- 5	2.4	- 1.5
Port Hardy A	4	0	9	- 2	46.0	16.7
Prince George A	- 5	- 2	3	-18	13.4	5.6
Prince Rupert A	2	- 1	7	- 4	68.7	40.0
Quesnel A	- 2	- 2	7	-15	12.2	6.1
Revelstoke A	1	0	7	- 4	17.9	1.7
Sandspit A	3	0	9	- 2	15.4	- 7.4
Smithers A	- 2	0	7	-11	2.1	- 2.7
Spring Island	M	M	M	M	M	M
Stewart A	M	X	5P	- 5P		X
Terrace A	1	- 1	5	- 4	28.6	7.3
Tofino A	4	- 2	9	- 2	125.5	33.1
Vancouver Int'l A	5	- 1	9	1	60.3	39.2
Victoria Int'l A	4	- 1	9	- 1	48.8	33.4
Williams Lake A	- 4	- 3	5	-15	7.0	2.6
YUKON						
Burwash A	-12	0	- 4	-29	0.8	- 5.1
Dawson A	-17	0	- 3	-29	1.3	- 2.3
Komakuk Beach A	-28	- 1	-18	-34	0.0	- 1.4
Mayo A	-11	2	- 4	-20	0.6	- 2.3
Shingle Point A	-27	- 2	-19	-33	0.0	- 1.7
Watson Lake A	-13	0	3	-25	3.4	- 3.3
Whitehorse A	- 8	1	2	-21	2.4	- 0.8
NORTHWEST TERRITORIES						
Alert	-33	0	-25	-38	0.9	- 1.7
Baker Lake	-35	- 8	-27	-41	0.0	- 1.5
Broughton Island	-25	1	-20	-32	8.0	6.6
Byron Bay	-34	- 3	-22	-39	0.0	- 0.6
Cambridge Bay A	-35	- 5	-22	-42	0.0	- 1.0
Cape Dorset	M	X	-21P	-31P	0.6	X
Cape Dyer A	-24	0	-15	-40	8.6	1.2
Cape Hooper	-26	- 1	-22	-30	6.4	5.9
Cape Parry A	-30	- 3	-24	-35	0.0	- 1.1
Cape Young A	-32	- 4	-24	-39	0.0	- 0.7
Chesterfield Inlet	-32	- 7	-20	-40	0.0	- 2.5
Clinton Point	-29	- 3	-19	-32	0.6	0.1
Clyde	-25	2	-17	-35	13.4	13.0
Contwoyto Lake	M	M	-24P	-42	M	M
Coppermine	-31	- 5	-17	-39	1.0	- 1.1
Coral Harbour	-30	- 4	-20	-36	0.0	- 1.5
Dewar Lakes	-28	1	-22	-32	0.0	0.0
Ennadai	M	M	-17P	-34P	M	M
Eureka	-42	- 6	-33	-46	0.3	0.0
Fort Reliance	-25	- 3	- 9	-36	0.4	- 1.5
Fort Simpson	-17	- 1	- 4	-31	0.7	- 4.5
Fort Smith A	-17	- 2	- 6	-31	2.1	- 1.4
Frobisher Bay A	-27	- 3	-16	-33	4.1	1.3
Gladman Point A	-36	- 4	-24	-44	0.0	0.0
Hall Beach A	-33	- 2	-26	-41	0.0	- 1.5
Hay River A	-20	- 3	- 2	-31	0.0	- 5.0
Inuvik A	-30	- 3	-17	-39	0.7	- 2.6
Jenny Lind Island	-35	- 5	-21	-43	0.0	- 0.2
Lady Franklin Point	-31	- 2	-20	-37	0.0	- 0.7
Longstaff Bluff	-28	2	-19	-38	3.0	3.0
Mackar Inlet	-30	0	-17	-37	0.0	- 0.3
Mould Bay	-33	0	-28	-39	0.8	0.4
Nicholson Peninsula	-30	- 3	-22	-35	0.0	- 0.5
Norman Wells A	-26	- 5	-14	-36	2.2	0.3
Pelly Bay	-33	- 2	-19	-39	0.0	0.0
Pond Inlet A	-32	X	-24	-37	0.0	X
Port Burwell	M	X	M	M	M	X
Resolute A	-34	- 3	-25	-40	0.0	- 0.8
Sachs Harbour	-29	0	-25	-34	0.0	- 1.2
Shepherd Bay A	-36	- 5	-27	-47	0.0	- 0.5
Tuktoyaktuk	-29	- 2	-23	-33	0.0	- 0.6
Yellowknife A	-21	- 1	- 9	-36	1.5	- 2.3
ALBERTA						
Banff	- 4	1	5	-12	16.5	13.4
Brooks	M	M	M	M	M	M
Calgary Int'l A	- 7	- 1	8	-19	0.4	0.3
Cold Lake A	-12	- 3	2	-26	5.3	2.3
Coronation A	-12	- 3	- 2	-21	1.7	- 3.6
Edmonton Int'l. A	-11	- 4	3	-23	2.2	- 1.4
Edmonton Mun. A	- 9	- 2	6	-19	2.4	- 2.6
Edmonton Namao A	-11	- 4	5	-20	7.6	3.6
Edson A	- 8	- 5	10	-24	2.4	- 0.5
Fort Chipewyan	M	M	- 5P	-27	5.8	- 0.1
Fort McMurray A	-10	0	4	-24	10.6	5.4
Grande Prairie A	-10	- 1	5	-24	5.7	0.5
High Level A	-13	- 3	2	-27	3.2	- 4.8
Jasper	- 5	- 2	6	-16	8.8	6.4
Lethbridge A	- 1	3	9	-11	1.0	- 3.3
Medicine Hat A	- 2	3	9	-11	0.0	- 4.8
Peace River A	-10	0	5	-21	3.7	0.4
Red Deer A	- 9	- 2	4	-19	3.3	- 0.5
Rocky Mountain House	-10	- 4	4	-23	4.0	- 0.3
Slave Lake A	-10	- 5	8	-25	16.1	9.9
Vermilion A	-12	- 2	0	-25	2.0	- 2.4
-10tecourt	- 8	- 1	11	-19	9.2	3.4
SASKATCHEWAN						
Broadview	-12	- 2	- 0	-25	3.6	1.0
Buffalo Narrows	-14	- 6	- 3	-23	10.2	7.1
Cree Lake	-18	X	- 7	-34	11.4	X
Estevan A	- 9	- 1	0	-20	3.6	0.0
Hudson Bay	-16	- 4	- 6	-33	M	M
Kindersley	M	M	0P	-19	M	M
La Ronge A	-17	- 7	- 7	-29	10.3	7.7
Meadow Lake A	-14	X	2	-27	11.0	X
Moose Jaw A	- 8	0	0	-18	6.4	3.7
Nipawin A	-17	X	- 6	-31	14.6	X
North Battleford A	-13	- 4	- 4	-23	7.2	2.7
Prince Albert A	-16	- 4	- 4	-27	9.5	5.4
Regina A	-11	- 2	- 2	-21	9.2	4.2
Saskatoon A	-13	- 3	- 3	-22	2.1	- 1.6
Swift Current A	- 6	1	4	-16	1.8	- 2.5
Uranium City	-17	- 2	- 9	-29	4.8	0.7
Wynyard	-13	- 2	- 3	-23	7.2	1.9
Yorkton A	-15	- 3	- 1	-28	8.7	3.6
MANITOBA						
Bissett	-13	- 6	0	-38	5.4	4.0
Brandon A	-13	- 3	- 1	-30	9.9	5.3
Churchill A	-24	- 4	-15	-36	3.6	0.3
Dauphin A	-14	- 3	- 1	-31	2.0	- 3.4
Gillam A	-22	X	-11	-37	6.1	X
Gimli	-13	- 3	1	-30	6.2	2.4
Island Lake	M	X	- 6P	-37	M	X
Lynn Lake	-20	- 7	- 8	-40	4.7	1.7
Norway House	-18	X	- 8	-38	18.8	X
Pilot Mound	-11	- 1	0	-25	9.9	6.7
Portage la Prairie	-12	- 3	1	-29	6.8	0.7
The Pas A	-16	- 4	- 7	-31	12.7	8.7
Thompson A	-21	- 8	-11	-42	9.3	5.7
Winnipeg Int'l A	-12	- 2	2	-29	6.8	1.6
ONTARIO						
Armstrong A	-16	- 4	- 2	-36	M	M
Atikokan	-12	- 5	- 1	-29	21.1	12.3
Earlton A	-11	- 3	2	-25	21.0	10.3
Geraldton	-16	- 5	- 2	-39	15.6	6.6
Gore Bay A	- 8	- 3	4	-23	19.7	10.8
Kapuskasing A	-12	- 3	- 1	-29	14.5	4.0
Kenora A	-11	- 3	1	-28	14.5	8.5
Kingston A	M	M	1P	-17	M	M
Lansdowne House	-17	- 4	- 1	-34	12.8	6.3
London A	- 4	- 2	10	-14	16.7	1.6
Moosonee	-15	- 2	- 2	-31	7.3	- 1.9
Mount Forest	M	M	6P	-20P	M	M
Muskoka A	- 8	- 4	5	-19	25.8	11.1
North Bay A	-10	- 4	4	-29	40.6	27.0
Ottawa Int'l A	- 7	- 4	7	-17	18.4	3.2
Petawawa A	- 9	X	6	-24	8.0	X
Pickle Lake	-16	- 5	- 4	-30	9.9	0.8
Red Lake A	-15	- 4	- 2	-32	9.8	5.4
Simcoe	M	M	4P	-12	M	M
Sioux Lookout A	-13	- 4	- 3	-29	10.3	2.5
Sudbury A	- 8	- 1	9	-22	24.8	17.1
Thunder Bay A	- 9	- 3	1	-25	24.7	15.4
Timmins A	-11	- 2	1	-28	10.4	- 0.1
Toronto Int'l A	- 5	- 3	7	-14	12.5	- 3.8
Trenton A	- 6	- 5	8	-16	16.0	0.1
Trout Lake	-18	- 3	- 4	-35	11.5	6.5
Wawa A	M	X	4P	-30P	M	X
Wiarton A	- 6	- 2	5	-17	35.7	21.6
Windsor A	- 1	- 2	13	-11	31.0	19.4
QUEBEC						
Bagotville A	-12	- 4	3	-22	17.5	5.6
Baie Comeau	- 9	- 1	1	-23	41.8	30.5
Blanc Sablon	- 8	0	1	-23	24.6	- 3.2
Border	M	M	-15P	-26	M	M
Chibougamau	-14	X	- 1	-32	30.4	X
Fort Chimo A	-20	- 2	- 8	-30	11.2	5.1
Gaspé A	- 8	X	1	-21	45.6	X
Grindstone Island	- 5	- 1	2	-12	26.2	9.3
Inoucdjouac	M	M	-18P	-35	M	M
Koartak	-23	X	-10	-32	0.0	X
La Grande Rivière A	M	X	- 4P	-30	M	X
Maniwaki	- 9	- 3	10	-24	18.8	9.4
Matagami A	M	X	- 1P	-31	M	X
Mont-Joli A	M	M	1P	-28	40.9	24.4
Montréal (A int.)	- 7	- 4	8	-18	28.2	10.4
Natashquan A	- 8	- 1	1	-21	45.1	31.5
Nitchequon	-18	- 3	- 2	-34	21.5	15.4
Port Menier	- 8	0	0	-18	62.3	50.5
Poste-de-la-Baleine	-21	- 4	- 4	-37	22.2	17.6
Québec A	-10	- 4	1	-20	49.6	34.5
Rivière du Loup	- 9	- 3	2	-17	35.8	22.0
Roberval A	-12	- 4	3	-22	13.1	4.4
Schefferville A	-18	- 2	- 2	-31	35.6	27.8
Sept-Iles	- 9	- 1	0	-20	42.4	27.3
Sherbrooke A	- 9	- 2	9	-26	34.2	22.9
Ste.Agathe des Monts	-10	- 4	5	-23	38.4	15.8
Val d'Or A	-13	- 3	3	-29	28.2	-19.3
NEW BRUNSWICK						
Charlo A	- 8	- 2	0	-21	66.9	44.8
Chatham A	- 7	- 2	4	-16	63.7	40.8
Fredericton A	- 6	- 3	5	-16	44.9	25.3
Moncton A	- 7	- 3	5	-16	62.3	39.0
Saint John A	- 6	- 3	4	-15	63.0	35.4
NOVA SCOTIA						
Eddy Point	- 6	X	4	-15	33.5	X
Greenwood A	- 4	- 3	7	-12	45.3	21.1
Sable Island	- 2	- 2	7	- 8	23.6	- 1.1
Shearwater A	- 4	- 3	5	-12	36.0	5.3
Sydney A	- 6	- 3	3	-17	35.7	5.3
Truro	- 4	0	7	-13	M	M
Yarmouth A	- 3	- 2	7	-10	52.7	24.7
PRINCE EDWARD ISLAND						
Charlottetown	- 7	- 3	5	-17	33.6	9.3
Summerside	- 6	- 2	6	-14	22.6	3.4
NEWFOUNDLAND						
Argentia VTMS	- 3	X	6	-11	19.3	X
Battle Harbour	- 7	- 1	1	-20	4.0	-19.0
Bonavista	- 4	0	4	-11	20.6	- 6.6
Burgeo	- 5	- 1	2	-12	34.6	2.5
Cartwright	M	M	3	-21P	6.7	-18.7
Churchill Falls A	M	M	- 6P	-29	M	M
Comfort Cove	- 6	- 1	5	-17	6.2	-21.6
Daniel's Harbour	- 6	- 1	5	-20	8.2	- 7.3
Deer Lake	- 8	- 1	5	-23	5.8	- 7.3
Gander Int'l A	- 6	- 1	5	-16	12.4	-10.5
Goose A	-11	- 2	2	-24	28.5	10.2
Hopedale	-12	0	- 1	-29	53.6	34.9
Port aux Basques	- 5	- 2	1	-11	25.8	6.3
St. Albans	M	M	5P	-21P	M	M
St. Anthony	- 8	X	0	-19	20.0	X
St. John's A	- 3	0	6	-13	30.9	- 0.4
St. Lawrence	- 4	- 1	3	-16	14.4	-14.4
Stephenville A	- 6	- 2	4	-16	26.7	8.7
Wabush Lake	-16	1	0	-30	21.6	13.8

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