

Environment Canada Imaging Cover Page

Report N.:



* C D S - 0 6 - 6 1 *

SKP Box Number: 672572447

METEOROLOGICAL BRANCH - DEPARTMENT OF TRANSPORT - CANADASEA LEVEL PRESSURE EXTREMES IN CANADA

1. These Climatic Data sheets contain specific observed pressure extremes in Canada. Table A contains the highest observed pressures in Canada, Table B highest observed pressures at selected stations and Table C the lowest observed pressures at selected stations in Canada. The lists should be considered as provisional since the material has been gathered from many sources and only a limited check has been carried out on the data. Field Offices with any amendments or corrections to these data sheets should notify Meteorological Headquarters at their convenience. Some world wide pressure extremes are shown in Table D.

2. Table A contains information concerning five instances or occasions when a mean sea level pressure of more than 1063 millibars was reported from one or more stations in Canada. While it is believed the list is relatively complete for the decade of the 1950's it is possible that there are several more instances in the earlier decades when reported pressures were in excess of 1063 millibars. It is hoped to make this list more complete as time goes on.

3. Monthly pressure extremes, as published by 16 meteorological offices across Canada in Monthly Meteorological Summaries, were the basis for the tables showing the highest and lowest observed pressures at selected stations. With the month and data information obtained from the Monthly Meteorological Summaries, inspections were made of the relevant synoptic and hourly weather reports to seek out the true extremes. This was necessary since many of the extremes had been selected on the basis of synoptic hours only. At stations marked with an asterisk, it was not possible to investigate in any detail beyond the synoptic observations. Particulars regarding the occurrences of the lowest pressures on record at Toronto and Edmonton are not readily available.

May.30, 1961
MKT:cg

Meteorological Branch
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TABLE AHIGHEST OBSERVED PRESSURES IN CANADA

	Sea Level Pressure mb.	Station	Date	Hour	Station Elevation (Feet)	Station Pressure mb.	Sea Level Pressure mb.	Temperature °F
1.	1067.3	Medicine Hat, Alta.	Jan. 24, 1897	06 MST	2161	965.1	1067.3	-42
	1065.7	Edmonton, Alta.			2158	965.3	1065.7	-41
	1065.0	Calgary, Alta.			3389	915.3	1065.0	-34
2.	1064.1	Fort Chimo, Que.	Jan. 8, 1956	09 EST	117	1058.9	1064.1	-25
	1062.7	Frobisher, NWT.		15 EST	68	1059.8	1062.7	-19
	1062.2	Resolution Island, NWT.		20 EST	127	1056.9	1062.2	3
	1061.2	Cape Hopes Advance, Que.		08 EST	240	1051.3	1061.2	-3
3.	1063.8	Clyde, NWT	Jan. 18, 1958	07 EST	10	—	1063.8	-35
4.	1063.6	Mayo, Y.T.	Jan. 27, 1951	09 YST	1625	992.1	1063.6	-53
	1063.0	Dawson, Y.T.		12 YST	1062	1016.8	1063.0	-46
5.	1063.6	Dawson, Y.T.	Jan. 6, 1909	08 YST	1062	—	1063.6	-52

TABLE B

HIGHEST OBSERVED PRESSURES AT SELECTED STATIONS

Name	Years of Record	Elevation Feet	Date	Hour	Highest Sea/Level Pressure MB	Corresponding Station Pressure MB	Temp. °F
Fort St. John, B.C.	20	2275	Dec. 20, 1960	05 P	1051.4	960.4	-9
Prince George, B.C.	19	2218	Jan. 16, 1957	10 P	1057.8	967.4	-15
Vancouver, B.C.	24	16	Jan. 26, 1949	19 P	1044.0	—	30
Victoria, B.C.	62	228	Oct. 20, 1906	12 P	1039.3	1036.1	51
Whitehorse, Y.T.	19	2289	Feb. 4, 1948	06 Y	1055.0	963.9	-7
Calgary, Alta.	21	3540	Dec. 10, 1957	05 M	1046.1	912.6	8
Edmonton, Alta.	79	2219	Mar. 20, 1914	06 M	1048.1	965.1	4
Regina, Sask.	23	1884	Mar. 11, 1951	20 M	1055.8	978.6	-16
Winnipeg, Man.	23	786	Jan. 10, 1949	11 C	1054.1	1021.1	-16
Toronto, Ont.	120	379	Jan. 8, 1866	08 E	1062.6	1046.7	-12
Montreal, Que.	20	98	Dec. 25, 1949	14 E	1052.3	1048.4	11
Moncton, N.B.	22	248	Dec. 25, 1949	18 A	1050.3	1040.3	15
Halifax, N.S.	88	83	Dec. 25, 1949 Jan. 1, 1890	20 A 09 A	1051.2 1050.1	1047.9 1045.2	21 11
Sydney, N.S.	49	197	Mar. 10, 1943	08 A*	1050.8	1042.7	5
Gander, Nfld.	21	482	Mar. 10, 1943	08 N*	1047.9	1028.1	-2
Torbay, Nfld.	20	463	Mar. 10, 1943	08 N*	1047.5	1030.0	7

* Synoptic Observations Only
Hourly Observations Not Readily Available

TABLE C

LOWEST OBSERVED PRESSURES AT SELECTED STATIONS

Name	Date	Hour	Lowest Sea Level Pressure MB	Corresponding Station Pressure MB	Temp. °F	Sea Level Pressure Range from Highest to Lowest
Fort St. John, B.C.	Nov. 26, 1949	23 P	969.9	889.7	33	81.5
Prince George, B.C.	Nov. 26, 1949	19 P	971.0	893.3	50	86.8
Vancouver, B.C.	Dec. 6, 1952	22 P	972.9	—	41	71.1
Victoria, B.C.	Dec. 6, 1952	22 P	970.6	962.5	44	68.7
Whitehorse, Y.T.	Jan. 2, 1948	00 Y	958.9	878.2	26	96.1
Calgary, Alta.	Nov. 15, 1942	05 M	977.6	855.3	30	68.5
Edmonton, Alta.	Nov. — 1933	—	—	890.6	—	—
Regina, Sask.	Nov. 27, 1949	20 M	978.6	911.8	50	77.2
Winnipeg, Man.	Oct. 10, 1949	15 C	966.6	938.6	49	87.5
Toronto, Ont.	Jan. 2, 1870	09 E	—	952.8	—	—
Montreal, Que.	Dec. 2, 1942	13 E*	962.6	959.1	30	89.7
Moncton, N.B.	Dec. 30, 1956	06 A	955.7	946.9	37	94.6
Halifax, N.S.	Feb. 28, 1952	12 A	957.7	954.8	36	92.4
Sydney, N.S.	Feb. 9, 1954	21 A	955.3	948.2	32	95.5
Gander, Nfld.	Jan. 25, 1945	20 N*	950.6	933.3	32	97.3
Torbay, Nfld.	Feb. 10, 1954	09 N	954.4	938.0	32	93.1

See Table B For Station Information

*Synoptic Observations Only

TABLE D - SOME PRESSURE EXTREMES

(a)	<u>HIGH</u>		
	World	1075.2 mb.	Irkutsk, Siberia, USSR - Jan 14, 1893
	Canada	1067.3	Medicine Hat, Alta. - Jan 24, 1897
	Alaska*	1062.2	Bethel - Dec 21, 1937
	United States (Continental)	1059.6	Lander, Wyoming. - Dec 20, 1924
	British Isles	1053.8	Glasgow - 1896
(b)	<u>LOW</u>		
	World	877 mb.	19°N 135°E 600 mi. NW of GUAM - Eye of Typhoon IDA 0500 $\frac{2}{3}$ September 24, 1958.
		886.6	Ship 460 mi. E of LUZON, Philippine Islands. August 18, 1927.
	United States	892.3	Long Key, Florida, September 2, 1935 in a Hurricane.
	British Isles	925.5	Ochertyre, Perthshire, January 26, 1884.
(c)	<u>SEA LEVEL PRESSURE EXCEEDED 99% OF THE TIME **</u>		
	<u>Location</u>	<u>Pressure</u>	
	Aleutian Low	972 mb.	
	Islandic Low	955 mb.	
(d)	<u>SEA LEVEL PRESSURE EXCEEDED 1% OF THE TIME **</u>		
	<u>Location</u>	<u>Pressure</u>	
	Siberian High	1055 mb.	
	Canadian High	1041 mb.	
	Pacific High	1037 mb.	

* A value of 1070.1 mb. has been credited to a station near the Alaska-Yukon boundary on January 6, 1909 on the U.S.W.B. Historical Weather Map for that date. The pressures are shown in excess of 1063 mb. from January 4 to January 7.

** After Schulman and Van Rooy (1950).