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**Declination Results at Canadian Stations
North of Latitude 60° N, 1938-47**

BY

R. G. MADILL

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DECLINATION RESULTS AT CANADIAN STATIONS NORTH OF LATITUDE 60° N, 1938-47

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R. G. MADILL

ABSTRACT

Declination observations were made at three hundred and fifty points in Northern Canada during the years 1938 to 1947, inclusive. The points lie within the area bounded by north latitudes 60° and 80° and west longitudes 62°·7 and 138°·5. Mean values of declination and relevant data pertaining to each station are presented in tabular form. While values in certain areas where daily variation and disturbance phenomena are not yet fully understood are subject to further corrections, they are of immediate importance in the construction of magnetic maps and in advancing our knowledge of the general distribution of magnetic meridians in Northern Canada. Reference is made in the text to the various agencies assisting the Dominion Observatory in gathering declination data and to the types of instruments employed. Mention is made of an electrical induction magnetometer, designed and constructed by the Dominion Observatory, which was used first during the 1947 field season.

INTRODUCTION

An account of the work of the magnetic survey carried on by the Dominion Observatory between 1907 and 1937, inclusive, is to be found in Publications of the Dominion Observatory, Vol. V, No. 5; Vol. VIII, No. 8; Vol. VIII, No. 10; and Vol. XI, No. 7.

The Dominion Observatory has endeavoured to follow the practice when publishing magnetic results, of tabulating values of individual observations for declination, inclination and horizontal intensity in addition to mean values of each element pertaining to every magnetic station. Each general Publication of Magnetic Results has included complete data from stations occupied in all parts of Canada during the period then under review. In the present instance, the Observatory departs from its regular procedure and is publishing mean values of one element, declination, for stations in Canada lying to the north of latitude 60° N. which have been occupied since 1937. This is due, in part, to the ever increasing demand from those interested in declination values for practical purposes from that part of Canada centred approximately on the north magnetic pole.

Prior to 1943, the Dominion Observatory had extended its network of magnetic stations north of latitude 60° along the Yukon and Mackenzie Rivers systems, the east and west coasts of Hudson Bay, the north and south coasts of Hudson Strait, the eastern coasts of Baffin and Devon Islands and to the southeastern tip of Ellesmere Island. There were, also, a number of stations established by Jackson of the Meteorological Service in 1908-09 on the southern coasts of the islands bordering on the north side of Viscount Melville Sound and Barrow Strait. Valuable magnetic data had been gathered in the Canadian Arctic during a century of exploration by such renowned explorers as Parry, Sabine, Back, Franklin, McClure, Collinson, Kellet, Greely and Stefansson.

An increased interest in Northern Canada by scientists in diverse fields began in 1940. This scientific interest was accompanied by requests for recent magnetic data with particular reference to values of declination. The Dominion Observatory was faced with a serious problem. There were no magnetic stations in many areas and in regions where old values were available, secular change information was lacking. Also, the Observatory had but one magnetic observer to undertake the somewhat formidable task of organizing a magnetic survey of such a vast and relatively inaccessible region.

This situation was met in part by the recruiting and training of additional staff for the magnetic work and in part by enlisting the aid of other survey organizations. Arrangements were made in 1943 whereby officers of the Geodetic, Topographical, and Hydrographic Surveys of the Department of Mines and Resources would make declination observations at survey points throughout Canada and submit the observations to the Dominion Observatory for computation and reduction. This arrangement has been most successful and has resulted in the establishing of two hundred and ninety-five declination stations north of latitude 60°N . Values of declination for eleven additional stations have been supplied by the United States Coast and Geodetic Survey and the Carnegie Institution of Washington.

Geophysicists of the Dominion Observatory, now numbering five trained for Arctic work, have occupied fifty-six stations in this area since 1939. Fourteen of these were repeat stations. Measurements of declination, inclination and intensity were made at all Observatory stations. Values of the latter two elements will appear in a subsequent report. Geophysicists were transported to stations in the Arctic Archipelago by every available means. Penetration of the Eastern Arctic to as far north as latitude 80° was effected by ice-breakers while the Western Arctic was reached by snowmobiles and aircraft.

During the period under consideration the accumulation of magnetic information from Northern Canada has been sufficient to make possible a complete redrawing of the magnetic charts of this part of the Arctic including the relocation of the north magnetic pole at approximately latitude 73°N . and longitude 100°W . Preliminary charts have been prepared for the use of air and marine navigation and it is expected that as a result of expeditions now being planned the network of Arctic stations will be sufficiently complete to justify the printing of magnetic charts for general distribution showing a refined position of the north magnetic pole as well as values of secular change.

INSTRUMENTS AND STANDARDIZATIONS

The instrumental equipment used by Dominion Observatory magneticians has been described fully in previous Publications of Magnetic Results and need not be discussed in this report. The instrumental equipment of Surveys officers consisted of compasses and compass attachments to theodolites all of which were of standard designs with a fair degree of precision. All instruments were standardized either with the standards of the Dominion Observatory at Ottawa or with those of Agincourt Magnetic Observatory. Comparisons with standards were made before and after each field season.

A major project of the Division of Terrestrial Magnetism of the Dominion Observatory was the design and construction of an electrical induction type magnetometer in which the detecting element was mounted on the telescope tube of a theodolite in such a manner that its use for astronomical observations was not impaired. Absolute measurements of declination, inclination and intensity can be made with this instrument with rapidity and precision. The magnetometer was severely tested in the environs of the north magnetic pole during the 1947 field season. No difficulty was experienced in measuring the magnetic elements where the standard type magnetometer was useless. Following the completion of the field season, the instrument was adapted for use with a pen-and-ink recorder.

SUMMARY OF MAGNETIC RESULTS

The stations are arranged in order of increasing westerly longitude. For each station there are given the latitude, longitude, year, number of observations, declination, and source. No attempt has been made to list the many individuals who made the observations but the organizations to which they belonged have been designated as the source of information. It must be stated that the Dominion Observatory is extremely grateful to the many observers of the surveys who carried out a difficult assignment faithfully and efficiently and who, in most cases, wrought better than they knew.

Each declination observation comprises from eight to ten readings. Daily variation and disturbance corrections have been applied to many of the observations but for those in areas where this information is presently lacking only the instrumental corrections have been added. Although, in the main, the declination values are to be considered preliminary, it is believed that final mean values will not differ materially from those listed. The values may be used as they stand for purposes of constructing isogonic charts.

SOURCES OF DECLINATION DATA

The various organizations contributing to the work of gathering declination observations are listed by initials as follows, Dominion Observatory, DO; Geodetic Survey, GS; Topographical Survey, TS; Hydrographic Survey, HS; Royal Canadian Corps of Engineers, RCE; United States Coast and Geodetic Survey, USC & GS; Louisa A. Boyd Expedition, LAB; Arctic, Desert and Tropical Information Centre, ADTIC. The initials DO following the name of a station indicate the station to be originally established by the Dominion Observatory.

MAGNETIC RESULTS

Station	Latitude N.	Longitude W.	Year	No. of Obs.	Declination	Source
	° ' "	° ' "			° ' "	
					West	
Clephane Bay.....	66 00.0	62 44.0	1943.7	2	42 36.4	TS
Inglis Bay.....	65 52.9	62 50.3	1943.6	1	56 44.1	TS
Canso Channel.....	67 13.0	63 46.0	1943.6	3	57 55.3	TS
Oodjuok Fiord.....	65 23.2	64 16.4	1943.7	1	52 38.6	TS
Anderson Channel.....	63 36.7	64 31.1	1943.7	5	50 08.9	TS
Cape Searle.....	67 40.8	64 36.0	1941.7	2	59 06.9	LAB
O.S. No. 9.....	62 33.2	64 52.2	1943.7	3	48 30.4	TS
Acadia Cove (DO).....	61 18.4	64 53.1	1943.8	1	45 38.9	HS
Naping Fiord.....	67 42.0	65 24.0	1943.6	9	60 01.2	TS
Pangnirtung.....	66 08.4	65 44.1	1943.7	1	51 59.1	TS
Pangnirtung (DO).....	66 08.7	65 44.6	1941.8	4	55 36.6	LAB
" ".....			1946.7	40	54 11.5	DO
Nannuk Harbour.....	61 53.4	66 23.7	1943.7	9	41 15.4	TS
York Sound.....	62 25.9	66 30.0	1941.7	2	51 12.8	LAB
Isorituk Fiord.....	66 36.0	67 21.0	1943.7	5	57 37.2	TS
Pritzler Harbour.....	62 08.5	67 24.5	1943.6	12	45 28.1	TS
Nettilling Fiord.....	65 50.6	67 55.3	1943.7	1	51 04.4	TS
Grinnell River.....	63 44.9	68 25.0	1943.8	2	46 58.2	ADTIC
Frobisher Bay.....	63 44.8	68 31.2	1943.5	3	52 16.8	TS
River Clyde (DO).....	70 27.2	68 34.6	1946.7	7	60 05.3	DO
River Clyde.....	70 27.9	68 35.0	1941.7	2	63 14.4	LAB
Observation Cove.....	62 22.0	68 45.0	1943.6	2	43 57.6	TS
Cape Hopes Advance (DO).....	61 05.1	69 33.5	1943.6	1	48 27.9	HS
Lake Harbour (DO).....	62 50.7	69 52.0	1943.6	4	47 41.8	TS
" ".....			1943.8	1	48 16.0	HS
" ".....			1946.5	49	46 53.7	DO
Payne Bay.....	60 00.8	70 01.2	1943.8	1	45 12.2	ADTIC
High Bluff Island.....	62 33.6	70 04.1	1943.6	1	48 16.3	TS
Amadjuak Lake.....	64 35.0	70 23.0	1943.6	12	42 36.9	TS
C 25.....	66 45.0	70 27.0	1943.6	3	57 35.5	TS
Heath Bay.....	66 15.0	70 33.0	1943.6	6	53 51.5	TS
Rabbit Island.....	62 30.0	70 41.0	1943.6	1	44 29.4	HS
Point 5.....	60 16.6	70 57.9	1946.6	11	51 00.4	GS
C 24.....	67 05.0	71 41.0	1943.6	5	62 12.7	TS
C 27.....	65 21.0	71 44.0	1943.6	4	53 47.2	TS
Wakeham Bay.....	61 35.5	71 58.0	1943.7	1	44 03.5	HS
C 23.....	67 31.0	72 26.0	1943.6	15	57 53.1	TS
Cape Weggs.....	62 23.5	73 33.4	1946.7	6	41 49.3	GS
Point 8.....	60 38.0	73 47.0	1946.6	13	46 52.3	GS
Bowman Island.....	65 32.0	73 47.0	1943.6	1	52 51.1	GS
Point 9.....	61 46.2	74 09.2	1946.6	12	41 45.6	GS
C 33.....	64 27.0	74 22.0	1943.6	10	50 20.2	TS
Point 11.....	61 24.5	75 33.0	1946.6	13	38 52.4	GS
D 30.....	65 18.0	75 45.0	1946.6	4	56 17.1	GS
Cape Dorset (DO).....	64 13.6	76 34.0	1946.6	12	49 40.2	DO
C 34.....	63 37.0	77 18.0	1943.7	1	49 14.6	TS
Wolstenholme (DO).....	62 31.9	77 23.9	1946.6	20	35 37.7	DO
C 31.....	65 25.0	77 24.0	1943.7	3	57 01.3	TS
Point 13.....	61 35.1	77 51.3	1946.6	3	36 45.1	GS
Nottingham Island (DO).....	63 06.2	77 57.0	1943.6	1	44 44.9	HS
" ".....			1943.7	4	46 13.3	TS
Pond Inlet (DO).....	72 41.7	77 58.3	1946.7	21	76 31.3	DO
Pond Inlet.....	72 42.3	78 01.0	1941.7	2	82 49.9	LAB
Cape Smith (DO).....	60 44.3	78 28.2	1946.6	23	34 32.4	DO
C 32.....	64 39.0	78 30.0	1943.7	4	47 28.8	TS

MAGNETIC RESULTS—Continued

Station	Latitude N.	Longitude W.	Year	No. of Obs.	Declination	Source
	° ' "	° ' "			° ' "	
					West	
Point 14.....	62 22.8	79 44.2	1946.6	4	36 41.4	GS
Point 15.....	61 35.1	79 51.0	1946.6	6	34 14.6	GS
Tay Bay.....	73 30.0	80 46.7	1946.7	.....	76 40.0	USC & GS
Dundas Harbour (DO).....	74 31.3	82 23.9	1946.7	21	96 39.6	DO
Dundas Harbour.....	74 31.2	82 26.2	1941.7	2	97 37.9	LAB
			1946.6	.....	96 42.0	USC & GS
Cape Joy.....	73 40.8	82 57.8	1946.7	.....	88 21.0	USC & GS
Southampton Island (DO).....	64 07.8	83 10.9	1946.6	40	40 57.0	DO
Croker Bay.....	74 32.3	83 35.0	1947.6	5	87 19.4	DO
Glacier Bay.....	75 48.0	83 56.0	1946.7	.....	90 35.0	USC & GS
Arctic Bay.....	73 02.4	85 08.2	1946.7	28	85 09.8	DO
Slidre Bay.....	79 59.2	85 56.2	1947.6	6	109 24.4	DO
Repulse Bay.....	66 31.0	86 15.0	1943.7	28	41 53.4	GS
Cape Dodds.....	65 10.0	86 55.8	1943.6	6	33 02.9	GS
Hobhouse Inlet.....	74 29.2	87 01.9	1946.7	.....	91 22.0	USC & GS
Committee Bay.....	67 21.0	87 35.0	1943.7	3	48 19.9	GS
Goose Fiord.....	76 26.4	88 33.9	1947.6	7	94 38.5	DO
Douglas Harbour.....	65 44.0	88 51.0	1943.6	7	33 51.9	GS
Fullerton.....	63 59.8	88 59.2	1943.6	4	21 31.8	GS
Point 85.....	65 07.4	89 34.9	1946.7	12	20 58.8	GS
Port Leopold.....	73 52.5	90 17.4	1946.6	.....	98 56.0	USC & GS
			1947.6	9	94 45.6	DO
Chesterfield Inlet (DO).....	63 20.3	90 42.5	1946.7	45	11 24.1	DO
Wager Bay.....	65 56.0	90 49.0	1943.6	14	23 39.0	GS
Union Bay.....	74 44.5	91 54.2	1946.6	.....	99 54.0	USC & GS
Point 26.....	66 35.8	92 01.8	1946.7	14	19 40.1	GS
Twin Lake.....	63 18.8	92 21.9	1945.6	5	08 00.0	GS
Low Point.....	63 48.4	92 29.6	1943.6	9	11 01.2	GS
Agnew River.....	70 38.0	92 35.3	1947.6	21	55 27.4	DO
Eskimo Point.....	61 06.7	94 05.0	1946.1	3	00 43.1	DO
					East	
Alder Lake.....	62 00.3	94 08.1	1945.6	11	00 27.8	GS
Fort Ross.....	71 59.7	94 11.0	1946.7	4	38 03.8	DO
					West	
Resolute Bay A.....	74 41.2	94 49.9	1947.6	40	101 14.5	DO
Resolute Bay B.....	74 41.1	94 53.4	1947.7	80	105 29.4	DO
					East	
Tha-anne River.....	60 35.5	95 23.5	1943.5	12	06 27.7	GS
					West	
Victory Lake.....	62 35.1	95 30.0	1945.6	16	01 51.5	GS
Point 4.....	64 46.0	95 31.0	1946.6	6	00 12.0	GS
Camp Lake.....	61 13.3	95 34.3	1945.6	8	02 10.4	GS
					East	
E.....	63 05.7	95 34.8	1946.2	1	02 56.0	DO
Carr Lake.....	62 01.2	95 41.6	1945.6	11	05 05.2	GS
					West	
Lake Franklin.....	66 46.0	95 51.0	1943.6	10	17 01.7	GS
Air Drop.....	63 39.0	95 53.0	1946.2	1	04 26.1	DO
					East	
Baker Lake Post.....	64 19.0	96 02.0	1943.6	22	01 57.8	GS
Boundary Lake.....	60 01.0	96 19.8	1945.5	1	09 30.6	GS
					West	
Lake Thaelinto.....	60 56.0	96 22.4	1943.5	6	01 09.2	GS
Tasekyoah Lake.....	68 51.6	96 39.1	1947.6	31	11 42.4	DO

MAGNETIC RESULTS—Continued

Station	Latitude N.	Longitude W.	Year	No. of Obs.	Declination	Source
	° ' "	° ' "			° ' "	
McClintock Lake.....	64 01.8	96 49.8	1945.6	9	East 03 44.4	GS
Point 58.....	60 56.4	96 51.6	1945.5	6	11 13.7	GS
Ferguson Lake	62 49.0	96 56.3	1945.6	11	06 53.8	GS
F.....	64 49.8	97 16.2	1946.2	1	07 34.7	DO
Malahar Lake.....	60 09.4	97 21.5	1945.5	19	09 50.1	GS
S. Henik Lake.....	61 37.8	97 32.0	1945.6	1	West 03 02.6	GS
Point 34.....	62 06.3	97 41.8	1945.6	11	East 12 20.1	GS
Freeman's Cove.....	75 11.5	98 03.9	1947.6	56	West 128 52.0	DO
H.....	65 24.5	98 16.5	1946.2	1	East 04 39.0	DO
Guillemard Bay.....	71 51.2	98 17.4	1947.6	13	West 38 35.7	DO
Yathkeyed Lake.....	62 42.0	98 18.0	1943.5	24	East 11 40.5	GS
Aberdeen Lake.....	64 42.0	98 22.4	1944.6	8	12 20.7	GS
Allen Lake.....	73 41.0	98 26.0	1947.6	22	West 124 42.1	DO
Boulder Lake.....	60 38.0	98 41.0	1945.6	9	East 13 37.6	GS
Point 33.....	62 03.4	99 06.3	1945.6	10	11 49.8	GS
Vera Lake.....	61 07.9	99 16.4	1945.5	14	15 03.4	GS
I.....	65 59.7	99 24.0	1946.2	1	10 26.7	DO
Aberdeen Lake.....	64 38.9	99 34.8	1947.6	36	17 39.2	DO
Windy Lake.....	60 23.2	100 05.1	1945.6	8	15 19.2	GS
Florence Lake.....	60 09.1	100 11.8	1945.5	11	10 43.3	GS
Point 32.....	62 05.7	100 38.9	1945.6	11	16 17.3	GS
Peddie Bay.....	75 11.0	100 39.0	1947.7	12	West 148 17.3	DO
Kazan River.....	61 28.0	100 42.0	1943.5	17	East 16 28.0	GS
Dubawnt Lake.....	63 27.4	100 45.7	1945.6	9	27 15.1	GS
Perry River.....	67 48.0	101 30.0	1946.2	5	26 38.7	DO
Ennadai Lake.....	60 50.3	101 31.9	1945.5	10	19 55.5	GS
Point 25.....	61 19.7	101 51.6	1945.6	12	17 28.4	GS
Pelly Lake.....	65 55.0	101 52.0	1943.6	20	26 38.9	GS
Kasba Lake.....	60 02.1	101 56.3	1945.5	8	22 58.2	GS
Point 31.....	62 07.2	102 07.6	1945.6	13	17 06.5	GS
Snowbird Lake.....	60 35.8	103 02.5	1945.6	8	20 15.8	GS
Rice Lake.....	60 02.0	103 05.1	1945.5	42	22 28.0	GS
Denmark Bay.....	70 34.8	103 21.0	1946.2	3	39 18.7	DO
Point 26.....	61 18.4	103 43.3	1945.6	6	21 20.2	GS
Gravel Hill Lake.....	62 14.1	103 45.9	1945.6	17	23 39.3	GS
M.....	68 15.1	104 08.0	1946.2	1	33 11.0	DO
N.....	69 49.6	104 08.0	1946.2	2	37 48.0	DO
Wholdaia Lake.....	60 41.6	104 35.1	1945.5	15	23 08.7	GS
Greely Haven.....	71 56.0	104 50.0	1947.6	3	61 39.5	DO
Millar Lake.....	61 18.1	104 51.8	1945.6	4	25 24.4	GS
Cambridge Bay (DO).....	69 07.2	104 57.2	1945.6	62	35 09.0	DO
			1946.2	4	35 20.4	DO
			1947.6	30	36 11.1	DO
Woodruff Lake.....	60 41.3	105 44.0	1945.5	10	26 31.4	GS
Coventry Lake.....	61 10.4	106 13.1	1945.5	9	27 07.3	GS

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MAGNETIC RESULTS—Continued

Station	Latitude	Longitude	Year	No. of Obs.	Declination	Source
	N.	W.				
	° ' "	° ' "			° ' "	
Boardman Lake.....	61 57.4	106 21.7	1945.6	23	East 30.00.2	GS
Q.....	68 27.7	108 31.0	1946.2	2	17 14.6	DO
Reliance.....	62 42.2	109 09.7	1945.5	23	33 57.2	DO
Leeman Lake.....	66 11.0	110 55.4	1947.6	6	37 26.1	GS
Jolly Lake.....	64 07.8	112 00.9	1947.7	24	35 36.3	DO
Beaulieu River.....	62 42.7	112 29.3	1945.6	1	34 32.8	TS
Point 1545.....	62 39.1	112 30.0	1945.6	1	33 47.4	TS
Itchen Lake.....	65 37.6	112 33.9	1947.6	2	36 54.6	GS
Point 1735.....	62 45.6	112 45.0	1945.6	1	33 47.8	TS
Tumpline Lake.....	62 36.0	112 47.4	1945.6	1	34 03.6	TS
Cleft Lake.....	62 26.7	112 48.0	1945.7	1	34 05.0	TS
Consolation Lake.....	62 30.5	112 56.5	1945.7	1	33 55.1	TS
Point 1440.....	62 42.0	113 40.1	1945.6	1	32 51.8	TS
Resolution B (DO).....	61 10.2	113 40.5	1943.6	80	35 49.7	DO
Point Lake.....	65 21.1	113 41.6	1947.7	19	40 25.8	DO
Lake Lucille.....	66 09.6	113 45.4	1947.5	10	41 31.6	GS
Yellowknife Bay.....	62 17.6	114 14.0	1944.6	1	35 17.0	HS
" ".....	62 16.6	114 15.1	1944.6	2	35 22.5	HS
" ".....	62 17.7	114 15.8	1944.6	1	35 36.0	HS
" ".....	62 22.8	114 17.6	1944.6	1	35 04.0	HS
" ".....	62 14.1	114 18.1	1944.6	1	34 40.0	HS
" ".....	62 21.1	114 18.1	1944.6	1	34 46.0	HS
" ".....	62 28.5	114 18.3	1944.6	1	34 27.0	HS
" ".....	62 26.4	114 18.6	1944.6	1	34 43.0	HS
" ".....	62 24.5	114 18.8	1944.6	1	35 19.0	HS
" ".....	62 25.9	114 18.8	1944.6	2	34 33.0	HS
" ".....	62 26.8	114 19.3	1944.6	1	34 17.0	HS
" ".....	62 27.4	114 19.6	1944.6	1	35 22.0	HS
" ".....	62 28.3	114 20.3	1944.6	1	34 53.0	HS
" ".....	62 26.5	114 20.4	1944.6	1	33 50.0	HS
" ".....	62 25.8	114 20.8	1944.6	1	34 21.0	HS
" ".....	62 27.3	114 21.3	1944.6	1	35 04.0	HS
" ".....	62 28.5	114 21.4	1944.6	1	35 41.0	HS
" ".....	62 24.8	114 21.5	1944.6	1	33 38.0	HS
" ".....	62 23.6	114 22.0	1944.6	2	34 09.0	HS
" ".....	62 21.5	114 24.3	1944.6	1	35 08.0	HS
Yellowknife.....	62 28.6	114 26.3	1947.6	44	33 23.3	DO
Yellowknife Bay.....	62 16.3	114 26.4	1944.6	2	34 03.0	HS
" ".....	62 19.0	114 27.0	1944.6	1	35 02.0	HS
Bernard Harbour.....	68 46.9	114 46.4	1943.6	3	48 01.8	GS
Point 251.....	64 24.0	114 55.0	1946.5	1	38 23.0	TS
Point 283.....	64 21.0	114 56.0	1946.5	1	34 09.0	TS
Buchan Lake.....	60 00.6	114 56.1	1943.4	5	32 45.4	GS
Point 898.....	63 53.0	115 04.0	1946.7	1	39 07.0	TS
Point 678.....	64 07.0	115 04.0	1946.6	1	38 32.0	TS
Coppermine.....	67 49.7	115 04.6	1943.6	27	48 09.7	GS
Point 191.....	64 31.0	115 06.0	1946.5	1	37 46.0	TS
Coppermine (DO).....	67 48.8	115 07.2	1945.6	206	47 15.4	DO
			1946.2	4	48 43.5	DO
Point 154.....	64 26.0	115 18.0	1946.5	1	36 52.0	TS
Point 793.....	64 01.0	115 24.0	1946.6	1	37 37.0	TS
Point 813.....	63 59.0	115 26.0	1946.6	1	38 42.0	TS
Point 453.....	64 18.0	115 29.0	1946.6	1	37 21.0	TS
Point 545.....	64 10.0	115 34.0	1946.6	1	37 10.0	TS
Akaitcho Lake.....	66 31.6	115 38.8	1947.6	7	39 27.4	GS

MAGNETIC RESULTS—Continued

Station	Latitude N.	Longitude W.	Year	No. of Obs.	Declination	Source
	° ' "	° ' "			° ' "	
					East	
Rac.....	62 49.4	116 06.9	1945.5	28	35 52.9	DO
Boffa Lake.....	69 40.0	116 11.6	1943.6	8	50 00.8	GS
Dismal Lakes.....	67 15.0	116 33.0	1946.2	1	44 34.2	DO
Point 45.....	67 54.8	116 36.3	1947.6	13	45 31.7	GS
Libby Lake.....	68 17.2	117 29.3	1943.6	1	45 21.2	GS
Fawn Lake.....	62 10.0	117 32.0	1943.4	7	37 52.1	GS
Point 20.....	67 28.5	117 35.4	1947.6	13	44 06.8	GS
King's Bay.....	70 43.8	117 45.0	1943.6	16	56 01.4	GS
Cameron Bay.....	66 03.8	117 45.9	1945.6	81	44 28.6	DO
Lac la Marte.....	63 11.6	118 50.0	1943.4	9	38 46.4	GS
Sawmill Bay.....	65 43.4	118 55.3	1947.6	16	41 43.6	GS
Confidence.....	66 53.8	119 11.9	1943.6	8	43 58.8	GS
Tache Lake.....	64 03.7	119 26.7	1943.5	6	39 53.8	GS
Betty's Cove.....	66 22.6	120 24.8	1947.5	14	43 53.5	GS
Mackenzie River.....	61 46.4	120 41.9	1945.6	1	35 12.0	HS
" ".....	61 47.3	120 42.0	1945.6	1	35 22.0	HS
" ".....	61 46.3	120 42.9	1945.6	1	35 01.0	HS
" ".....	61 46.7	120 43.3	1945.6	1	35 03.0	HS
" ".....	61 47.9	120 43.5	1945.6	1	35 31.0	HS
" ".....	61 48.4	120 44.1	1945.6	1	35 21.0	HS
" ".....	61 47.7	120 44.4	1945.6	1	35 26.0	HS
" ".....	61 48.1	120 44.9	1945.6	1	35 24.0	HS
" ".....	61 48.6	120 45.2	1945.6	1	35 19.0	HS
" ".....	61 48.6	120 46.6	1945.6	1	35 15.0	HS
" ".....	61 48.9	120 47.2	1945.6	1	35 23.0	HS
" ".....	61 49.2	120 48.3	1945.6	1	35 14.0	HS
" ".....	61 48.7	120 48.5	1945.6	1	35 20.0	HS
" ".....	61 49.6	120 50.0	1945.6	1	35 27.0	HS
" ".....	61 49.2	120 50.6	1945.6	1	34 58.0	HS
" ".....	61 49.6	120 51.8	1945.6	1	35 08.0	HS
" ".....	61 49.3	120 52.4	1945.6	1	35 09.0	HS
" ".....	61 50.1	120 54.0	1945.6	1	35 04.0	HS
" ".....	61 49.6	120 54.2	1945.6	1	35 04.0	HS
" ".....	61 50.2	120 55.7	1945.6	1	35 12.0	HS
" ".....	61 49.8	120 56.2	1945.6	1	35 30.0	HS
" ".....	61 50.5	120 56.6	1945.6	1	35 26.0	HS
" ".....	61 49.9	120 56.8	1945.5	2	35 21.5	HS
" ".....	61 50.3	120 57.4	1945.5	1	35 25.0	HS
" ".....	61 49.8	120 58.1	1945.5	1	35 19.0	HS
" ".....	61 50.2	120 58.1	1945.5	1	35 23.0	HS
" ".....	61 50.6	120 58.4	1945.5	2	35 22.0	HS
" ".....	61 50.3	120 58.6	1945.5	1	35 20.0	HS
" ".....	61 49.8	120 59.1	1945.5	2	35 30.0	HS
" ".....	61 50.5	121 00.0	1945.5	1	34 58.0	HS
" ".....	61 49.9	121 01.2	1945.5	1	35 14.0	HS
" ".....	61 50.4	121 01.6	1945.5	1	34 55.0	HS
" ".....	61 50.5	121 03.0	1945.5	1	35 09.0	HS
" ".....	61 50.1	121 03.9	1945.5	1	35 39.0	HS
" ".....	61 50.5	121 05.1	1945.5	1	35 40.0	HS
" ".....	61 50.2	121 05.4	1945.5	1	35 42.0	HS
" ".....	61 50.2	121 07.1	1945.5	1	35 22.0	HS
" ".....	61 50.7	121 07.1	1945.5	1	35 32.0	HS
" ".....	61 50.7	121 07.9	1945.5	1	35 31.0	HS
" ".....	61 50.2	121 09.4	1945.5	1	35 19.0	HS
" ".....	61 51.0	121 10.7	1945.5	1	35 36.0	HS

DECLINATION RESULTS AT CANADIAN STATIONS NORTH OF LATITUDE 60° N, 1938-47 351

MAGNETIC RESULTS—Continued

Station	Latitude	Longitude	Year	No. of Obs.	Declination	Source
	N.	W.				
	° ' "	° ' "			° ' "	
					East	
Mackenzie River.....	61 51.2	121 11.0	1945.5	1	35 20.0	HS
“ “.....	61 50.4	121 11.5	1945.5	1	35 34.0	HS
“ “.....	61 51.5	121 12.3	1945.5	1	35 16.0	HS
“ “.....	61 50.9	121 16.4	1945.6	1	35 49.0	HS
“ “.....	61 52.2	121 18.8	1945.6	1	35 43.0	HS
“ “.....	61 52.5	121 20.4	1945.6	1	35 44.0	HS
“ “.....	61 51.6	121 20.7	1945.5	1	35 43.0	HS
Windrum Anchorage.....	71 29.1	121 42.5	1943.6	3	54 03.7	GS
Downwind Lake.....	66 51.9	121 46.7	1947.5	14	42 53.5	GS
Greasy Lake.....	63 20.8	121 53.5	1943.5	6	37 46.3	GS
			1944.7	1	37 42.0	TS
Point 13.....	66 35.3	122 20.5	1947.5	13	43 01.2	GS
Blackwater Lake.....	64 08.4	122 59.6	1943.5	5	40 11.2	GS
Stewart Lake.....	67 27.1	123 08.9	1947.5	5	42 26.0	GS
D 23.....	64 32.0	123 41.0	1944.7	3	38 54.2	TS
Iverson Lake.....	62 28.1	124 29.4	1944.7	1	36 39.0	GS
Carleton Lake.....	66 57.6	124 36.3	1947.5	14	43 05.0	GS
Wright Bay.....	69 43.6	124 51.5	1943.5	21	48 22.5	GS
Smith Arm.....	65 57.5	124 53.5	1943.5	10	40 14.4	GS
Lac Manoir.....	67 32.6	124 53.8	1947.5	16	43 04.3	GS
McDiarmid Lake.....	68 06.7	125 07.2	1943.5	9	45 48.1	GS
Atkinson Lake.....	68 56.1	125 13.9	1947.6	13	47 30.2	GS
Red Dog.....	64 11.0	125 38.0	1944.6	13	39 14.4	TS
Point 41 M.....	69 21.9	125 43.3	1947.6	9	47 51.9	GS
Tweed Lake.....	66 47.1	125 50.6	1943.5	13	43 43.5	GS
Shama Lake.....	67 38.3	126 08.6	1947.5	9	43 01.0	GS
Foran Lake.....	63 51.4	126 09.0	1943.6	11	37 50.3	GS
D 16.....	64 14.0	126 28.0	1944.6	11	38 22.4	TS
Klata Lake.....	68 46.4	126 45.9	1947.6	16	44 36.8	GS
Gwen Lake.....	69 58.6	127 01.6	1947.6	17	47 25.2	GS
Point 4.....	65 55.2	127 05.7	1944.5	1	41 33.2	TS
D 13.....	64 51.0	127 14.0	1944.5	1	38 23.9	TS
Patricia Berry Lake.....	67 01.5	127 18.8	1943.5	30	41 49.3	GS
Parallel.....	60 00.0	127 47.0	1943.7	5	33 10.2	GS
Andy Creek.....	64 30.0	127 50.0	1944.6	1	38 44.0	TS
Cape Bathurst.....	70 33.7	127 59.3	1947.6	5	49 25.7	GS
Point 11.....	65 09.1	128 05.2	1944.6	1	38 46.4	TS
Hyland River.....	60 00.0	128 11.0	1944.6	39	33 25.1	GS
Watson Lake.....	60 06.0	128 21.0	1947.5	1	33 46.0	RCE
Anderson River.....	69 29.4	128 22.7	1943.5	6	45 56.8	GS
Twitya River.....	64 08.0	128 23.0	1944.6	9	38 07.2	TS
Good Hope A (DO).....	66 15.5	128 38.3	1943.7	78	39 22.9	DO
June Lake.....	63 30.9	128 40.2	1943.7	5	37 58.5	GS
D 21.....	67 27.0	128 47.0	1944.7	3	41 31.5	TS
Watson Lake.....	60 07.0	128 50.0	1947.5	1	33 35.0	RCE
Parallel.....	60 02.0	129 01.0	1943.6	3	33 38.8	GS
Camp 3, DOT.....	66 27.7	129 01.3	1943.7	10	41 53.3	DO
O'Grady Lakes.....	62 59.8	129 04.9	1944.6	10	38 15.6	GS
Crossley Lakes.....	68 35.5	129 29.7	1943.5	5	45 07.6	GS
N 4.....	60 00.0	129 41.0	1944.6	40	33 06.6	GS
Point 10.....	65 30.6	130 03.2	1944.6	1	39 49.8	TS
Point 9.....	65 57.4	130 06.1	1944.6	1	39 59.0	TS
Itsi Lake.....	62 50.0	130 13.2	1943.7	3	35 28.0	GS
Pelly Lakes.....	62 03.6	130 14.6	1944.6	8	36 13.5	GS
N 3.....	60 00.0	130 15.0	1944.6	32	33 26.4	GS

MAGNETIC RESULTS—*Concluded*

Station	Latitude	Longitude	Year	No. of Obs.	Declination	Source
	N.	W.				
	° /	° /			° /	
					East	
N 2.....	60 00.0	130 46.2	1944.5	26	33 30.2	GS
Point 5.....	67 51.7	130 48.2	1944.7	1	41 11.0	TS
Charles Hyndman Lake.....	64 14.8	131 02.4	1943.5	5	44 53.6	GS
Point 8.....	66 53.5	131 02.6	1944.6	1	40 13.2	TS
Sheldon Lake.....	62 40.5	131 04.6	1943.7	9	35 44.6	GS
Parallel.....	60 00.0	131 14.0	1943.6	3	31 41.9	GS
Nidderly Lake.....	63 17.5	131 21.3	1944.5	5	36 13.9	GS
N 1.....	60 00.0	131 34.2	1944.5	46	32 34.6	GS
Olive Lake.....	63 55.2	131 36.5	1944.5	7	36 55.5	GS
Isabel Lake.....	62 40.7	132 20.2	1944.6	13	35 37.6	GS
Ruth McDougall Lake.....	63 13.3	132 27.6	1943.7	2	35 21.0	GS
Summit Lake.....	67 42.6	132 28.3	1944.6	7	40 07.5	GS
Point 7.....	66 48.0	132 29.6	1944.6	1	39 44.0	TS
D 6.....	67 51.0	132 35.0	1944.6	14	41 32.2	TS
Swan Lake.....	63 33.8	132 47.6	1943.7	3	35 50.9	GS
Point 7A.....	66 20.9	132 51.1	1944.6	1	38 40.2	TS
Arctic Red River.....	67 26.7	133 44.2	1943.7	86	43 00.9	DO
White.....	60 18.5	133 57.0	1944.7	1	32 44.4	TS
Jubilee.....	60 12.0	134 07.0	1944.7	1	33 05.0	TS
Kathleen Emery Lake.....	64 15.0	134 13.0	1944.5	5	38 02.7	GS
Point 19.....	66 10.3	134 16.7	1944.6	1	36 40.8	TS
D 20.....	66 43.0	134 26.0	1944.6	9	38 04.5	TS
Margaret Cormack Lake.....	65 20.4	134 30.6	1944.7	8	33 24.3	GS
Lansdowne.....	60 22.0	134 31.5	1944.7	1	31 34.7	TS
Lewes.....	60 36.5	134 32.0	1944.7	1	36 26.9	TS
Nares.....	60 11.0	134 35.0	1944.5	2	32 06.2	TS
Whitehorse.....	60 34.0	134 39.0	1947.6	1	31 47.0	RCE
Caribou.....	60 16.0	134 42.0	1944.5	1	32 59.4	TS
Wounded Moose.....	60 28.0	134 42.0	1944.5	1	31 09.5	TS
Skelly.....	60 09.5	134 51.0	1944.7	1	30 42.5	TS
Whitehorse.....	60 36.0	134 53.0	1947.6	1	32 11.0	RCE
Wheaton.....	60 27.4	134 57.9	1944.5	1	31 29.5	TS
Whitehorse.....	60 42.0	135 03.0	1947.6	1	32 09.0	RCE
Perkins.....	60 20.0	135 06.0	1944.7	1	34 05.8	TS
Andy.....	60 04.5	135 10.5	1944.6	1	31 37.4	TS
Bell.....	60 10.5	135 11.0	1944.5	1	32 08.3	TS
Granger.....	60 31.0	135 16.0	1944.5	1	28 48.9	TS
Whitehorse.....	60 49.0	135 17.0	1947.6	1	31 40.0	RCE
Whitehorse.....	60 49.0	135 23.0	1947.6	1	31 09.0	RCE
McNeil.....	60 08.0	135 27.0	1944.6	1	32 19.1	TS
Ibex.....	60 31.5	135 29.5	1944.5	1	31 33.6	TS
Wind Lakes.....	64 28.6	135 32.5	1944.5	8	35 20.0	GS
Arkell.....	60 36.5	135 37.0	1944.5	1	32 52.1	TS
Sun.....	60 15.5	135 38.0	1944.5	1	31 51.3	TS
Prim.....	60 22.0	135 54.0	1944.5	1	32 31.7	TS
Shingle Point.....	69 00.2	137 26.7	1943.5	9	40 05.9	GS
Porcupine River.....	67 27.2	138 02.8	1944.7	9	37 59.6	GS
Chapman Lake.....	64 50.9	138 19.9	1944.5	4	34 18.0	GS
Kay Point.....	69 15.2	138 28.8	1944.6	10	39 28.1	GS