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**Department of Mines
and Technical Surveys**

APPENDICES
Annual Report
Calendar Year
1961

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Appendix I - Surveys and Mapping Branch

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Appendix II - Geological Survey of Canada

Lists of Geological surveys and maps.

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List of Geographical maps.

Appendix IV - Mines Branch

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Appendix V

Research Grants to Canadian Universities.

Appendix VI

List of publications and articles published.

(b) TOPOGRAPHICAL SURVEY

Province or Territory	Field Surveys				Map Compilation							Photo Mosaic (sq. mi.)	Map Sheets Forwarded for Reproduction			
					1/25,000		1/50,000		1/250,000		Total		1/25,000	1/50,000	1/250,000	Area (sq.mi.)
	No. of Parties	Type of Work	Mapping Scale	Area Controlled (sq.mi.)	No. of Map Sheets	Area (sq.mi.)	No. of Map Sheets	Area (sq.mi.)	No. of Map Sheets	Area (sq.mi.)	Area (sq.mi.)					
Nfld.	1	Topographic	1/ 25,000	165	7	219	18	5145	5	15893	21,257		7			219
	2	Topographic	1/ 25,000	500												
N. S.		Interpretation	1/ 50,000	(2 map sheets)	9	336					336		9			345
N. B.	2	Topographic Field Check	1/ 25,000 1/ 25,000	100 (5 map sheets)	8	343	4	1266			1609		5			178
Que.	* 1	Vertical	1/250,000	77,725												
	1	Vertical	1/ 25,000	690												
	2	Topographic	Special	St. L. Seaway	1	53	18	6652	12	58,840	65,545	300		16	11	45,610
Ont.	* 1	Vertical	1/250,000	60,600												
	3	Trav & Levels	1/250,000	655 mi.												
	2	Interpretation	1/ 25,000	(22 map sheets)	2	106	4	1570			1,675		2	6		2,477
Man.	1	Topographic	1/ 25,000	950									4	17	7	41,057
	1	Traverse	-	225 mi.			13	4044	4	19,572	23,616					
Sask.	1	Horizontal	1/ 25,000	400										29	4	29,929
	3	Traverse	-	1510 mi.			29	10340	3	16,975	27,315	5835				
Alta.	* 1	Vertical	1/250,000	22,800									10	1	5	25,300
	2	Topographic	1/ 25,000	1,200												
	1	Vertical	-	1,275	14	651	1	364	7	35,509	36,524	1156				
B.C.	* 1	Topographic	1/ 50,000	4,620			11	4228			4,228			2	2	8,709
Yukon	1	Spirit Lvlng	-	315 mi.			7	1706			1,706			7		1,911
N.W.T.	* 1	Traverse	-	3000 mi.			23	5759	4	15,059	20,818	82691		12	5	24,076
* Helicopter - equipped					41	1708	128	41,074	35	161,848	24,630	89,83	37	90	34	148,633

Appendix I

Surveying, Mapping and Charting Activity

(a) Geodetic Survey of Canada - Field Operations, 1961

Area	No. of Parties	Type of Work	No. of Stations	Mileage	No. of Bench Marks	No. of Measured Lines
Northwest Territories	3	Triangulation	79	630		57
		Reconnaissance	50	425		
Northwest Territories-Saskatchewan-Manitoba-Ontario	3	Astronomy and Base Lines	23			1
Alberta		Triangulation	1			
British Columbia	1	Levelling		296	104	
Alberta-Saskatchewan	1	Levelling		741	346	
Saskatchewan	1	Levelling Inspection			1039	
Saskatchewan-Manitoba	1	Triangulation	21	150		27
Ontario	1	Reconnaissance	25	185		
Ontario	1	Triangulation	22	25		31
Ontario-Quebec	2	Levelling		494	246	
Quebec	1	Triangulation	17	110		
		Reconnaissance	17	120		
New Brunswick	1	Reconnaissance	26	170		
Newfoundland (Labrador)	1	Triangulation	23	235		

(c) CANADIAN HYDROGRAPHIC SERVICE (cont'd.)
New or Revised Nautical Charts

The last column, headed "Edition" refers to the month of publication and type of edition.
FE indicates a first edition; NE, a new edition; CR, a corrected reprint; and R, a reprint.

Number	Name	Location	Scale	Latitude	Longitude	Edition	
1201	White Island to Goose Cape	Que.	1:81,700	47°29'48"00'	69°25' - 73°15'	Jul.'61	NE
1209	Saguenay River, St. Fulgence to Shipshaw	Que.	1:18,000	48°25' - 48°28'	70°53' - 71°05'	Oct.'61	NE
1217	Plans in the Vicinity of Pointe des Monts	Que.	Various			Jun.'61	CR
1219	Father Point to Quebec	Que.	1:324,300	46°45' - 49°00'	69°20' - 71°20'	Nov.'61	NE
1336	Champlain to Lake St. Peter	Que.	1:36,000	46°14' - 46°27'	72°15' - 72°42'	Feb.'61	NE
1337	Lake St. Peter	Que.	1:36,000	46°04' - 46°17'	73°37' - 73°04'	Dec.'61	CR
1338	Head of Lake St. Peter to Lavaltrie	Que.	1:36,000	45°50' - 46°09'	72°57' - 73°17'	Dec.'60	NE
1339	Lavaltrie to Longue-Pointe	Que.	1:36,000	45°34' - 45°53'	73°13' - 73°32'	Jul.'61	NE
1340	Montreal Harbour	Que.	1:12,000	45°29' - 45°36'	73°29' - 73°34'	Feb.'61	NE
1410	Lake St. Louis	Que.	1:25,000	45°19' - 45°27'	73°40' - 73°59'	Mar.'61	NE
1411	Beauharnois Canal	Que.	1:25,000	45°12' - 45°22'	73°54' - 74°13'	Feb.'61	NE
1413	Lancaster Bar to Cornwall Island	Ont.	1:25,000	44°59' - 45°09'	74°26' - 74°44'	Feb.'61	NE
1414	Cornwall to Cat Island	Ont.	1:25,000	44°55' - 45°04'	74°43' - 75°01'	Mar.'61	NE
1415	Cat Island to Iroquois Lock	Ont.	1:25,000	44°49' - 44°58'	75°00' - 75°20'	Mar.'61	NE
1416	Iroquois Lock to Prescott	Ont.	1:25,000	44°41' - 44°51'	75°16' - 75°34'	Mar.'61	NE
1419	Grenadier Island to Grindstone Island	Ont.	1:25,000	44°14' - 44°25'	75°50' - 76°06'	Feb.'61	CR
1420	Grindstone Island to Howe Island	Ont.	1:25,000	44°11' - 44°22'	76°03' - 76°18'	Feb.'61	CR
1550	Britannia Bay to Chat Falls	Ont.	Various	45°20' - 45°32'	75°48' - 76°16'	Jun.'61	FE
2000	Lake Ontario - The entire lake	Ont.	1:400,000	42°50' - 44°30'	75°55' - 80°05'	Dec.'61	NE
2007	Belleville Bridge to Telegraph Narrows	Ont.	1:30,000	44°05' - 44°12'	77°07' - 77°24'	Jul.'59	NE
2061	Scotch Bonnet Island to Cobourg	Ont.	1:73,200	43°42' - 44°04'	77°28' - 78°15'	Nov.'50	NE
2062	Oshawa to Toronto	Ont.	1:72,900	43°33' - 43°55'	78°49' - 79°35'	Aug.'61	NE
2064	Kingston to False Ducks	Ont.	1:61,200	43°54' - 44°15'	76°27' - 77°10'	May'61	NE
2069	Bay of Quinte - Picton to Presqu'île Bay	Ont.	1:60,600	43°59' - 44°17'	77°01' - 77°44'	Jun.'61	CR
2100	Lake Erie - The entire lake	Ont.	1:400,000	41°10' - 43°30'	78°50' - 83°30'	Jun.'61	NE
2181	Plans of Harbours	Ont.	Various			Mar.'61	NE
2200	Lake Huron - The entire lake	Ont.	1:400,000	42°55' - 46°25'	81°15' - 84°20'	Dec.'60	NE
2216	Penetang Harbour	Ont.	1:18,300	44°46' - 44°50'	79°52' - 79°58'	Sen.'61	NE
2225	Approaches to Parry Sound	Ont.	1:20,000	45°16' - 45°23'	80°13' - 80°28'	Aug.'61	NE
2283	Waubashene to Western Islands	Ont.	1:48,900	44°44' - 45°02'	79°42' - 80°23'	Feb.'61	CR

2287	Clapperton Island to Meldrum Bay	Ont.	1:75,600	45°51'-46°15'	82°10'-83°07'	Jun. '61	CR
2291	Goderich to Chantry Island	Ont.	1:93,300	43°41'-44°30'	81°20'-82°05'	Jan. '61	NE
2292	Chantry Island to Cove Island	Ont.	1:93,300	44°27'-45°20'	81°15'-82°00'	Sen. '61	NE
2294	Little Current	Ont.	1:12,000	45°58'-46°01'	81°53'-81°59'	Apr. '60	CR
2295	Meldrum Point to St. Joseph Island	Ont.	1:72,900	45°54'-46°19'	83°04'-83°58'	Apr. '58	NE
2311	Thunder Cape to Pigeon River	Ont.	1:72,900	47°52'-48°19'	88°37'-89°34'	Apr. '61	CR
2314	Fort William and Port Arthur	Ont.	1:18,200	48°19'-48°30'	89°05'-89°17'	Dec. '61	NE
3413	Esquimalt and Victoria Harbours and Approaches	B.C.	1:12,200	48°23'-48°27'	123°21'-123°30'	Oct. '61	NE
3415	Victoria Harbour	B.C.	1:6,100	48°24'-48°27'	123°22'-123°25'	Oct. '61	NE
3430	Fraser River, Sand Heads to Tilbury Island	B.C.	1:12,000	49°06'-49°09'	123°02'-123°20'	Apr. '61	NE
3431	Fraser River, Tilbury Island to Douglas Island	B.C.	1:12,000	49°08'-49°14'	122°47'-123°04'	Apr. '61	NE
3434	Vancouver Harbour, Second Narrows to Port Moody	B.C.	1:12,200	49°16'-49°21'	122°52'-123°02'	Apr. '61	NE
3449	Race Rocks to Turn Point	B.C.	1:78,600	48°16'-48°46'	122°29'-123°32'	Feb. '61	CR
3451	Discovery Island to Saltspring Island	B.C.	1:38,100	48°25'-48°45'	123°13'-123°34'	Apr. '57	NE
3452	Moresby Passage to Gabriola Passage (Southern Sheet)	B.C.	1:39,900	48°42'-48°55'	123°07'-123°39'	Feb. '61	NE
3453	Moresby Passage to Gabriola Passage (Northern Sheet)	B.C.	1:39,900	48°48'-49°09'	123°28'-123°49'	Aug. '61	NE
3472	Plans of Cowichan Bay, Genoa Bay, and Sturdies Bay	B.C.	Various	-	-	Oct. '57	NE
3521	Okisollo Channel	B.C.	1:24,400	50°13'-50°20'	125°06'-125°24'	Feb. '61	NE
3524	Bute Inlet	B.C.	1:75,000	50°20'-50°56'	124°42'-125°10'	Apr. '60	NE
3556	Duncan Bay	B.C.	Various	-	-	Nov. '60	NE
3557	Plans in the Vicinity of Grappler Sound	B.C.	Various	-	-	May '61	NE
3558	Approaches to Nanaimo Harbour	B.C.	1:18,200	49°08'-49°14'	123°51'-123°58'	Nov. '60	NE
3562	Redonda Islands	B.C.	1:37,500	50°01'-50°20'	124°35'-124°56'	Oct. '60	NE
3563	Sutil Channel to Stuart Island	B.C.	1:37,500	50°05'-50°24'	124°50'-125°12'	Aug. '60	NE
3570	Wells Passage and Adjacent Channels	B.C.	1:37,500	50°45'-51°00'	126°42'-127°12'	Nov. '60	NE
3574	Numas Islands to Harris Islands	B.C.	1:37,400	50°45'-51°00'	127°02'-127°37'	Sen. '60	NE
3579	Sand Heads to Cape Mudge	B.C.	1:153,700	39°06'-50°03'	123°14'-125°16'	Apr. '61	CR
3592	Beaver Harbour and Hardy Bay	B.C.	1:12,200	50°42'-50°46'	127°21'-127°30'	May '61	CR
3617	Quatsino Sound	B.C.	1:48,700	50°20'-50°39'	127°30'-128°09'	Jun. '61	CR
3627	Barkley Sound and Approaches	B.C.	1:77,900	48°40'-49°07'	124°54'-125°56'	Nov. '61	NE
3637	Barkley Sound	B.C.	1:40,000	48°47'-49°02'	125°01'-125°32'	Jul. '61	NE
3643	Plans in Clayoquot Sound	B.C.	Various	-	-	Dec. '61	NE
3645	Sydney Inlet to Thasis Inlet	B.C.	1:76,900	49°15'-49°55'	126°02'-126°46'	Sen. '61	NE
3647	Harbours in Juan de Fuca Strait	B.C.	Various	-	-	Dec. '60	NE
3648	Clayoquot Sound, Northwest Portion	B.C.	1:36,500	49°10'-49°29'	125°57'-126°17'	Oct. '60	NE
3676	Quatsino Sound to Nahwitli Bar	B.C.	1:75,100	50°19'-51°02'	127°55'-128°37'	Jan. '61	CR

3710	Plans in the Vicinity of Laredo & Milbanke Sounds	B.C.	Various	-	-	Nov. '60	CR
3713	Approaches to Skeena River	B.C.	1:31,700	54°03' -54°12'	129°54' -130°18'	May '61	CR
3714	Hecate Strait (Northern Portion)	B.C.	1:146,100	53°23' -54°16'	130°24' -132°20'	Nov. '60	CR
3720	Iqol Point to Ocean Falls	B.C.	1:41,000	52°08' -52°22'	127°42' -128°17'	Feb. '61	CR
3719	Inlets in Campania and Princess Royal Islands	B.C.	Various	-	-	Apr. '61	NE
3729	Dean Channel and Burke Channel	B.C.	1:75,000	51°52' -52°32'	127°00' -127°59'	Oct. '60	FE
3730	Dean Channel & North & South Bentinck Arms	B.C.	1:75,000	51°57' -52°54'	126°33' -127°17'	Oct. '61	CR
3735	Chatham Sound, Approaches to Prince Rupert & Skeena R.	B.C.	1:69,300	53°58' -54°26'	129°54' -130°37'	Feb. '61	NE
3744	Queen Charlotte Sound	B.C.	1:365,100	50°37' -53°49'	127°24' -131°11'	Oct. '61	NE
3746	Petrel Channel and Approaches	B.C.	1:39,100	53°29' -53°50'	129°53' -130°18'	Jan. '57	FE
3747	Browning Entrance	B.C.	1:39,100	53°29' -53°50'	130°14' -130°39'	Sep. '61	CR
3772	Grenville Channel, Sainty Point to Baker Inlet.	B.C.	1:36,200	53°21' -53°50'	129°16' -130°02'	Nov. '60	CR
3778	Rivers Inlet	B.C.	1:73,600	51°22' -51°53'	127°14' -127°50'	Aug. '57	CR
3781	Dean Channel, Cousins Inlet to Elcho Harbour	B.C.	1:73,600	52°12' -52°25'	127°20' -127°48'	May '59	NE
3784	Kwakshua Channel to Spider I. and Namu Harbour	B.C.	1:24,300	51°38' -51°52'	127°50' -128°21'	Dec. '60	NE
3797	Plans in Vicinity of Queen Charlotte & Fitz Hugh Sds.	B.C.	Various	-	-	Dec. '60	NE
3805	Masset Sound and Inlet	B.C.	1:73,100	53°32' -54°10'	132°02' -132°43'	Nov. '60	NE
3837	Queen Charlotte Sound to Dixon Entrance	B.C.	1:525,000	50°45' -55°00'	127°30' -134°00'	Nov. '60	NE
3857	Louscoone Inlet	B.C.	1:18,300	52°06' -52°15'	131°10' -131°18'	Nov. '61	NE
3980	Plans in Smith and Chatham Sounds	B.C.	Various	-	-	Jun. '61	FE
3982	Port Simpson & Adjacent Anchorages	B.C.	1:24,370	54°25' -54°38'	130°20' -130°35'	Jan. '61	FE
4002	Gulf of St. Lawrence	-	1:750,000	45°16' -50°30'	57°20' -67°30'	Oct. '61	FE
4213	Little Hope Island to Lockeport Harbour	N.S.	1:37,500	43°34' -43°49'	64°43' -65°09'	Aug. '61	FE
4311	Egg Island to Pennant Point	N.S.	1:97,200	44°05' -44°50'	62°49' -63°41'	Jun. '61	NE
4316	Halifax Harbour	N.S.	1:12,200	44°35' -44°41'	63°31' -63°37'	Apr. '58	NE
4318	Chebucto Head to Pennant Point	N.S.	1:18,000	44°24' -44°30'	63°30' -63°41'	Jul. '61	CR
4319	Saint John Harbour	N.B.	1:12,700	45°11' -45°17'	66°00' -66°07'	Nov. '61	NE
4320	Egg Island to West Ironbound Island	N.S.	1:145,000	43°55' -44°50'	62°45' -64°25'	Sep. '61	NE
4324	Yarmouth to Petit Passage	N.S.	1:63,400	43°50' -44°23'	66°05' -66°34'	Feb. '61	NE
4325	Approaches to Bay of Fundy	N.S.	1:184,600	43°02' -44°38'	65°34' -66°08'	Jun. '61	CR
4326	Pubnico to Yarmouth	N.S.	1:63,400	43°32' -43°53'	65°45' -66°31'	Sep. '61	CR
4333	Point Lepreau to Cape Spencer	N.B.	1:77,000	44°51' -45°17'	65°54' -66°28'	Nov. '61	NE
4336	St. Peters Bay	N.S.	1:18,000	45°34' -45°40'	60°48' -60°59'	Dec. '56	NE
4354	Bras D'Or Lake	N.S.	1:81,400	45°36' -45°56'	60°23' -61°10'	Jul. '61	NE
4357	Country Harbour	N.S.	1:24,220	45°02' -45°10'	61°28' -61°45'	Nov. '61	NE
4358	Whitehaven	N.S.	1:18,200	No Limits	-	Aug. '61	NE
4366	River Petitcodiac and Cumberland Basin	N.S.	1:62,500	45°41' -46°03'	64°08' -64°53'	Dec. '60	NE
4367	Flint Island to Cape Smoky	N.S.	1:75,200	46°10' -46°41'	59°40' -60°40'	Sep. '61	CR

4375	Quyón Island to Flint Island	N.S.	1:75,700	45°46' - 46°11'	54°15' - 60°12'	Aug. '61	CR
4385	Osborne Head to Petty Island	N.S.	1:36,500	44°20' - 44°41'	63°24' - 63°47'	Sen. '61	CR
4386	St. Magaret Bay	N.S.	1:39,400	44°21' - 44°42'	63°40' - 64°06'	Nov. '61	NE
4387	Great Bras D'Or (Western Portion) & St. Patricks Chan.	N.S.	1:40,500	45°55' - 46°11'	60°38' - 61°09'	May '61	CR
4388	Great Bras D'Or (Eastern Portion) & St. Andrew Channel	N.S.	1:40,500	46°01' - 46°22'	60°18' - 60°40'	Oct. '61	NE
4404	Cape George to Pictou	N.S.	1:76,000	45°36' - 46°04'	61°52' - 62°49'	Jun. '61	NE
4406	Tryon Shoals to Cape Egmont	P.E.I.	1:76,500	45°50' - 46°26'	63°27' - 64°09'	Jul. '61	CR
4405	Pictou Island to Tryon Shoals	P.E.I.	1:75,700	45°45' - 46°14'	62°35' - 63°33'	Jun. '61	NE
4418	Cape Tormentine to Port Borden	P.E.I.	1:36,700	46°06' - 46°19'	63°37' - 63°50'	Dec. '60	NE
4434	Chandler and Approaches	Que.	1:12,000	48°19' - 48°21'	64°37' - 64°43'	Aug. '61	NE
4437	Pictou Harbour	N.S.	1:12,000	45°36' - 45°43'	62°38' - 62°45'	Dec. '60	NE
4448	Port Hood, Mabou Harbour and Havre Boucher	N.S.	Various	-	-	Nov. '60	NE
4451	Magdalen Islands	Que.	1:110,700	47°00' - 47°58'	61°10' - 62°11'	Oct. '61	NE
4455	Washtawooka Bay to Piashti Bay	Que.	1:69,900	49°57' - 50°22'	61°59' - 62°50'	Apr. '61	NE
4457	Natashquan Point to Havre St. Pierre	Que.	1:156,700	49°21' - 50°20'	61°30' - 62°37'	May '61	NE
4478	Shediac Harbour	N.B.	1:12,000	46°13' - 46°17'	64°27' - 64°35'	Aug. '61	NE
4480	Cape Whittle to Anticosti Island (West Point)	Que.	1:354,500	48°20' - 50°30'	59°50' - 64°40'	Jun. '61	CR
4578	Clarenville and Approaches	Nfld.	1:12,000	48°08' - 48°12'	53°54' - 54°02'	Sen. '61	CR
4583	St. Julien I. to Hooping Harbour including Canada Bay	Nfld.	1:73,500	50°30' - 51°08'	55°36' - 56°15'	Jan. '61	FCE
4586	Bay Bulls and Witless Bay	Nfld.	1:12,200	47°15' - 47°20'	52°44' - 52°53'	May '61	NE
4592	Little Bay Island to League Rock	Nfld.	1:24,400	49°31' - 49°40'	55°30' - 55°49'	Dec. '60	NE
4595	Bay of Exploits - Sheet 1 (North)	Nfld.	1:24,500	49°21' - 49°33'	54°59' - 55°12'	Jan. '59	CE
4598	Bay of Exploits - Sheet IV (Northeast)	Nfld.	1:24,600	49°20' - 49°37'	54°47' - 55°00'	Nov. '61	CR
4599	Bay of Exploits - Sheet V (Southeast)	Nfld.	1:24,600	49°13' - 49°21'	54°45' - 55°04'	Oct. '61	CR
4626	Saint-Pierre and Miquelon	Nfld.	1:75,000	46°35' - 47°14'	55°58' - 56°41'	May '61	NE
4641	Port aux Basques and Approaches	Nfld.	1:7,500	47°33' - 47°36'	59°04' - 59°09'	Dec. '60	NE
4652	Humber Arm, Meadows Point to Humbermouth	Nfld.	1:14,400	48°56' - 49°00'	57°53' - 58°04'	Jun. '61	NE
4661	Bear Head to Cow Head	Nfld.	1:147,000	48°51' - 49°55'	57°30' - 58°45'	Oct. '61	CR
4680	Hawke Bay to Ste. Genevieve Bay including St. John Bay	Nfld.	1:147,000	50°35' - 51°13'	56°49' - 57°29'	Nov. '61	CR
4713	Battle Harbour	Nfld.	1:8,000	52°14' - 52°18'	55°32' - 55°39'	May '61	CR
4722	Terrington Basin	Nfld.	1:6,000	53°20' - 53°22'	60°20' - 60°25'	Oct. '60	NE
4725	Carrington Island to Etagaulet Bay	Nfld.	1:50,000	53°40' - 54°04'	58°35' - 59°08'	Jun. '61	CR
4776	Entrance to Saglék Bay to Button Islands	Nfld.	1:250,000	58°30' - 60°50'	58°48' - 65°10'	Mar. '61	NE
5316	Shaftsbury Inlet to Ashe Inlet	N.W.T.	1:75,000	62°26' - 62°55'	69°13' - 70°40'	Aug. '61	NE
5397	Dawson Inlet to Marble Island	N.W.T.	1:150,000	61°45' - 62°42'	90°54' - 93°40'	Nov. '60	NE
5400	Cape Curchill to Egg River	Man.	1:146,200	58°39' - 60°03'	93°10' - 94°54'	Dec. '60	NE

5401	Wakeham and Fisher Bays and Approaches	Que.	Various	61°32'-61°45'	81°51'-72°18'	May '61	CR
5402	Cape Prince of Wales to Cape Weggs	Que.	1:150,000	61°33'-62°29'	71°20'-73°50'	Feb. '52	NE
5412	Erik Cove to Nuvuk Harbour including Digges Islands	Que.	1:75,200	62°15'-62°44'	77°10'-78°32'	Dec. '60	NE
5416	Mouth of Moose River	Ont.	1:73,200	51°15'-51°33'	80°12'-80°39'	Apr. '57	NE
5434	Chesterfield Inlet, East Point to Promise Point	N.W.T.	1:31,700	63°39'-63°51'	91°54'-92°31'	Mar. '54	FE
5436	Chesterfield Inlet, Primrose Island to Cross Bay	N.W.T.	1:31,700	63°51'-64°02'	93°03'-93°40'	Mar. '54	FE
5437	Chesterfield Inlet, Cross Bay to Bowell Islands	N.W.T.	1:31,700	63°54'-64°06'	93°37'-94°14'	Mar. '54	NE
5445	Rankin Inlet, Vicinity of Thomson Island	N.W.T.	1:20,000	62°44'-62°53'	91°50'-92°13'	Dec. '60	NE
5452	Diana Bay	Que.	1:50,000	60°47'-61°10'	69°31'-70°10'	Mar. '61	CR
5455	Lake Harbour and Approaches	N.W.T.	1:25,000	62°39'-62°52'	69°30'-69°52'	Feb. '61	NE
5467	Leaf Bay and Approaches	Que.	1:50,000	58°51'-59°09'	68°25'-69°16'	Feb. '56	NE
5533 ^D	Roes Welcome Sound (Chesterfield Inlet to Cape Munn)	N.W.T.	1:500,000	63°00'-66°00'	85°00'-95°00'	Feb. '56	FE
5860	Approaches to Moose River	Ont.	1:24,000	51°19'-51°32'	80°14'-80°30'	Apr. '61	FE
5861	Ship Sands Island to Moosonee	Ont.	1:24,000	51°12'-51°21'	80°22'-80°41'	Apr. '61	FE
6050	Plans in Lake Nipigon	Ont.	Various	-	-	May '61	NE
6251	Red River to Gull Harbour	Man.	1:100,000	50°20'-51°12'	96°08'-97°09'	Sen. '61	NE
6370	Great Slave Lake, Slave R. to Mackenzie R. and Rae	N.W.T.	1:250,000	60°47'-62°27'	112°35'-117°05'	Nov. '61	CR
7000	Arctic Is., Davis Strait to Beaufort Sea including connecting passages	N.W.T.	1:4,000,000	55°00'-80°00'	15°00'-160°00'	May '61	CR
7050	Resolution Island to Cape Mercy	N.W.T.	1:500,000	61°20'-65°00'	62°00'-69°00'	Jun. '61	NE
7072	Cape M'Clintock to Cape Discovery	N.W.T.	1:500,000	80°00'-83°00'	53°00'-84°00'	May '61	NE
7075	Meighen Island to Norwegian Bay and Eureka	N.W.T.	1:500,000	77°50'-80°00'	78°00'-102°00'	Jun. '61	NE
7076	Meighen Island to Cape Discovery	N.W.T.	1:500,000	80°00'-83°00'	71°00'-105°00'	Jun. '61	NE
7080	Demarcation Point to Cape Pathurst	N.W.T.	1:500,000	68°00'-71°00'	127°30'-141°00'	Jun. '61	NE
7081	Cape Pathurst to Cape Baring	N.W.T.	1:500,000	68°45'-71°55'	116°00'-129°00'	Jun. '61	NE
7082	Cape Baring to Cambridge Bay	N.W.T.	1:500,000	66°35'-70°05'	104°30'-170°40'	May '61	NE
7083	Cambridge Bay to Shepherd Bay	N.W.T.	1:500,000	67°05'-70°15'	93°40'-105°20'	Apr. '61	NE
7127	Koojesse Inlet and Approaches	N.W.T.	Various	63°37'-63°45'	68°22'-68°42'	May '61	NE
7404	Frozen Strait, Lyon Inlet and Approaches	N.W.T.	1:200,000	65°04'-66°40'	82°10'-84°50'	Mar. '61	CR
7405	Repulse Bay and Approaches	N.W.T.	1:200,000	65°05'-66°40'	84°27'-87°05'	Mar. '61	CR
7430	Repulse Bay (Harbour Islands to Talun Bay)	N.W.T.	1:31,700	66°25'-66°37'	85°45'-86°25'	Mar. '56	NE
7525	Radstock Bay	N.W.T.	1:37,500	74°34'-74°54'	90°30'-91°26'	Oct. '61	FE
7604	Kugmallit Bay and Approaches	N.W.T.	1:150,000	69°10'-70°12'	132°00'-135°40'	Apr. '61	NE
7607	Cape Pathurst to Rooth Islands	N.W.T.	1:150,000	69°59'-70°54'	124°40'-128°20'	May '61	FE
7609	Cape Lyon to Tinney Point	N.W.T.	1:150,000	69°20'-70°61'	119°40'-123°05'	Apr. '61	FE
7616	Dolphin and Union Strait	N.W.T.	1:160,000	68°20'-69°30'	112°40'-117°30'	May '61	NE
7627	Tuktoyaktuk Harbour	N.W.T.	1:9,000	69°23'-69°28'	132°56'-133°06'	May '61	NE
7617	Coppermine River to Lady Franklin Point	N.W.T.	1:150,000	67°33'-68°37'	112°19'-115°30'	May '61	NE
7637	Cape Parry and Approaches	N.W.T.	1:50,000	70°00'-70°20'	124°10'-125°28'	Jun. '61	NE

7670	Bernard Harbour to Lady Franklin Point	N.W.T.	1:75,000	68°25'-68°56'	113°00'-114°55'	May '61	NE
7671	Read Island and Bernard Harbour	N.W.T.	1:63,400	69°00'-69°18'	113°15'-114°30'	Apr. '61	NE
7678	Coppermine River and Approaches	N.W.T.	1:50,000	67°44'-68°02'	114°35'-115°35'	Apr. '61	NE
7682	Murray and Richardson Islands	N.W.T.	1:50,000	68°17'-68°37'	110°35'-111°46'	May '61	NE
7688	Pathurst Inlet Settlement and Approaches	N.W.T.	1:50,000	66°42'-67°04'	107°35'-108°20'	Apr. '61	NE
7702	Jenny Lind Island to Hat Island	N.W.T.	1:150,000	67°40'-69°00'	100°00'-102°40'	Apr. '61	NE
7705	Simpson Strait to Matheson Point	N.W.T.	1:150,000	68°00'-69°00'	93°20'-97°00'	Apr. '61	NE
7706	Matheson Point to Spence Bay	N.W.T.	1:150,000	68°50'-69°50'	93°20'-97°00'	Apr. '61	NE
7731	Storis Passage and Approaches	N.W.T.	1:75,000	68°70'-68°47'	97°54'-113°00'	Apr. '61	NE
7733	Simpson Strait	N.W.T.	1:75,000	68°15'-68°43'	96°24'-98°10'	Apr. '61	NE

Decca Charts

L(D7) OPS 64	RCN Plotting Sheet		1:500,000	40°15'-43°30'	61°35'-67°30'	Jun. '61	NE
L(D7) OPS 65	RCN Plotting Sheet		1:500,000	41°15'-44°30'	56°35'-62°30'	Jun. '61	NE
L(D9) 4002	Gulf of St. Lawrence	-	1:750,000	46°16'-50°30'	57°20'-67°30'	Jan. '61	NE
L(D7) 4213	Little Hope Island to Lockport Harbour	N.S.	1:37,500	43°34'-43°49'	64°43'-65°09'	Aug. '61	NE
L(D7) 4311	Egg Island to Pennant Point	N.S.	1:97,200	44°05'-44°50'	62°49'-63°41'	Jun. '61	NE
L(D7) 4317	Liscomb Island to Egg Island	N.S.	1:108,837	44°20'-45°02'	61°54'-62°53'	Oct. '60	NE
L(D7) 4320	Egg Island to West Ironbound Island	N.S.	1:145,000	43°55'-44°50'	62°45'-64°25'	Sep. '61	NE
L(D7) 4385	Osborne Head to Betty Island	N.S.	1:36,500	44°20'-44°41'	63°24'-63°47'	Sep. '61	NE
L(D7) 4386	St. Margaret Bay	N.S.	1:39,400	44°21'-44°42'	63°40'-64°06'	Nov. '61	NE
L(D7) 4404	Cape George to Pictou	N.S.	1:76,000	45°36'-46°04'	61°52'-62°49'	Jun. '61	NE
L(D7) 4405	Pictou Island to Tryon Shoals	P.E.I.	1:75,700	45°45'-46°14'	62°35'-63°33'	Jun. '61	NE
L(D2) 4626	Saint-Pierre and Miquelon	Nfld.	1:75,000	46°35'-47°14'	55°58'-56°41'	May '61	NE

Special Charts

22	Labrador, Hudson Str. & Bay, Ice Chart		1:4,500,000	50°30'-65°00'	54°30'-95°00'	Jun. '51	R
OPS 58	Atlantic Ocean			10°00'S-68°30'W	30°00'E-100°00'W	Mar. '56	R
S 161	Canada, Grid is Marsden Squares		1:6,336,000	-	-	Jan. '61	NE
S 164	Search and Rescue Grid Reference	Ont.		41°00'-49°15'	76°00'-92°30'	May '61	NE
S 165	Approaches to Nova Scotia, Plotting Sheet	N.S.	1:1,500,000	54°00'-73°00'	39°00'-48°00'	Jul. '61	NE

(d) LEGAL SURVEYS AND AERONAUTICAL CHARTS

Aeronautical Charts - Air Overprint Compilation and Revision

<u>Type of Chart</u>	<u>Scale</u>	<u>New Compilations</u>	<u>Revisions</u>	<u>Totals</u>
Aeronautical	1:500,000 1:506,880	30 12	10 54	40 66
Low Level Pilotage	1:500,000	9	1	10
World Aeronautical	1:1,000,000	5	21	26
Aeronautical Route	1:1,000,000	0	4	4
Radio Video Plates	various	24	1	25
Obstruction Charts	1:10,000	1	5	6
Maritime Plotting	1:2,000,000	0	2	2
Mercator Plotting	1:1,000,000	2	0	2
North Atlantic Plotting	1:5,000,000	1	0	1
RCN Plotting	1:500,000	2	0	2

FLIGHT INFORMATION PUBLICATIONS - (Canada Air Pilot, the RCAF/RCN-Terminal-Low Altitude Pilots' Handbook and the RCAF/RCN Terminal High Altitude Pilots' Handbook)

<u>Type of Chart</u>	<u>New Editions</u>	<u>Revisions</u>	<u>Totals</u>
Instrument Approach and Landing Charts	131	709	840
Aerodrome pages (Land and Water)	15	297	312
Miscellaneous	2	144	146
ENROUTE CHARTS	<u>New</u>	<u>Revisions</u>	<u>Totals</u>
Enroute High Altitude	2	16	18
Enroute Low Altitude	11	46	57
Terminal Area	2	2	4
RCAF/RCN Enroute Supplement (150 pages)	1	4	5

(e) TOPOGRAPHICAL MAPS AND CHARTS PRINTED IN 1961

In the following tabulation, the column headed "Year and Edition" refers to the year of publication and the edition number: 54-1 means it was published in 1954 and is the first edition; 54-P-1 means it was published in 1954, is a preliminary map and is the first edition; 55-PR-1 means it was published in 1955, is a provisional map and is the first edition.

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
(1) National Topographic Series Maps (Scale 1:50,000)						
13 E/13	2	Mating Lake	Nfld	53 45-54 00	63 30-64 00	60-PR1
13 L/3	2	Fremont Lake	Nfld	54 00-54 15	63 00-63 30	60-PR1
13 L/4	2	Agnes Lake	Nfld	54 00-54 15	63 30-64 00	60-PR1
13 L/5	2	Fraser Lake	Nfld	54 15-54 30	63 30-64 00	60-PR1
14 M/3	1	Gulch Cape	Nfld	59 00-59 15	63 00-63 30	60-PR1
14 M/4	1	Nachvak Fiord	Nfld	59 00-59 15	63 30-64 00	60-PR1
23 A/13	1	Rivière à la Fringue	Nfld	52 45-53 00	65 30-66 00	60-PR1
23 A/14	1	Lac Joseph	Nfld	52 45-53 00	65 00-65 30	60-PR1
23 H/3	1	Rivière Aux Poissons	Nfld	53 00-53 15	65 00-65 30	60-PR1
23 H/5	1	Cissy Lake	Nfld	53 15-53 30	65 30-66 00	60-PR1
23 H/6	1		Nfld	53 15-53 30	65 00-65 30	60-PR1
23 H/11	1	Gabbro Lake	Nfld	53 30-53 45	65 00-65 30	60-PR1
23 H/12	1	McKay River	Nfld	53 30-53 45	65 30-66 00	60-PR1
23 H/13	1	Sims Lake	Nfld	53 45-54 00	65 30-66 00	59-PR1
23 H/15	1	Lobstick Lake	Nfld	53 45-54 00	64 30-65 00	59-PR1
23 H/16	1	Hook Bay	Nfld	53 45-54 00	64 00-64 30	59-PR1
23 I/2	1	Overflow Lake	Nfld	54 00-54 15	64 30-65 00	59-PR1
23 I/3	1		Nfld	54 00-54 15	65 00-65 30	59-PR1
23 I/4	1	Timmins Lake	Nfld	54 00-54 15	65 30-66 00	60-PR1
23 I/8	1	Petscapiskau Hill	Nfld	54 15-54 30	64 00-64 30	61-PR1
24 P/16	1	Eclipse Harbour	Nfld	59 45-60 00	64 00-64 30	60-PR1
22 P/9	1	Lac Bellanca	Que-Nfld	51 30-51 45	64 00-64 30	60-PR1
22 P/10	1		Que-Nfld	51 30-51 45	64 30-65 00	60-PR1
22 P/14	1	Lac Fleur de May	Que-Nfld	51 45-52 00	65 00-65 30	60-PR1
22 P/15	1	Domagaya Lake	Que-Nfld	51 45-52 00	64 30-65 00	60-PR1

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
22 P/16	1	Lac Thevet	Que-Nfld	51 45-52 00	64 00-64 30	60-PR1
23 B/1	1	Caopacho Lake	Que-Nfld	52 00-52 15	66 00-66 30	60-PR1
23 B/7	1	Lac Felix	Que-Nfld	52 15-52 30	66 30-67 00	60-PR1
23 B/8	1	Redfir	Que-Nfld	52 15-52 30	66 00-66 30	60-PR1
23 B/10	1	Opcopa Lake	Que-Nfld	52 30-52 45	66 30-67 00	60-PR1
23 B/14	1	Lac Virot	Que-Nfld	52 45-53 00	67 00-67 30	60-PR1
23 G/2	1	Wabush Lake	Que-Nfld	53 00-53 15	66 30-67 00	60-PR1
23 G/3	1	Lac Montenon	Que-Nfld	53 00-53 15	67 00-67 30	60-PR1
23 G/6	1	Lac Mingre	Que-Nfld	53 15-53 30	67 00-67 30	60-PR1
24 P/1	1	Komaktorvik Lakes	Que-Nfld	59 00-59 15	64 00-64 30	60-PR1
24 P/8	1	Tower Mountain	Que-Nfld	59 15-59 30	64 00-64 30	61-PR1
24 P/9	1	Ryans Bay	Que-Nfld	59 30-59 45	64 00-64 30	60-PR1
12 E/1	2	Bagot Bluff	Que	49 00-49 15	62 00-62 30	60-1
12 E/3-E	1	Rivière Chicotte	Que	49 00-49 15	63 00-63 15	60-1
12 E/7	2	Natiskotek River	Que	49 15-49 30	62 30-63 00	60-1
12 E/9-W	1	Tower Point	Que	49 30-49 45	62 15-62 30	61-1
12 E/10	2	Carleton Point	Que	49 30-49 45	62 30-63 00	61-1
12 L/3	2	Trilobite Bay	Que	50 00-50 15	63 00-63 30	61-1
12 L/4	2	Havre-St.Pierre	Que	50 00-50 15	63 30-64 00	60-1
12 L/6	2	Lac A L'Ours	Que	50 15-50 30	63 00-63 30	61-1
12 L/13	2	Lac Jerome	Que	50 45-51 00	63 30-64 00	60-PR1
12 L/14	2	Lac Sanson	Que	50 45-51 00	63 00-63 30	60-PR1
12 L/16	2	Lac Gaudreault	Que	50 45-51 00	62 00-62 30	60 PR1
22 C/5	2	Lac de Pons	Que	48 15-48 30	69 30-70 00	60-1
22 C/11	2	St-Paul-du-Nord	Que	48 30-48 45	69 00-69 30	61-1
22 C/15	2	Betsiamites	Que	48 45-49 00	68 30-69 00	61-1
22 D/7	2	Bagotville	Que	48 15-48 30	70 30-71 00	61-3
22 F/2	2	Nipi Lake	Que	49 00-49 15	68 30-69 00	60-1
22 F/8	2	Lac Castelnu	Que	49 15-49 30	68 00-68 30	60-1
22 F/9	2	Lac Miquelon	Que	49 30-49 45	68 00-68 30	61-1
22 I/5	2	Matamek Lake	Que	50 15-50 30	65 30-66 00	60-1
22 I/6	2	Rivière Aux Graines	Que	50 15-50 30	65 00-65 30	60-PR1

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
22 I/7	2	Sheldrake	Que	50 15-50 30	64 30-65 00	60-1
22 I/11	2	Lac Brezel	Que	50 30-50 45	65 00-65 30	60-PR1
22 J/5	2	Lac Beaudin	Que	50 15-50 30	67 30-68 00	61-PR1
22 J/11	2	Lac Rond	Que	50 30-50 45	67 00-67 30	60-PR1
22 J/12	2	Lac Bouffard	Que	50 30-50 45	67 30-68 00	60-PR1
22 J/14	2	Grand Lac du Nord	Que	50 45-51 00	67 00-67 30	60-PR1
22 N/9	2	Rivière Hart-Jaune	Que	51 30-51 45	68 00-68 30	61 PR1
22 O/3	2	Lac Garemand	Que	51 00-51 15	67 00-67 30	60-PR1
22 O/5	2	Lac Grandmesnil	Que	51 15-51 30	67 30-68 00	60-PR1
22 O/9	2	Lac Brochet	Que	51 30-51 45	66 00-66 30	60-PR1
22 P/4	1	Canatiche Lake	Que	51 00-51 15	65 30-66 00	60-PR1
22 P/6	1	Lac Vital	Que	51 15-51 30	65 00-65 30	60-PR1
22 P/11	1	Lac Fournier	Que	51 30-51 45	65 00-65 30	60-PR1
23 B/2	1		Que	52 00-52 15	66 30-67 00	60-PR1
23 B/3	1	Lac Aux Cedres	Que	52 00-52 15	67 00-67 30	60-PR1
23 B/4	1	Lac Nore'	Que	52 00-52 15	67 30-68 00	60-PR1
23 B/12	1	Peliptacau	Que	52 30-52 45	67 30-68 00	60-PR1
23 B/13	1	Lac Bouteille	Que	52 45-53 00	67 30-68 00	60-PR1
23 C/1	1	Rivière Thémines	Que	52 00-52 15	68 00-68 30	60-PR1
23 C/9	1	Lac Saint-Julien	Que	52 30-52 45	68 00-68 30	60-PR1
23 C/16	1	Lac Goupil	Que	52 45-53 00	68 00-68 30	60-PR1
23 N/9	1	Eaton Canyon	Que	55 30-55 45	68 00-68 30	61-PR1
23 N/16	1	Granite Falls	Que	55 45-56 00	68 00-68 30	60-PR1
24 E/1	1	Lac Aigneau	Que	57 00-57 15	70 00-70 30	60-PR1
24 C/13	1	Lake Methuselah	Que	56 45-57 00	69 30-70 00	60-PR1
24 E/8	1		Que	57 15-57 30	70 00-70 30	60-PR1
24 F/4	1	Drumlin Lake	Que	57 00-57 15	69 30-70 00	60-PR1
24 F/5	1	Forbes Lake	Que	57 15-57 30	69 30-70 00	60-PR1
24 K/7	1	Diana Lake	Que	58 15-58 30	68 30-69 00	60-PR1
24 K/11	1	Ballantyne Lake	Que	58 30-58 45	69 00-69 30	60-PR1
24 K/15	1	Kaslak Lake	Que	58 45-59 00	68 30-69 00	60-PR1
24 M/9	1	Rivière Lefroy	Que	59 30-59 45	70 00-70 30	60-PR1

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
24 M/10	1	Peter Lake	Que	59 30-59 45	70 30-71 00	60-PR1
24 M/15	1	Lac de Thury	Que	59 45-60 00	70 30-71 00	60-PR1
24 N/4 ²	1	Lac Voltz	Que	59 00-59 15	69 30-70 00	60-PR1
24 N/12	1	Baie de Bonnard	Que	59 30-59 45	69 30-70 00	60-PR1
24 N/13	1	Baie Brochant	Que-NWT	59 45-60 00	69 30-70 00	60-PR1
31 G/14	2	Chéneville	Que	45 45-46 00	75 00-75 30	60-1
31 G/15	2	Arundel	Que	45 45-46 00	74 30-75 00	61-1
31 J/16	2	Lac Charland	Que	46 45-47 00	74 00-74 30	61-2
31 K/7	2	Lac Duval	Que	46 15-46 30	76 30-77 00	60-1
31 K/9	2	Montcerf	Que	46 30-46 45	76 00-76 30	60-1
31 M/7	2	Belleterre	Que	47 15-47 30	78 30-79 00	61-PR2
31 N/2	2	Lac Jean-Pere	Que	47 00-47 15	76 30-77 00	60-2
31 N/3	2	Nishkotea Lake	Que	47 00-47 15	77 00-77 30	60-PR2
31 N/4	2	Lac Antiquois	Que	47 00-47 15	77 30-78 00	60-PR2
31 N/5	2	Cawasachouane Lakes	Que	47 15-47 30	77 30-78 00	60-PR2
31 N/6	2	Reservoir Dozois	Que	47 15-47 30	77 00-77 30	60-2
31 N/7	2	Cabonga Reservoir	Que	47 15-47 30	76 30-77 00	60-2
31 N/8	2	Lac St-Amour	Que	47 15-47 30	76 00-76 30	60-PR2
31 N/12	2	Otanabi Lake	Que	47 30-47 45	77 30-78 00	61-PR2
31 O/1	2	Lac Troyes	Que	47 00-47 15	74 00-74 30	60-PR1
31 O/2	2	Pine Lake	Que	47 00-47 15	74 30-75 00	60-PR1
31 O/3	2	Lac Dieppe	Que	47 00-47 15	75 00-75 30	60-PR1
31 O/4	2	Petawaga Lake	Que	47 00-47 15	75 30-76 00	60-PR1
31 O/5	2	Wapus Lake	Que	47 15-47 30	75 30-76 00	61-PR1
31 O/6	2	Lac Duplessis	Que	47 15-47 30	75 00-75 30	60-PR1
31 O/7	2	Adonis Lake	Que	47 15-47 30	74 30-75 00	60-PR1
31 O/9	2	Manouane Lake	Que	47 30-47 45	74 00-74 30	61-1
31 O/14	2	Lac Gosselin	Que	47 45-48 00	75 00-75 30	60-PR1
31 O/15	2	Parent	Que	47 45-48 00	74 30-75 00	60-1
31 O/16	2	Casey	Que	47 45-48 00	74 00-74 30	60-1
31 P/7	2	La Tuque	Que	47 15-47 30	72 30-73 00	60-1
31 P/11	2	Lac Flamand	Que	47 30-47 45	73 00-73 30	61-1

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
31 P/12	2	Lac Chateauvert	Que	47 30-47 45	73 30-74 00	61-PR1
32 A/16	2	Dolbeau	Que	48 45-49 00	72 00-72 30	60-2
32 D/1	2	Malartic	Que	48 00-48 15	78 00-78 30	60-1
32 D/2	2	Kinojevis Lake	Que	48 00-48 15	78 30-79 00	60-1
32 D/8	2	La Motte	Que	48 15-48 30	78 00-78 30	61-2
32 G/9	2	Lac Boisvert	Que	49 30-49 45	74 00-74 30	61-PR1
32 G/10	2	Lac à L'Eau-Jaune	Que	49 30-49 45	74 30-75 00	61-PR1
32 G/16	2	Chibougamau	Que	49 45-50 00	74 00-74 30	61-1
33 N/5	2	Great Whale River	Que-NWT	55 15-55 30	77 30-78 00	61-PR1
35 F/1	2	Juet Lake	Que	61 00-61 15	76 00-76 30	61-PR1
35 F/3	2	Carye Lake	Que	61 00-61 15	77 00-77 30	61-PR1
35 G/8	2	Lac Forcier	Que	61 15-61 30	74 00-74 30	61-PR1
35 H/9	2	Mount Albert Low	Que	61 30-61 45	72 00-72 30	61-PR1
31 M/12	2	New Liskeard	Ont-Que	47 30-47 45	79 30-80 00	60-1
53 E/9	1	Benson Bay	Man-Ont	53 30-53 45	94 00-94 30	60-PR1
53 E/10	2	Wapus Bay	Man	53 30-53 45	94 30-95 00	60-PR1
53 E/16	1	York Lake	Man	53 45-54 00	94 00-94 30	61-PR1
62 G/3	2	Cartwright	Man	49 00-49 15	99 00-99 30	61-1
62 G/7	2	Somerset	Man	49 15-49 30	98 30-99 00	61-1
62 J/6	2	Arden	Man	50 15-50 30	99 00-99 30	61-1
62 N/8	2	Sifton	Man	51 15-51 30	100 00-100 30	60-1
63 O/8	1	Hambone Lake	Man	55 15-55 30	98 00-98 30	61-PR1
63 O/9	1	Ospwagan Lake	Man	55 30-55 45	98 00-98 30	61-PR1
63 P/4	1	Sipiwesk Lake	Man	55 00-55 15	97 30-98 00	61-PR1
63 P/12	2	Thompson	Man	55 30-55 45	97 30-98 00	61-1
64 A/1	1	Split Lake	Man	56 00-56 15	96 00-96 30	61-PR1
64 A/2	1	Assean Lake	Man	56 00-56 15	96 30-97 00	59-PR1
64 A/3	1	Orr Lake	Man	56 00-56 15	97 00-97 30	59-PR1
62 K/3	2	Miniota	Man-Sask	50 00-50 15	101 00-101 30	61-1
62 E/9	2	Carlyle	Sask	49 30-49 45	102 00-102 30	60-1
62 E/10	2	Kisbey	Sask	49 30-49 45	102 30-103 00	60-1
62 E/16	2	Dumas	Sask	49 45-50 00	102 00-102 30	60-1
62 K/4	2	Moosomin	Sask	50 00-50 15	101 30-102 00	60-1

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
72 G/15	2	Gravelbourg	Sask	49 45-50 00	106 30-107 00	60-1
72 I/14	2	Holdfast	Sask	50 45-51 00	105 00-105 30	60-1
72 I/15	2	Earl Grey	Sask	50 45-51 00	104 30-105 00	60-1
72 O/6	2	Outlook	Sask	51 15-51 30	107 00-107 30	60-1
72 O/8	2	Bladworth	Sask	51 15-51 30	106 00-106 30	60-1
72 O/10	2	Indi Lake	Sask	51 30-51 45	106 30-107 00	61-1
72 P/2	2	Strasbourg	Sask	51 00-51 15	104 30-105 00	61-1
72 P/14	2	Lanigan	Sask	51 45-52 00	105 00-105 30	60-1
72 P/16	2	Wynyard	Sask	51 45-52 00	104 00-104 30	60-1
73 A/11	2	Basin Lake	Sask	52 30-52 45	105 00-105 30	60-1
73 F/6	2	Cleeves	Sask	53 15-53 30	109 00-109 30	60-1
72 L/9-E	1	Middle Sand Hills	Alta-Sask	50 30-50 45	110 00-110 15	60-1
72 M/16	2	Grassy Island Lake	Alta-Sask	51 45-52 00	110 00-110 30	61-PR1
72 L/3	2	Suffield	Alta	50 00-50 15	111 00-111 30	60-1
72 L/12	2	Brooks	Alta	50 30-50 45	111 30-112 00	60-1
72 M/9	2	Esther	Alta	51 30-51 45	110 00-110 30	60-1
72 M/10	2	Sedalia	Alta	51 30-51 45	110 30-111 00	60-1
72 M/12	2	Hanna	Alta	51 30-51 45	111 30-112 00	60-1
72 M/13	2	Garden Plain	Alta	51 45-52 00	111 30-112 00	60-1
72 M/14	2	Kirkpatrick Lake	Alta	51 45-52 00	111 00-111 30	60-1
72 M/15	2	Monitor	Alta	51 45-52 00	110 30-111 00	60-1
82 H/1	2	Milk River	Alta	49 00-49 15	112 00-112 30	60-1
82 H/2	2	Lake Shanks	Alta	49 00-49 15	112 30-113 00	60-1
82 H/6	2	Raley	Alta	49 15-49 30	113 00-113 30	60-1
82 H/7	2	Raymond	Alta	49 15-49 30	112 30-113 00	61-1
82 H/8	2	Warner	Alta	49 15-49 30	112 00-112 30	60-1
82 I/1	2	Vauxhall	Alta	50 00-50 45	112 00-112 30	61-1
82 J/2	2	Fording River	BC-Alta	50 00-50 15	114 30-115 00	60-1
82 N/16	2	Siffleur River	Alta	51 45-52 00	116 00-116 30	61-1
82 O/12	2	Barrier Mountain	Alta	51 30-51 45	115 30-116 00	60-1
82 P/3	2	Strathmore	Alta	51 00-51 15	113 00-113 30	61-1

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
82 P/16	2	Farrell Lake	Alta	51 45-52 00	112 00-112 30	60-1
83 B/2	2	Caroline	Alta	52 00-52 15	114 30-115 00	60-1
83 B/7	2	Rocky Mountain House	Alta	52 15-52 30	114 30-115 00	60-1
83 B/9	2	Rimbey	Alta	52 30-52 45	114 00-114 30	60-1
83 C/1	2	Whiterabbit Creek	Alta	52 00-52 15	116 00-116 30	61-1
83 C/7	2	Job Creek	Alta	52 15-52 30	116 30-117 00	60-1
83 C/10-W	1	George Creek	Alta	52 30-52 45	116 45-117 00	61-PR1
83 F/15	2	Nosehill Creek	Alta	53 45-54 00	116 30-117 00	61-1
83 H/12	2	St. Albert	Alta	53 30-53 45	113 30-114 00	60-2
83 J/4	2	Whitcourt	Alta	54 00-54 15	115 30-116 00	60-1
83 J/5	2	Carson Lake	Alta	54 15-54 30	115 30-116 00	61-1
83 J/6	2	Christmas Creek	Alta	54 15-54 30	115 00-115 30	60-2
83 J/10	2	Timeu Creek	Alta	54 30-54 45	114 30-115 00	61-1
83 J/13	2	Wallace Mountain	Alta	54 45-55 00	115 30-116 00	61-1
83 K/3	2	Berland River	Alta	54 00-54 15	117 00-117 30	61-1
83 K/6	2	Tony Creek	Alta	54 15-54 30	117 00-117 30	61-1
83 K/8	2	Two Creek	Alta	54 15-54 30	116 00-116 30	61-PR1
83 K/9	2	Goose River	Alta	54 30-54 45	116 00-116 30	61-1
83 K/10	2	Atikkamek Creek	Alta	54 30-54 45	116 30-117 00	61-PR1
83 K/11	2	Waskahigan River	Alta	54 30-54 45	117 00-117 30	61-1
83 K/13	2	Long Lake	Alta	54 45-55 00	117 30-118 00	60-1
83 K/14	2	Asplund Creek	Alta	54 45-55 00	117 00-117 30	60-1
83 L/8	2	Simonette River	Alta	54 15-54 30	118 00-118 30	61-PR1
83 L/9	2	Latornell River	Alta	54 30-54 45	118 00-118 30	60-PR1
83 L/10	2	Cutbank River	Alta	54 30-54 45	118 30-119 00	60-PR1
83 L/13	2	Calahoo Creek	Alta	54 45-55 00	119 30-120 00	61-PR1
83 M/13	2	Bonanza	Alta	55 45-56 00	119 30-120 00	61-PR1
84 C/8	2	Gadotte Lake	Alta	56 15-56 30	116 00-116 30	61-PR1
84 D/2	2	Hines Creek	Alta	56 00-56 15	118 30-119 00	61-PR1
82 G/7	2	Upper Flathead	BC-Alta	49 15-49 30	114 30-115 00	61-1
82 G/8	2	Beaver Mines	BC-Alta	49 15-49 30	114 00-114 30	60-2

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
82 G/15	2	Tornado Mountain	BC-Alta	49 45-50 00	114 30-115 00	60-1
82 G/5	2	Moyie Lake	BC	49 15-49 30	115 30-116 00	60-1
82 G/6	2	Elko	BC	49 15-49 30	115 00-115 30	60-1
82 K/10	2	Howser Creek	BC	50 30-50 45	116 30-117 00	61-1
82 N/4	2	Illecillewaet	BC	51 00-51 15	117 30-118 00	61-1
92 G/8	2	Stave Lake	BC	49 15-49 30	122 00-122 30	61-1
92 P/9	2	Clearwater	BC	51 30-51 45	120 00-120 30	60-1
93 G/8	2	Ahbau Lake	BC	53 15-53 30	122 00-122 30	61-1
93 G/13	2	Hulatt	BC	53 45-54 00	123 30-124 00	60-1
93 H/6	2	Indianpoint Lake	BC	53 15-53 30	121 00-121 30	61-1
93 K/6	2	Taltapin Lake	BC	54 15-54 30	125 00-125 30	60-1
93 M/3	2	Moricetown	BC	55 00-55 15	127 00-127 30	61-1
94 A/1	2	Shearer Dale	BC	56 00-56 15	120 00-120 30	60-1
94 A/10	2	Rose Prairie	BC	56 30-56 45	120 30-121 00	61-1
94 A/15	2	Milligan Creek	BC	56 45-57 00	120 30-121 00	61-1
94 B/2	2	Gold Bar	BC	56 00-56 15	122 30-123 00	61-1
94 B/3	2	Ne-Parle-Pas Rapids	BC	56 00-56 15	123 00-123 30	61-1
94 H/2	1	Big Arrow Creek	BC	57 00-57 15	120 30-121 00	59-PR1
94 H/8	1	Upper Chinchaga River	BC	57 15-57 30	120 00-120 30	59-PR1
94 I/2	2	Etthithun River	BC	58 00-58 15	120 30-121 00	61-PR1
94 P/3	2	Kotcho Lake	BC	59 00-59 15	121 00-121 30	61-PR1
94 P/5	2	Komie Creek	BC	59 15-59 30	121 30-122 00	61-PR1
94 P/14	2	Hossitl Creek	BC	59 45-60 00	121 00-121 30	61-PR1
103 I/4	2	Port Essington	BC	54 00-54 15	129 30-130 00	61-1
103 I/6	2	Salvus	BC	54 15-54 30	129 00-129 30	61-1
103 I/16	2	Dorreen	BC	54 45-55 00	128 00-128 30	61-1
104 P/4	1	Needlepoint Mountain	BC	59 00-59 15	129 30-130 00	61-PR1
34 D/11	2	Eskimo Harbour	NWT	56 30-56 45	79 00-79 30	61-PR1
34 D/13	2	North Belcher Islands	NWT	56 45-57 00	79 30-80 00	61-PR1
75 L/6	1	Redcliff Island	NWT	62 15-62 30	111 00-111 30	61-2

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
85 N/15	1	Ketcheson Lake	NWT	63 45-64 00	116 30-117 00	61-PR1
85 N/16	1	Snively Lake	NWT	63 45-64 00	116 00-116 30	61-PR2
95 O/3	1	Smith Creek	NWT	63 00-63 15	123 00-123 30	61-PR1
95 O/4	1	Wrigley River	NWT	63 00-63 15	123 30-124 00	61-PR1
95 O/5	1	Wrigley	NWT	63 15-63 30	123 30-124 00	61-PR1
95 O/13	1	Blackwater River	NWT	63 45-64 00	123 30-124 00	61-PR1
96 B/3	1	Blackwater Lake North	NWT	64 00-64 15	123 00-123 30	60-PR1
96 B/4	1	Twin Peaks	NWT	64 00-64 15	123 30-124 00	60-PR1
96 E/8	1	Kelly Lake	NWT	65 15-65 30	126 00-126 30	60-PR1
106 H/10	1	Sans Sault Rapids	NWT	65 30-65 45	128 30-129 00	60-PR1
115 H/1	2	Mount Cooper	YT	61 00-61 15	136 00-136 30	61-PR1
115 H/2	2	Hutshi Lakes	YT	61 00-61 15	136 30-137 00	61-PR1
115 H/7	2	Hopkins Lake	YT	61 15-61 30	136 30-137 00	61-PR1
115 H/16	2	Mount Morrison	YT	61 45-62 00	136 00-136 30	61-PR1
115 I/10	1	Minto	YT	62 30-62 45	136 30-137 00	61-PR1
115 I/16	1	Diamain Lake	YT	62 45-63 00	136 00-136 30	61-PR1
115 O/2	1	Scroggie Creek	YT	63 00-63 15	138 30-139 00	61-PR1
115 O/3	1	Thistle Creek	YT	63 00-63 15	139 00-139 30	61-PR1
115 O/4	1	Los Angeles Creek	YT	63 00-63 15	139 30-140 00	61-PR1
115 O/7	1	Black Hills Creek	YT	63 15-63 30	138 30-139 00	60-PR1
115 O/8	1	Rosebud Creek	YT	63 15-63 30	138 00-138 30	61-PR1
115 O/9	1	Australia Mountain	YT	63 30-63 45	138 00-138 30	61-PR1
115 O/12	1	Ogilvie	YT	63 30-63 45	139 30-140 00	61-PR1
115 O/13	1	Garner Creek	YT	63 45-64 00	139 30-140 00	61-PR1
115 P/1	1	Summit Lake	YT	63 00-63 15	136 00-136 30	61-PR1
115 P/3	1	Coldspring Mountain	YT	63 00-63 15	137 00-137 30	61-PR1
115 P/7	1	Stewart Crossing	YT	63 15-63 30	136 30-137 00	61-PR1
115 P/10	1	Moose Creek	YT	63 30-63 45	136 30-137 00	61-PR1
115 P/14	1	Clear Creek	YT	63 45-64 00	137 00-137 30	61-PR1
115 P/15	1	Sprague Creek	YT	63 45-64 00	136 30-137 00	61-PR1
115 P/16	1	Seattle Creek	YT	63 45-64 00	136 00-136 30	61-PR1

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
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(2) National Topographic Series Maps (Scale 1:250,000)

2 D		Gander Lake	Nfld	48 00-49 00	54 00-56 00	60-1
11P&11I		Burgeo	Nfld	46 45-48 00	56 00-58 00	61-1
12 E		Anticosti Island	Que	49 00-50 00	62 00-64 00	61-1
12 J		Harrington Harbour	Que	50 00-51 00	58 00-60 00	60-1
24 N		Hopes Advance Bay	Que	59 00-60 00	68 00-70 00	61-1
34 L		Port Harrison	Que-NWT	58 00-59 00	78 00-80 00	60-PR1
21 H		Amherst	NB-NS	45 00-46 00	64 00-66 00	60-2
52 H		Nipigon	Ont	49 00-50 00	88 00-90 00	61-P-3
62 P		Hecla (Conv.)	Man	51 00-52 00	96 00-98 00	49-P-2
74 F		Lloyd Lake	Sask	57 00-58 00	108 00-110 00	60-PR2
74 G		Cree Lake	Sask	57 00-58 00	106 00-108 00	60-PR3
74 J		Livingstone Lake	Sask	58 00-59 00	106 00-108 00	60-1
74 K		William River	Sask	58 00-59 00	108 00-110 00	60-PR1
74 D		Waterways	Alta	56 00-57 00	110 00-112 00	60-1
83 F		Edson	Alta	53 00-54 00	116 00-118 00	61-1
83 J		Whitecourt	Alta	54 00-55 00	114 00-116 00	61-1
84 A		Algar Lake	Alta	56 00-57 00	112 00-114 00	60-2
82 K		Lardeau	BC	50 00-51 00	116 00-118 00	59-1
86 E		Leith Peninsula	NWT	65 00-66 00	118 00-120 00	61-3
96 E		Norman Wells	NWT	65 00-66 00	126 00-128 00	60-1
106 H		Sans Sault Rapids	NWT	65 00-66 00	128 00-130 00	60-1

(3) Aeronautical Charts - National Topographic Series
(Scale 1:500,000) - New

1 NW		Avalon-Burin	Nfld	46 00-48 00	52 00-56 00	60-5
12 NE 2 NW		Harrington-Belle Isle	Nfld	50 00-52 00	55 15-60 00	60-4
21 NE		Campbellton-Moncton	NB	46 00-48 00	64 00-68 00	60-2
22 SE		Gaspe	Que	48 00-50 00	64 00-68 00	60-3
24 NE		George River	Que-Nfld	58 00-60 00	64 00-68 00	60-5
31 SW		Toronto-Ottawa	Ont	43 33-46 00	76 00-80 00	61-3
42 SW		Geraldton-White River	Ont	48 00-50 00	84 00-88 00	61-2

Map Number	No. of Sheets	Name	Location	Latitude	Longitude	Year & Edition
92 NW		Campbell River- Rivers Inlet	BC	50 00-52 00	124 00-128 00	60-3
94 NW		Liard River	BC	58 00-60 00	124 00-128 00	60-3
94 SE		Hudson Hope	BC	56 00-58 00	120 00-124 00	60-3
49 N $\frac{1}{2}$ -39N $\frac{1}{2}$		Bache Peninsula	NWT	78 00-80 00	72 00-88 00	61-P-3
85 SW		Providence	NWT	60 00-62 00	116 00-120 00	60-4
95 NW-NE		Wrigley	NWT	62 00-64 00	120 00-128 00	60-3
106 SW-SE		Wernecke Mountains	YT-NWT	64 00-66 00	128 00-136 00	60-3
560 N $\frac{1}{2}$ 340 N $\frac{1}{2}$		Challenger Mountains	NWT	82 00-84 00	72 00-90 00	60-3
(4) Aeronautical Charts - National Topographic Series (Scale 1:500,000) - Conversions						
14 NW		Hebron-Cape Territok	Que-Nfld	58 00-60 00	60 00-64 00	59-4
23 NE		Dyke Lake	Que-Nfld	54 00-56 00	64 00-68 00	53-P-5
52 SE		Ignace- Fort William	Ont	48 00-50 60	88 00-92 00	52-2
53 NE		Severn River	Man-Ont	54 00-56 00	88 00-92 00	52-P-4
62 NE		Neepawa-Gypsumville	Man	50 00-52 00	96 00-100 00	52-3
63 SW		Pasquia Hills- Swan River	Sask-Man	52 00-54 00	100 00-104 00	51-3
73 NE		Green Lake-Stanley	Sask	54 00-56 00	104 00-108 00	53-3
67 SW-SE		King William Island	NWT	68 00-70 00	96 00-104 00	58-P-5
76 NW-NE		Bathurst Inlet	NWT	66 00-68 00	104 00-112 00	54-P-3
(5) Aeronautical Charts - National Topographic Series (Scale, 1 inch to 8 miles)						
55 NW-NE		Chesterfield Inlet	NWT	62 00-64 00	88 00-96 00	60-P-5
55 SW		Eskimo Point	NWT	60 00-62 00	92 00-96 00	60-P-7
65 NW-NE		Dubawnt Lake	NWT	62 00-64 00	96 00-104 00	60-P-4
65 SE		Nueltin Lake	NWT	60 00-62 00	96 00-100 00	60-P-5
65 SW		Kazan River	NWT	60 00-62 00	100 00-104 00	60-P-4
(6) World Aeronautical Charts (Scale 1:1,000,000)						
2007		Eureka Sound	NWT	80 00-84 00	71 00-101 00	61-2
2178		Hamilton River	Que-Nfld	52 00-56 00	54 00-64 00	60-2
2224		Gander River	Nfld	48 00-52 00	48 00-56 00	60-2
2261		St. Mary's River	NS	44 00-48 00	56 00-64 00	60-2
2311		Roseway River	NS	40 00-44 00	61 00-69 00	61-2

(7) PRINTING SUMMARY FOR 1961

TYPE	NO OF MAPS	NO OF SHEETS	COPIES	MAP IMPRESSIONS
1:50,000	118	232	1,020,800	6,499,800
1:250,000	16	16	80,700	469,800
1:500,000	15	15	151,600	691,800
8 Mile	5	5	29,600	29,600
1:1,000,000	5	5	43,000	268,500
Hydrographic	249	249	420,295	1,280,610
Geological	124	124	341,785	1,133,315
Indexes	5	5	14,700	29,700
Canada Air Pilot	1175	1175	3,511,995	7,123,025
Miscellaneous	345	345	949,725	3,587,540
	<u>2057</u>	<u>2171</u>	<u>6,564,200</u>	<u>21,113,690</u>

TYPE	NO OF MAPS	NO OF SHEETS	COPIES	MAP IMPRESSIONS
<u>Provisional Editions</u>				
1:50,000	159	219	962,100	1,880,200
1:250,000	<u>4</u>	<u>4</u>	<u>14,500</u>	<u>31,000</u>
	163	223	976,600	1,911,200
<u>Advance Prints</u>				
1:50,000	<u>71</u>	<u>71</u>	<u>8,300</u>	<u>8,300</u>
	71	71	8,300	8,300
<u>Conversions</u>				
1:250,000	1	1	6,500	31,500
1:500,000	<u>9</u>	<u>9</u>	<u>78,500</u>	<u>346,800</u>
	10	10	85,000	378,300

Reprints

1:50,000	20	34	192,250	1,280,700
1 Mile	5	5	9,000	48,000
Advance 50,000	58	58	7,350	7,350
2 Mile	16	16	103,000	521,800
1:250,000	7	7	27,700	152,600
4 Mile	1	1	4,500	31,500
1:500,000	3	3	14,000	88,500
8 Mile	6	6	24,500	91,200
1:1,000,000	6	6	47,300	305,000
ARC	6	6	19,400	140,600
Indexes	4	4	15,000	30,000
Miscellaneous	72	72	470,272	2,937,270
	<u>204</u>	<u>218</u>	<u>934,272</u>	<u>5,634,520</u>

Air Overprints

8 Mile & 1:500,000	118	118	325,400	637,500
1:1,000,000	27	27	80,200	160,400
ARC	8	8	24,600	43,200
	<u>153</u>	<u>153</u>	<u>430,200</u>	<u>841,000</u>
Grand Totals -	<u>2,658</u>	<u>2,846</u>	<u>8,998,572</u>	<u>29,887,110</u>

GEOLOGICAL SURVEY OF CANADA

(a) Distribution of Parties, 1961

The functional distribution of parties of the Geological Survey of Canada in 1961 was as follows: bedrock mapping, 36; surficial geology, 12; groundwater and engineering surveys, 8; geophysics, 6; geochemistry, 6; stratigraphy and palaeontology, 15; submarine geology, 3; mineral deposits, mineralogy, and petrology, 14; other functions, 2.

The regional distribution of the parties was as follows:

Franklin	5
Keewatin	1
Mackenzie	2
Yukon	4
Yukon and British Columbia	1
British Columbia	22
British Columbia and Alberta	4
Alberta	5
Saskatchewan	4
Manitoba	5
Ontario	9
Ontario and Quebec	3
Quebec	2
New Quebec and Labrador	2
Quebec and New Brunswick	1
New Brunswick	3
Nova Scotia	4
Prince Edward Island	1
Newfoundland	5
Miscellaneous	19

(b) Maps Printed From January 1, 1961, to December 31, 1961

- A --- Geological ("A") Series (Multicolor)
- PS --- Preliminary Geological Series (P. S.)
- G --- Aeromagnetic ("G") Series; scale, 1 inch
to 1 mile unless otherwise indicated
- WSP --- Water Supply Papers (W. S. P.)

Canada

- 900A Canada, Principal Mineral Areas;
(11th edition); in cooperation with the
Mineral Resources Division;
1 inch to 120 miles For separate
distribution

- 900A Canada, Principal Mineral Areas;
(French (11th edition); in cooperation with the
edition) Mineral Resources Division;
1 inch to 120 miles For separate
distribution

- 1045A-M1 Metallogenic Map
(Reprint) Uranium in Canada;
1 inch to 120 miles For Economic
Geology Series 16

- 1045A-M3 Metallogenic Map,
(Reprint) Molybdenum in Canada;
1 inch to 120 miles For Economic
Geology Series 20

District of Franklin

- 43-1960 Mingo Lake (36 A);
(P. S.) Baffin Island;
1 inch to 4 miles For separate
distribution

- 20-1961 Banks, Victoria, and Stefansson Islands
(77, 87 and parts of 67, 68, 78, 88, 97, and 98)
1:1,000,000 Paper 61-12

British Columbia

- 886A
(reprint) Nicola (92 I, E 1/2); Geology);
1 inch to 4 miles.....For Memoir 249
and separate
distribution
- 887A
(reprint) Nicola (92 I, E 1/2);
(Mineral Localities);
1 inch to 4 miles.....For Memoir 249
and separate
distribution
- 1090A Nelson, west Half (82 F, W 1/2);
(Geology);
1 inch to 4 miles.....For Memoir 308
and separate
distribution
- 1091A Nelson, west half (82 F, W 1/2);
(mining Properties)
1 inch to 1 mile.....For Memoir 308
and separate
distribution
- 39-1960
(P.S.) Chilliwack, Sumas, and Kent Municipalities
(92 H/4, W 1/2, and part of 92 G/1);
(Surficial Geology).....Paper 60-29
- 40-1960
(P.S.) Chilliwack, Sumas, and Kent Municipalities;
(92 H/4, W 1/2, and part of 92 G/1);
(Locations and types of wells).....Paper 60-29
- 49-1960
(P.S.) Prince George (93 G);
1 inch to 4 miles.....For separate
distribution
- 2-1961
(P.S.) Rabbit River (94 M);
1 inch to 4 miles.....For separate
distribution
- 3-1961
(P.S.) Quesnel Lake, West Half:
(93 A, W 1/2);
1 inch to 4 miles.....For separate
distribution
- 4-1961
(P.S.) Rogers Pass (82 N, W 1/2);
1 inch to 4 miles.....For separate
distribution
- 11-1961
(P.S.) Pine Pass (93 O);
1 inch to 4 miles.....For separate
distribution

15-1961 (P. S.)	Kettle River, West Half (82 E, W 1/2) 1 inch to 4 miles	For separate distribution
19-1961 (P. S.)	Dawson Creek (93 P) 1 inch to 4 miles	Paper 61-10

British Columbia - Alberta

1039A	Alberta and Northeastern British Columbia; Oil and Gas Fields (7th edition) 1 inch to 20 miles	For separate distribution
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Alberta

47-1960 (P. S.)	Buried Valleys in Central and Southern Alberta 1 inch to 20 miles	Paper 60-32
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Alberta - Saskatchewan

16-1961 (P. S.)	Firebag River Area (74 E, E 1/2 and 74 F, W 1/2); 1 inch to 4 miles	For separate distribution
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Saskatchewan

845A (Reprint)	Geological Map of Saskatchewan; 1 inch to 20 miles	For separate distribution
10-1961 (P. S.)	La Loche (74 C); 1 inch to 4 miles	For separate distribution
1028G	Coronation Mine Area (63 L/9, E 1/2 and 63 K/12, W 1/2); 1 inch to 1/2 mile...	
W. S. P. 329	Weyburn (62 E); 1 inch to 4 miles	

Saskatchewan - Manitoba

1044A Saskatchewan and Western Manitoba,
Oil and Gas Fields (6th edition);
1 inch to 20 miles For separate
distribution

Manitoba

1068A Collins Point (63 N/3);
West of Principal Meridian;
1 inch to 1 mile For separate
distribution

29-1960 Plum Coulee Area
(P. S.) (Parts of 62 H/SW and 62 G/SE);
West of Principal Meridian;
(Location and Types of Wells);
1 inch to 2 miles Paper 60-22

30-1960 Plum Coulee Area
(P. S.) (Parts of 62 H/SW and 62 G/SE);
West of Principal Meridian;
(Surficial Geology);
1 inch to 2 miles Paper 60-22

52-1960 Whiskey Jack Lake (64 K);
(P. S.) 1 inch to 4 miles For separate
distribution

9-1961 Kettle Rapids (54 D);
(P. S.) 1 inch to 4 miles For separate
distribution

21-1961 Oxford House (53 L);
(P. S.) 1 inch to 4 miles For separate
distribution

1029G Egenolf Lake (64 N/1)

1030G Whitmore Lake (64 N/2)

1031G Colbeck Lake (64 N/3)

1032G Erickson Lake (64 N/4)

1033G Snyder Lake (64 N/5)

1034G Thanout Lake (64 N/6)

1035G Huggill Lake (64 N/7)

1036G Finner Lake (64 N/8)
1037G Turner Lake (64 N/9)
1038G Sucker Lake (64 N/10)
1039G Kasmere Lake (64 N/11)
1040G Wolf Lake (64 N/12)
1041G Veal Lake (64 N/13)
1042G Tice Lake (64 N/14)
1043G Putahow Lake (64 N/15)
1044G Bagg Lake (64 N/16)
1045G Melvin Lake (64 F/1)
1046G Dunsheath Lake (64 F/2)
1047G Goldsand Lake North (64 F/3)
1048G Carswell Lake (64 F/4)
1049G Carriere Lake (64 F/5)
1050G Carlson Lake (64 F/6)
1051G Brisebois Lake (64 F/7)
1052G Le Clair Lake (64 F/8)
1053G Jordan Lake (64 F/9)
1054G Eyrie Lake (64 F/10)
1055G Hjalmarson Lake (64 F/11)
1056G Sawbill (64 F/12)
1057G Brochet (64 F/13)
1058G Abram Lake (64 F/14)
1059G Attridge Lake (64 F/15)
1060G Kustra Lake (64 F/16)
1061G Chartrand Lake (64 K/1)
1062G Ducharme Lake (64 K/2)

1063G Easton Lake (64 K/3)
1064G Engen Lake (64 K/4)
1065G Whiskey Jack Lake (64 K/5)
1066G Fagnan Lake (64 K/6)
1067G Morrow Lake (64 K/7)
1068G Fergus River (64 K/8)
1069G Pangman Lake (64 K/9)
1070G Paulson Lake (64 K/10)
1071G Chipewyan Falls (64 K/11)
1072G Lac Brochet (64 K/12)
1073G Misty Lake (64 K/13)
1074G Rutledge Lake (64 K/14)
1075G Chatwin Lake (64 K/15)
1076G Dean Lake (64 K/16)
1078G Munroe Lake (64 0/2)
1079G Canfield Lake (64 0/3)
1080G Doig Lake (64 0/4)
1081G Booth Lake (64 0/5)
1082G Calder Lake (64 0/6)
1083G Sandhill Lake (64 0/7)
1086G Askey Lake (64 0/10)
1087G Corbett Lake (64 0/11)
1088G Drake Lake (64 0/12)
1089G Todd Island (64 0/13)
1090G Lowry Lake (64 0/14)
1091G Blevins Lake (64 0/15)

- 18-1961 North Caribou Lake (53 B);
(P. S.) 1 inch to 4 miles For separate
distribution
- 26-1961 Sault Ste. Marie (41 K/9);
(P. S.) 1 inch to 1 mile For separate
distribution

Ontario - Quebec

- 31-1960 Ottawa (31 G/5);
(P. S.) (Hydrogeology);
1 inch to 1 mile Paper 60-23

Quebec

- 42-1960 Montreal Area
(P. S.) (Parts of 31 H/12, E 1/2 and 31 H/5, E 1/2);
(Drift-thickness Contours);
1 inch to 1500 feet For separate
distribution
- 29-1961 Montreal Area
(P. S.) (Parts of 31 H/12, E 1/2, and 31 H/5, E 1/2); Surficial
Geology;
1 inch to 1500 feet For separate
distribution

Quebec - Newfoundland

- 1087A Menihek Lakes (23 J, E 1/2);
1 inch to 4 miles For separate
distribution
- 34-1960 Iron Formations and the
(P. S.) Labrador Geosyncline;
(23, 24, and parts of 22 and 25);
1 inch to 16 miles Paper 60-30

New Brunswick

- 1092A Sevogle (21 P/4, W 1/2);
1 inch to 1 mile For separate
distribution

41-1960 Big Bald Mountain (21 0/1);
(P.S.) 1 inch to 1 mile For separate
distribution

Nova Scotia - New Brunswick

48-1960 St. Mary Bay (21 B, E 1/2);
(P.S.) 1 inch to 4 miles For separate
distribution

Nova Scotia

44-1960 Shelburne (20 0 and 20 P);
(P.S.) 1 inch to 4 miles For separate
distribution

1-1961 Hopewell, West Half
(P.S.) (11 E/7, W 1/2);
1 inch to 1 mile For separate
distribution

27-1961 Guysborough (11 F/5);
(P.S.) 1 inch to 1 mile For separate
distribution

Prince Edward Island

33-1960 Montague (11 L/2);
(P.S.) (Surficial Geology);
1 inch to 1 mile For separate
distribution

36-1960 Mount Stewart (11 L/7)
(P.S.) 1 inch to 1 mile For separate
distribution

37-1960 Souris (11 L/8);
(P.S.) 1 inch to 1 mile For separate
distribution

34-1961 Rustico, East Half
(P.S.) (11 L/6, E 1/2);
1 inch to 1 mile For separate
distribution

Newfoundland

- | | | |
|--------------------|--|------------------------------|
| 1117A | Stephenville (12 B)
(Aeromagnetic)
1 inch to 4 miles | For Memoir 323 |
| 35-1960
(P. S.) | Kings Point (12 H/9);
1 inch to 1 mile | For separate
distribution |
| 17-1961
(P. S.) | Ossokmanuan Lake, West Half
(23 H, W 1/2);
1 inch to 4 miles | For separate
distribution |

Appendix III

GEOGRAPHICAL MAPS

Canada

Average Monthly Registrations, Labor Market Areas,
1953 - 1959 (130 miles to 1 inch)

Average Monthly Registrations, Labor Market Areas,
1953/54 - 1958/59 (130 miles to 1 inch)

Labor Surplus, Problem and Normal Labor Market Areas,
1953 - 1959 (130 miles to 1 inch)

Nova Scotia

11 D	Halifax	(1:250,000)	(Land Use)
11 E	Truro	(1:250,000)	(Land Use)
20 OP	Shelburne	(1:250,000)	(Land Use)

Ontario

30 L/13 E	Dunville East	(1:50,000)	(Land Use)
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MINES BRANCH

TABLE I
 Nature and Regional Origin of Metallic Ores
 Received for Investigation in 1961

Nature of Sample	Y.T.	B.C.	Ont.	Que.	N.S.	N.B.	Totals
Iron			11*	3			14
Gold		2	1				3
Copper-Iron		1					1
Copper-Zinc				6*			6
Copper-Gold							
Copper-Lead-Zinc				1*			1
Copper		3					3
Silver			1				1
Silver-Lead							
Silver-Zinc	1						1
Iron-Titanium				3			3
Nickel-Copper						1	1
Chromium				1*			1
Manganese					2		2
Molybdenum			1	2			3
Iron-Chromium							
Iron-Platinum		1					1
Gold-Antimony		1					1
Gold-Silver		1					1
Tin						1	1
Special Products			3*	1			4
Totals	1	9	17	17	2	2	48
Samples from Commonwealth and other Countries							4
* Including Pilot Plant Investigations							52

TABLE II
 Nature and Regional Origin of Industrial Minerals
 Received for Investigation in 1961

Nature of Sample	Yukon & NWT	B.C.	Alta.	Sask.	Man.	Ont.	Que.	N.B.	N.S.	PEI.	Nfld.	Other	Total
Altered Feldspar							2						2
Aggregates			1		1	4	3		2				11
Anhydrite									1				1
Asbestos							1						1
Bentonite			2		9							2	13
Building Stone						2					1		3
Brucite									1				1
Clay and Clay Products			1	1		2	2						6
Diatomite		1						1	2				4
Garnet						1							1
Gypsum	1												1
Industrial Waters	7	6	5	5	6	12	6	10	4		4		65
Lime							5						5
Limestone		2				27	2		1				32
Mica		1											1
Pumice		2											2
Silica				1		1	3		3				8
Tremolite							2						2
Misc.												2	2
Total	8	12	9	7	16	49	26	11	14		5	4	161

TABLE III

Nature and Regional Origin of Samples
Received for Examination and Testing - 1961
Industrial Minerals Sub-Division

Nature of Sample	Yukon & NWT.	B.C.	Alta.	Sask.	Man.	Ont.	Que.	N.B.	N.S.	P.E.I.	Nfld.	Other	Total
Altered Feldspar							2						2
Anhydrite									1				1
Anorthosite							1						1
Apatite							2						2
Artificial Abrasives												1	1
Asbestos							16						16
Basalt									2				2
Barite									2				2
Barylite											1		1
Bauxite												1	1
Bentonite			3									2	5
Brucite						2	14		12				28
Cement			1			1	1						3
Clay			1				1						2
Diatomite		4					2	1	3				10
Dolomite						1							1
Feldspar		2											2
Fluorspar		1					1						2
Garnet						1						1	2
Germanium Minerals												3	3
Granite						11	6				2		19
Graphite					2	7	1	2					12
Gypsum	2								1				3
Lime							11						11
Limestone		4				36	4		1		1		46
Lithium Minerals							1						1
Magnesite													
Manganese								3					3
Manganosiderite												3	3
Sub-Total	2	11	5		2	59	63	6	22		4	11	185

TABLE III (cont'd.)

Nature of Sample	Yukon & NWT	B.C.	Alta	Sask.	Man.	Ont.	Que.	N.B.	N.S.	PEI.	Nfld.	Other	Total
Marble						1							1
Marmatite												1	1
Mica		3				2	1		1				7
Nepheline						3	1						4
Syenite													
Phlogopite												1	1
Phosphate						1		1					2
Pollucite					1								1
Pumice		2											2
Pyrochlore							1						1
Quartz Crystals		1				1							2
Quartzite						2							2
Rutile												1	1
Sand		2											2
Sandstone							1						1
Silica		4		2		4	9	1	9				29
Silica Residue												1	1
Silicon Carbide						3							3
Scheelite	3												3
Shale						4	1		4				9
Spodumene							3						3
Spodumene-Beryl							3						3
Talc & Soapstone							4						4
Tremolite							5						5
Vermiculite						2							2
Wolframite											4		4
Wollastonite												3	3
Zinc Oxide							3						3
Misc.		1					1						2
Sub-Total	3	13		2	1	23	33	2	14		4	7	102

TABLE III (concl.)

Nature of Sample	Yukon & NWT	B.C.	Alta.	Sask.	Man.	Ont.	Que.	N.B.	N.S.	PEI.	Nfld.	Other	Total
Aggregate, Gravel and Crushed Stone					6	13	16	1	9				45
L.W.Aggregate													
(a) Clay			9			25		4	10				48
(b) Shale						5	21						26
(c) Vermiculite		2				47							49
H.W.Aggregate							1						1
(a) Granite						2	16	8	10		1		37
(b) Marble						2	3	1	1				7
(c) Sandstone							1		3				4
(d) Limestone			1			1			2				4
(e) Artificial						3	5	2	2		2		14
Pozzolans		2	1			1							4
Roofing Granules						1	1						2
Slate							1		2				3
Others													
Ceramic Clay & Shale		11	8	19	8	15	11	1	4	3			80
Refractory Raw Materials							13						13
Refractory Products		8				4	1						13
Building Products						8	2						10
Other Ceramic Materials						4	1						5
Sub-Total	0	23	19	19	14	131	93	17	43	3	3		365
Sub-Total Page 1	2	11	5	0	2	59	63	6	22	0	4	11	185
Page 2	3	13	0	2	1	23	33	2	14	0	4	7	102
Page 3	0	23	19	19	14	131	93	17	43	3	3	0	365
Grand Total	5	47	24	21	17	213	189	25	79	3	11	18	652

Appendix V

GEOLOGICAL SURVEY OF CANADA RESEARCH GRANTS TO CANADIAN UNIVERSITIES -- 1961-62

Grants-in-aid to stimulate and support geological research in Canadian universities were initiated in 1951. Applications are received from members of university staffs and are submitted to the Director, Geological Survey of Canada. They are reviewed by the National Advisory Committee on Research in the Geological Sciences and the grants are awarded by the Survey on the Committee's recommendations.

Through the years the funds provided for the grants have been increased, in several steps, from \$10,000 in 1951 to \$50,000 in 1958, 1959, and 1960. For 1961 the amount was increased from \$50,000 to \$75,000.

For 1961-62, 53 applications were received (36 in 1960-61), and the total of the grants applied for was \$127,910 (\$102,677 in 1960-61). Of the 53 applications, 18 amounting in the aggregate to \$56,665 were for further support of projects supported previously; the remaining 35 applications totalling \$71,245 were for support of new projects. Grants totalling \$75,000 were awarded to 16 universities in support of 28 new projects and 15 continuing studies. Amounts of the grants and summary descriptions of the projects are given in the 11th Annual Report of the National Advisory Committee on Research in the Geological Sciences for 1960-61.

Over the past 10 years 134 papers have been published in scientific periodicals recording results from projects supported by the grants; of these, 17 were published in 1961. Sixty of these papers have been published in Canada; 50 in the United States, 15 in Great Britain and 9 in other countries.

The National Research Council of Canada is awarding grants-in-aid of research in the geological sciences in Canadian universities on a substantial and increasing scale; in 1960-61, \$399,550 was awarded,

of which about \$190,000 was in support of geological projects and geophysical projects of interest to geologists; and in 1961-62 the amount of the grants has been increased again substantially.

Efforts have been made to co-ordinate the awards of the National Research Council and Geological Survey grants-in-aid. When the applications for Geological Survey grants are reviewed by the Projects Subcommittee of the National Advisory Committee in June, the subcommittee has full knowledge of grants in the geological sciences awarded the preceding March by the National Research Council. In addition, one or more members of the Projects Subcommittee of the National Advisory Committee also serve on the National Research Council grant application screening committee. In this way grants-in-aid of research in the geological sciences by both organizations are fully co-ordinated.

In the future, Geological Survey funds will be directed mainly to support projects involving, in general, the study of rocks and minerals in field and laboratory that are directed toward the solution of specific geological problems, as opposed to more purely experimental projects such as the simulation of geological processes in the laboratory. Applications for grants for major items of equipment, costly services, and continuing support of technicians' salaries, etc., also may be better directed to the National Research Council.

COMPREHENSIVE STUDY OF A CANADIAN ORE DEPOSIT

This project is a co-operative, comprehensive study, or series of studies, of the copper orebody of the Coronation Mine, a few miles southeast of Flin Flon, Manitoba. It was started in 1960, at the suggestion of the National Advisory Committee on Research in the Geological Sciences, with participation by geologists, geochemists, geophysicists and mineralogists from several organizations with the hope that such comprehensive, integrated investigation of a

single orebody would extend our knowledge of how and why orebodies of this general type are formed.

Dr. D.R.E. Whitmore, Geological Survey of Canada, co-ordinator of the project, has reported at some length in the 1959-60 Annual Report of the National Advisory Committee and again in the 1960-61 report of this Committee on the 12 studies under way or completed by October, 1961.

ANNUAL REPORT, NATIONAL ADVISORY COMMITTEE
ON RESEARCH IN THE GEOLOGICAL SCIENCES

On behalf of the National Advisory Committee on Research in the Geological Sciences, the Geological Survey continues to publish the Annual Report of the Committee which includes a survey of current research in the geological sciences in Canada. The Annual Report for 1960-61 was published and distributed in January 1961. Some 800 copies were prepared and by December 1961 more than 700 copies had been distributed. The report for 1960-61 was prepared for distribution early in 1962.

PUBLICATIONS AND ARTICLES PUBLISHED

1. Publications

Administrative

- Report of the Explosives Division (Calendar Year 1960).
Rapport de la Division des explosifs (année civile 1960).
Annual Report of the Department (Calendar Year 1959).
Rapport annuel du Ministère (année civile 1959).
Annual Report of the Department and appendices (Calendar Year 1960).
Rapport annuel du Ministère et appendices (année civile 1960).
Explosives safety (folder, reprint).
Explosifs et sûreté (feuillet, réimpression).
Explosives Act and Regulations.
Sommaire des Règlements régissant le transport des explosifs au Canada (feuillet).
"Pensez aux enfants" (affiche).
Les explosifs, danger permanent (feuillet).

Mineral Resources Division

- Report on the administration of the Emergency Gold Mining Assistance Act for the fiscal year ended March 31, 1961.
Rapport concernant l'application de la Loi d'urgence sur l'aide à l'exploitation des mines d'or, année financière terminée le 31 mars 1961.
57 Preliminary mineral reviews (offset).
57 rapports préliminaires sur les minéraux (offset).
Operators' Lists (offset):
1, Part 1, Metallurgical works in Canada, primary iron and steel, 1961.
2, Metal and industrial mineral mines in Canada, 1960.
3, Part 1, Milling plants in Canada, metallic ores, 1961.
3, Part 2, Milling plants in Canada, industrial minerals, 1961.
4, Coal mines in Canada, 1961.
5, Petroleum refineries in Canada, 1961.

6, Ceramic Plants in Canada, 1960.

7, Natural gas processing plants in Canada, 1961.

Mineral Reports:

No. 1: L'industrie minière du Canada en 1956.

No. 3: Platinum metals, C.C. Allen.

No. 4: The Canadian mineral industry, 1958.

Mineral Information Bulletins (offset)

MR 42, Summary review of Federal taxation, prepared by E.C. Hodgson.

MR 43, Survey of the primary zinc industry in Canada, 1959, D.B. Fraser.

MR 44, Survey of the uranium industry in Canada, 1959, J.W. Griffith.

MR 48, Survey of the petroleum industry in Canada, 1959, R.A. Simpson.

MR 49, A preliminary survey of the Canadian mineral industry in 1960
by Officers of the Division and Mines Branch.

MR 50, Transportation of minerals in Northern Canada, Amil Dubnie.

MR 51, The Canadian iron ore industry in 1960, R.B. Elver.

MR 52, Survey of the petroleum industry in Canada, 1960, R.A. Simpson, et al.

Surveys and Mapping Branch

Geodetic Survey of Canada

Publ. 17: Precise and secondary levelling in Quebec, south of the
St. Lawrence River (revised 1960), L.P. Robertson.

Publ. 24A: Precise levelling in British Columbia south of Dawson Creek,
L.P. Robertson.

Publ. 24B: Precise and secondary levelling in British Columbia north of
Dawson Creek and Yukon Territory, L.P. Robertson.

Canadian Hydrographic Service

British Columbia pilot, vol. II, 4th edn.

Pilot of Arctic Canada, vol. III, 1st edn.

St. Lawrence River pilot, Quebec to Kingston, 3rd edn. 1961.

Sailing directions for Lake Simcoe 1961.

Canadian Hydrographic Service (brochure).

Suppl. No. 1 to the sixth edition, 1959, of the British Columbia pilot,
vol. I, 6th edn.

- Suppl. No. 1 to the 1959 edition of the pilot of Arctic Canada, vol. I, 1st edn.
 Suppl. No. 1 to the 1959 edition of the pilot of Arctic Canada, vol. II, 1st edn.
 Suppl. No. 2 to the 1957 edition of the St. Lawrence pilot.
 Suppl. No. 3 to the 1955 edition of the Great Lakes pilot, vol. II, Lake
 Huron, Georgian Bay and the Canadian shores of Lake Superior.

Tide Tables--Annales des marées, 1962 (offset):

- St. Lawrence and Saguenay Rivers.
 Fleuve Saint-Laurent et rivière Saguenay.
 Atlantic coast.
 Gulf of St. Lawrence.
 Bay of Fundy and Atlantic coast of Nova Scotia.
 Atlantic coast of Newfoundland and Labrador.
 Pacific coast.
 Juan de Fuca Strait to Boundary Pass, B.C.
 Strait of Georgia to Queen Charlotte Strait, B.C.
 Barkley Sound to Dixon Entrance, B.C.
 "Canadian Maps" folder (bilingual).
 Current survey St. Lawrence River, Montreal, Quebec, 1960.
 The adoption of the international Great Lakes datum 1955.
 Tidal and meteorological influences on the current in Little Current channel, 1959.
 Current measurement in Canadian waters.
 A more recent approach to tide and water level recording.

Geological Survey of Canada

Memoirs:

- 304: Formations du Silurien et du Dévonien inférieur dans l'Est de la péninsule de Gaspé (Québec), L.M. Cumming.
 308: Nelson map-area west half, British Columbia, H.W. Little.
 310: The geology, geochemistry, and origin of the gold deposits of the Yellowknife district, Northwest Territories, R.W. Boyle.
 311: Ammonoid faunas of the upper Triassic Pardonet Formation, Peace River foothills, British Columbia, F.H. McLearn.
 312: Whitehorse map-area, Yukon Territory, J.O. Wheeler.

- 316: Triassic stratigraphy and faunas, Queen Elizabeth Islands, Arctic Archipelago, E.T. Tozer.

Bulletins:

- 58: The geology of Keno and Galena Hills, Yukon Territory, K.C. McTaggart.
- 61: Petrology of the gneisses of Cumberland Sound, Baffin Island, Northwest Territories, G.C. Riley.
- 63: Cretaceous rocks in the region of Liard and Mackenzie rivers, Northwest Territories, D.F. Stott.
- 64: Gneisses of the Kipawa district, western Quebec, Grenville subprovince of Canadian Shield, W.T. Harry.
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- 60-12: Observations géologiques dans le Nord du Nouveau-Québec, Ralph Kretz.
- 60-18: Surficial geology of north-central district of Mackenzie, Northwest Territories, B.G. Craig.
- 60-20: Belcher Islands, Northwest Territories, G.D. Jackson.
- 60-22: Ground-water resources of Plum Coulee area, Manitoba, J.F. Charron.
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