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CANADA
DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
CENSUS OF INDUSTRY
MINING, METALLURGICAL & CHEMICAL BRANCH

THE SAND AND GRAVEL INDUSTRY
IN
CANADA
1938



OTTAWA
1940

Price 25 cents

DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
MINING, METALLURGICAL AND CHEMICAL BRANCH
OTTAWA - CANADA

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THE SAND AND GRAVEL INDUSTRY, 1938

Commercial production of sand and gravel in Canada during 1938 totalled 32,223,882 short tons valued at \$12,002,554 compared with 27,001,301 short tons worth \$10,492,696 in 1937. The tonnage and value of these materials produced in 1938 established an all-time high record for the industry. Included in the totals for both 1937 and 1938 are sands and gravels derived from all sources, including recoveries by dredges and material used by railroads as ballast.

Of the total sand and gravel output in 1938 there were 22,513,256 tons used for concrete, roads, etc., and 2,359,703 tons as railway ballast. In addition, there were produced 1,750,187 tons of straight sand for building, etc.; 18,845 tons for moulding; 4,656 tons as core sand and 62,939 tons for other purposes. The quantity of crushed gravel produced during the year under review amounted to 2,661,973 tons and 1,852,323 tons of sand were employed as mine fill.

Quebec and Ontario are Canada's largest sand and gravel producing provinces, the output in these provinces in 1938 being, respectively, 12,523,404 and 8,531,281 short tons; in 1938 the quantity of material washed or screened at Canadian sand and gravel plants totalled 2,949,360 short tons compared with 3,522,387 short tons in 1937, while the quantity of bank or pit-run grades amounted to 29,274,522 short tons as against a corresponding tonnage of 23,478,914 in the preceding year.

Imports of sand and gravel n.o.p. into Canada in 1938 totalled 86,692 short tons worth \$62,485 compared with 132,460 short tons at \$97,607 in 1937; exports of these materials in 1938 amounted to 609,193 short tons valued at \$146,050 as against corresponding exports of 364,270 tons at \$78,441 in 1937.

Active firms in the Canadian sand and gravel industry numbered 1,339 in 1938, of which 861 were located in Quebec, 410 in Ontario, 21 in British Columbia and lesser numbers in Nova Scotia, New Brunswick, Manitoba, Saskatchewan and Alberta. Capital employed by the industry totalled \$3,286,340; employees were reported at 6,959; salaries and wages paid totalled \$4,482,916; fuel, electricity and process supplies used aggregated \$254,595 and the total net value of production was estimated at \$11,747,959.

The Bureau of Mines, Ottawa, reports that most of the gravel used for road work comes from pits that are worked for that purpose. Usually enough gravel is extracted by a portable or semi-portable plant to supply the immediate needs, following which a sufficient reserve is built up, in the form of stock piles for two years' requirements. Thus, the output of gravel from year to year depends upon the extent of road construction and improvements. Railway pits may also remain idle for several years. Part of the gravel is crushed, screened, and in some cases even washed. Some of the provincial highway departments have been using crushed instead of pit-run gravel on their main highways for a number of years.

Most of the large commercial plants are equipped to produce crushed gravel, a product that can compete with crushed stone. Sand is used chiefly in the building industry, for which purpose it must be free from dust, loam, organic matter or clay, and contain but little silt. It is usually obtained from local deposits. Special grades of sand are used in foundries for moulding, in the filtering of water supply, and in glass making.

Table 1 - PRODUCTION IN CANADA, IMPORTS AND EXPORTS OF SAND AND GRAVEL, 1937 and 1938

	Washed or Screened Tons	Bank or Pit-run Tons	TOTAL VALUE \$
<u>1 9 3 7</u>			
<u>PRODUCTION (x)</u>			
<u>SAND -</u>			
Moulding sand	77,706	22,962	44,551
Building sand and sand for concrete, roadwork, etc.	860,555	495,714	476,824
Core sand	855	267	1,520
Mine filling .....	...	1,170,260	146,811
Other sand (including blast sands, engine sands, etc.)	10,648	47,237	11,567
<u>SAND AND GRAVEL -</u>			
Sand and gravel for railway ballast	270,724	2,493,915	533,876
Sand and gravel for concrete, roadbuild- ing, etc.	1,847,871	17,605,317	8,340,764
Crushed gravel	454,028	1,643,242	936,783
TOTAL	3,522,387	23,478,914	10,492,696
Cost of fuel, electricity and process supplies used .....	...	...	295,348
TOTAL NET VALUE .....	...	...	10,197,348
<u>IMPORTS</u>	<u>Tons</u>	<u>\$</u>	
Sand, silica, for glass and carborundum manufacture, etc.	212,840	373,760	
Sand and gravel, n.o.p.	132,460	97,607	
Silex or crystallized quartz, ground or unground	4,276	103,940	
Ganister	2,405	5,980	
TOTAL	351,981	581,287	
<u>EXPORTS -</u>			
Sand and gravel	364,270	78,441	

(x) Does not include production of natural silica sand or of silica sand manufactured from quartz or silica rock; production of these are recorded under quartz in the bulletin - The Feldspar and Quartz Mining Industry.

Table 1 - PRODUCTION IN CANADA, IMPORTS AND EXPORTS OF SAND AND GRAVEL, 1937 and 1938 (Concluded)

	Washed or Screened Tons	Bank or Pit-run Tons	TOTAL VALUE \$
<u>1 9 3 8</u>			
<u>PRODUCTION(x)</u>			
<u>SAND -</u>			
Moulding sand	8,434	10,411	19,698
Building sand and sand for concrete, roadwork, etc.	1,038,859	711,328	685,976
Core sand	4,528	128	5,612
Mine filling .....	...	1,852,323	256,380
Other sand (including blast sands, engine sands, etc.)	12,885	50,054	17,297
<u>SAND AND GRAVEL -</u>			
Sand and gravel for railway ballast	246,485	2,113,218	443,936
Sand and gravel for concrete, roadbuild- ing, etc.	1,312,136	21,201,120	9,101,882
Crushed gravel	326,033	3,335,940	1,471,773
TOTAL	2,949,360	29,274,522	12,002,554
Cost of fuel, electricity and process supplies used .....	...	...	254,595
TOTAL NET VALUE .....	...	...	11,747,959

	Tons	\$
<u>IMPORTS -</u>		
Sand, silica, for glass and carborundum manufacture, etc.	172,073	338,832
Sand and gravel, n.o.p.	86,692	62,485
Silex or crystallized quartz, ground or unground	3,069	77,815
Ganister	360	2,838
TOTAL .....	...	482,020

<u>EXPORTS -</u>		
Sand and gravel	609,193	146,050
(x) Does not include production of natural silica sand or of silica sand manufactured from quartz or silica rock; production of these are recorded under quartz in the bulletin - The Feldspar and Quartz Mining Industry.		

Table 2 - PRODUCTION(x) OF SAND AND GRAVEL IN CANADA, 1929 - 1938

Year	Tons	\$	Year	Tons	\$
1929	27,846,945	7,317,814	1934	14,854,159	4,035,477
1930	28,547,511	8,344,913	1935	21,213,489	6,389,440
1931	21,748,586	6,651,165	1936	22,124,160	6,921,399
1932	14,469,942	4,480,596	1937	27,001,301	10,492,696
1933	11,738,823	4,464,285	1938	32,223,882	12,002,554
(x) Does not include production of natural silica sand or of silica sand manufactured from quartz or silica rock; production of these are recorded under quartz. Also does not include natural sand used for back filling at mines prior to 1936.					

Table 3 - PRODUCTION OF SAND AND GRAVEL, BY PROVINCES, 1935 - 1938

Province		1935	1936	1937	1938
Prince Edward Island	Tons	(a)	66,975	(a)	(a)
	\$	(a)	27,663	(a)	(a)
Nova Scotia	Tons	1,423,557	1,880,496	2,993,429	2,077,378
	\$	685,973	913,703	1,457,266	1,013,266
New Brunswick	Tons	1,813,206	970,945	1,136,013	3,333,540
	\$	845,981	567,797	715,652	1,825,383
Quebec	Tons	5,268,987	5,490,280	9,476,000	12,523,404
	\$	1,442,468	1,418,231	2,637,495	3,532,873
Ontario	Tons	8,770,117	8,498,153	8,332,526	8,531,281
	\$	2,211,406	2,227,620	3,613,854	3,046,043
Manitoba	Tons	1,399,659	1,852,606	1,380,957	1,216,084
	\$	404,730	545,130	551,464	645,812
Saskatchewan	Tons	502,732	716,910	822,447	1,037,753
	\$	171,170	284,531	470,343	662,511
Alberta	Tons	653,511	894,380	711,966	792,760
	\$	146,092	339,928	312,687	525,175
British Columbia ...	Tons	1,381,720	1,753,415	1,648,963	2,211,682
	\$	481,620	596,796	733,935	751,491

(a) Data not available.

Table 4 - PRODUCTION OF SAND FOR BUILDING AND CONCRETE, ROADS, ETC., and SAND AND GRAVEL FOR RAILWAY BALLAST AND FOR CONCRETE, ROADS, ETC., 1931 - 1938

Year	S A N D		S A N D A N D G R A V E L			
	For building, concrete, : roads, etc. :		For railway ballast		For concrete, roads, etc.	
	Tons	\$	Tons	\$	Tons	\$
1931	3,189,428	1,069,210	3,593,451	459,531	14,352,283	4,784,298
1932	2,368,304	745,091	2,097,224	324,648	9,604,113	3,181,105
1933	775,412	218,559	561,538	110,449	9,957,832	3,907,911
1934	686,631	209,002	1,454,618	266,292	12,418,408	3,411,751
1935	787,412	264,435	2,267,195	415,092	17,531,047	5,357,331
1936	956,502	362,542	6,318,681	1,054,703	14,336,640	5,216,942
1937	1,356,269	476,824	2,764,639	533,876	19,453,188	8,340,764
1938						
Nova Scotia. ....	...	...	74,520	11,876	2,002,828	1,001,315
New Brunswick	13,502	4,775	77,840	10,505	3,741,253	1,809,928
Quebec	893,506	288,713	948,772	156,928	7,461,283	1,865,060
Ontario	743,173	351,503	733,786	161,707	5,563,961	2,109,124
Manitoba ...	30,480	10,485	53,792	14,812	1,070,748	594,502
Saskatchewan	6,515	2,111	79,646	17,652	850,912	607,548
Alberta	9,111	8,785	260,157	37,331	496,030	474,451
British Columbia..	53,920	19,604	131,190	33,125	1,326,241	639,954
CANADA ...	1,750,187	685,976	2,359,703	443,936	22,513,256	9,101,882

Table 5 - PRODUCTION OF MOULDING AND CORE SAND AND CRUSHED GRAVEL, 1938

	Moulding Sand		Core Sand		Crushed Gravel	
	Tons	\$	Tons	\$	Tons	\$
Nova Scotia	30	.75	...	...	...	...
Quebec .....	...	...	2,000	1,800	3,209,857	1,218,428
Ontario	18,105	19,202	2,528	3,698	356,967	211,963
Manitoba	710	421	128	114	60,246	25,478
Saskatchewan .....	...	...	...	...	9,720	7,200
British Columbia ...	...	...	...	...	25,203	8,704
CANADA	18,845	19,698	4,656	5,612	3,661,973	1,471,773

Table 6 - PRINCIPAL STATISTICS OF THE SAND AND GRAVEL INDUSTRY IN CANADA(x), 1936-1938

	1936	1937	1938
Number of firms	1,356	1,560	1,339
Capital employed	\$ 2,994,127	6,706,288	3,286,340
Number of employees - On salary	66	100	122
On wages	3,572	5,984	6,837
Total	3,638	6,084	6,959
Salaries and wages - Salaries	\$ 103,587	142,456	205,639
Wages	\$ 1,986,801	3,326,015	4,277,277
Total	\$ 2,090,388	3,468,471	4,482,916
Selling value of sand and gravel produced by railway companies (Gross) ..	\$ 942,090	439,341	368,182
Selling value of sand and gravel produced by other operators (Gross) ..	\$ 5,979,309	10,053,655	11,634,372
Total Selling Value of Sand and Gravel Produced (Gross) ..	\$ 6,921,399	10,492,696	12,002,554
Cost of fuel and electricity	\$ 72,836	232,169	188,800
Cost of process supplies used	\$ 28,223	63,179	65,795
TOTAL NET VALUE OF PRODUCTION	\$ 6,820,340	10,197,348	11,747,959

(x) Includes data relating to sand production by dredgers and railways.

Table 7 - CAPITAL EMPLOYED, NUMBER OF EMPLOYEES, SALARIES AND WAGES PAID, and FUEL AND ELECTRICITY CONSUMED, BY PROVINCES, 1937 and 1938

Province	No. of operators	Capital employed	No. of employees	Salaries and wages	Cost of fuel and electricity used	Cost of process supplies used
		\$		\$	\$	\$
1937						
Nova Scotia	6	(a)	391	306,217	(a)	...
New Brunswick ..	7	5,000	1,510	312,704	(a)	...
Quebec	1,017	232,121	2,274	1,595,846	32,710	7,980
Ontario	471	5,273,738(x)	465	408,237	169,909	33,739
Manitoba	15	655,559	649	318,305	8,899	...
Saskatchewan ...	13	(a)	398	237,544	1,141	14,110
Alberta	9	23,774	290	183,410	(a)	...
British Columbia	22	516,096	107	106,208	19,510	7,350

Table 7 - CAPITAL EMPLOYED, NUMBER OF EMPLOYEES, SALARIES AND WAGES PAID, and FUEL AND ELECTRICITY CONSUMED, BY PROVINCES, 1937 and 1938 (Concluded)

Province	No. of opera- tors	Capital employed \$	No. of employ- ees	Salaries and wages \$	Cost of fuel and electricity used \$	Cost of process supplies used \$
<u>1 9 3 8</u>						
Nova Scotia	4	(a)	242	181,450	(a)	...
New Brunswick ..	6	5,000	1,508	907,777	(a)	...
Quebec	861	388,268	3,470	2,144,702	19,126	2,248
Ontario	410	1,537,845(✓)	629	500,671	137,621	28,137
Manitoba	14	788,856	286	169,240	9,143	15,786
Saskatchewan ...	16	108,002	482	276,431	1,360	11,326
Alberta	7	26,032	232	190,132	599	150
British Columbia	21	432,337	110	112,513	20,951	8,148

(a) Complete data not available.

(✓) Includes value of dredges.

Table 8 - FUEL AND ELECTRICITY USED, 1937 and 1938

Kind	Unit of measure	1 9 3 7		1 9 3 8	
		Quantity	Value \$	Quantity	Value \$
Bituminous coal - Canadian	short ton	6,326	38,431	4,420	23,850
Foreign	short ton	11,306	68,604	2,868	19,094
Anthracite coal	short ton	310	2,294	4,731	27,665
Coke	short ton	3	30	29	302
Gasoline	Imp.gal.	(✓) 236,194	51,842	402,199	73,626
Kerosene	Imp.gal.	2,673	1,020	2,857	635
Fuel oil	Imp.gal.	39,848	4,142	43,428	4,846
Wood	cord	65	253	132	1,051
Natural gas	M cu. ft.	15,718	6,393	47	28
Other fuel .....	\$	...	...	...	...
Electricity purchased	K. W. H.	6,006,286	59,160	2,905,397	37,703
TOTAL .....	\$	...	232,169	...	188,800

Table 9 - AVERAGE NUMBER OF WAGE-EARNERS, BY MONTHS, 1934 - 1938

Month	1934	1935	1936	1937	1938
January	122	122	186	280	458
February	122	116	169	265	476
March	387	138	221	305	466
April	596	1,088	315	1,885	935
May	3,128	6,117	4,502	8,514	12,762
June	3,895	6,664	8,703	14,961	14,195
July	4,167	6,754	8,785	15,153	13,889
August	4,219	6,806	5,087	11,503	13,872
September	2,418	4,988	4,656	11,307	12,905
October	940	1,483	1,319	4,893	9,559
November	400	544	420	2,026	1,259
December	316	406	256	434	574

Table 10 - NUMBER OF WAGE-EARNERS WHO WORKED THE NUMBER OF HOURS SPECIFIED, DURING ONE WEEK IN MONTH OF NORMAL EMPLOYMENT, 1938

Hours	No.	Hours	No.
30 hours or less	26	51 - 54 hours	24
31 - 43 hours	102	55 hours	177
44 hours	25	56 - 64 hours	433
45 - 47 hours	7	65 hours and over..	54
48 hours	12,810	GRAND TOTAL.	13,692
49 - 50 hours	34	Total wages paid in that week \$	180,801

Table 11 - POWER EQUIPMENT INSTALLATION, 1938

	Number of Units	Horse power
Steam engines and steam turbines	23	1,191
Diesel engines	20	1,113
Gasoline, gas and oil engines	51	2,347
Hydraulic turbines or water wheels	7	240
Electric motors operated by purchased power	163	5,811
Electric motors operated by establishments' power	...	...
Boilers	14	1,040

Table 12 - COST OF MATERIALS USED AND VALUE OF WORK PERFORMED IN THE CONSTRUCTION INDUSTRY IN CANADA, 1937 and 1938

	Cost of Materials Used \$	New Construc- tion \$	Value of Work Performed Alterations Maintenance and Repairs \$	TOTAL VALUE \$
<u>1 9 3 7</u>				
General and Trade Contractors and Subcontractors	151,804,667	205,335,133	72,873,918	278,209,051
Municipalities	5,965,292	6,976,348	13,151,975	20,128,323
Harbour Commissions	311,451	410,574	1,206,375	1,616,949
Provincial Government Departments	15,472,069	29,878,709	15,556,617	45,435,326
Dominion Government Departments	2,290,956	2,346,152	4,138,313	6,494,465
TOTAL	175,844,435	244,946,916	106,927,198	351,874,114 (a)
<u>1 9 3 8</u>				
General and Trade Contractors and Subcontractors	152,976,356	204,781,181	76,703,509	281,484,690
Municipalities	7,255,141	9,531,261	13,332,215	22,863,476
Harbour Commissions	355,852	423,711	1,057,745	1,481,456
Provincial Government Departments	12,535,948	21,645,327	16,491,527	38,136,854
Dominion Government Departments	3,438,911	4,167,684	5,089,125	9,256,909
TOTAL	176,562,208	240,549,164	112,674,121	353,223,285 (b)

(Construction Branch - Dominion Bureau of Statistics).

For Footnotes - see next page.

Footnotes to Table 12 -

- (a) Includes - single dwellings, \$29,231,314; factories, warehouses, \$35,982,590; hard surfaced or paved streets and highways, \$38,625,244; gravel or stone surfaced streets and highways, \$29,914,507; bridges, viaducts, etc., \$12,351,378; electric stations, power plants, etc., \$14,988,028; docks, wharves, piers and breakwaters, \$8,001,048; apartment houses, \$5,825,241; schools, institutions, \$7,260,284; office buildings, \$8,362,412; stores, \$7,915,622; dirt or clay streets and highways, \$7,620,496.
- (b) Includes - Single dwellings, \$30,709,570; factories, warehouses, \$24,275,807; hard surfaced or paved streets and highways, \$32,129,962; gravel or stone surfaced streets and highways, \$33,342,919; bridges, viaducts, etc., \$9,919,754; electric stations, power plants, etc., \$20,641,445; docks, wharves, piers and breakwaters, \$6,548,349; apartment houses, \$7,944,612; schools, institutions, \$11,831,167; office buildings, \$8,013,402; stores, \$9,755,082; dirt or clay streets and highways, \$6,564,092.

- PRINCIPAL SAND AND GRAVEL OPERATORS, 1938

In addition to the names listed below, production has been reported by the railway companies for ballast, and also a considerable amount by counties and townships in Ontario for road use.

<u>Name of Firm</u>	<u>Head Office Address</u>	<u>Location</u>
<u>NOVA SCOTIA -</u>		
Mosher, Walter	307 Portland St., Dartmouth	Elmsdale
Nova Scotia Department of Highways	Halifax	Various
<u>NEW BRUNSWICK -</u>		
Fundy Fur & Feather Farm Ltd.	Little River	Little River
Likely, Jos. A., Ltd.	Saint John	East Saint John
Maxwell, Chas. & Son	St. Stephen	St. Stephen
New Brunswick Department of Highways	Fredericton	Various
<u>QUEBEC -</u>		
Barbe, Alfred	Ste. Rose Ouest	Ste. Rose Ouest
Bigras, Omer	Ste. Rose Ouest	Ste. Rose Ouest
Bonner Sand & Ballast Ltd.	1434 St. Catherine St. W. Montreal	South Durham
Breen, Thos.	Cheminis, Ont.	Dasserat Tp.
Brouillet Sand & Gravel	Rawdon	St. Julienne
Canadian Johns-Manville Co. Ltd.	Sun Life Bldg., Montreal	Asbestos
Carrière, Turcotte & Asselin Enrg.	Chateau Richer	Lac Beauport
Coaticook, Ville de	100 rue Child, Coaticook	Coaticook
Cie de Sable Ltée, La	10 .. 3rd Ave., Quebec	River St. Charles
Consolidated Oka Sand & Gravel Co. Ltd.	248 McCord St., Montreal	Lake of Two Mountains
E. T. Paving & Contracting Co. Ltd.	Box 738, Sherbrooke	Ascot
Gagnon & Frère Enrg.	St. David, Cte Lévis	St. David
Granby, City of	Granby	Granby
Komo Construction Ltée	814½ rue St. Valier, Quebec	Baie Comeau
Latulippe, Philippe	238 rue de la Ronde, Quebec	St. Charles River

PRINCIPAL SAND AND GRAVEL OPERATORS, 1938 (Continued)

<u>Name of Firm</u>	<u>Head Office Address</u>	<u>Location</u>
<u>QUEBEC - Concluded</u>		
Magog, Ville de	Box 710, Magog	Magog
Mercure, C.	9 rue St. Denis, St-Hyacinthe	St. Dominique
National Sand & Material Co. Ltd.	75 Richmond St., Montreal	St. Lawrence River
Piedmont Construction Co. Ltd.	832 St. James St. W., Montreal	Ste-Therese Gilman's Corners Farnham Cowansville
Quebec Department of Highways	Quebec	Various
Quebec, Ville de	Quebec	Ste-Therese de Beauport
Raymond, McDonell & Co. Ltd.	2020 Union St., Montreal	St. Philippe
St. Francis River Dredging Co.	St. Francois du Lac	St. Francis River
Sherbrooke, City of	Wellington St., Sherbrooke	Sherbrooke
Standard Lime Co. Ltd.	Joliette	St. Emelie
Standard Sand & Gravel Ltd.	St. Felix de Valois	St. Felix de Valois
<u>ONTARIO -</u>		
Adair, D.	Caledon East, R. R. 2	Caledon Tp.
Allan, James	Seaforth	Tuckersmith Tp.
Axford, J. B. & Sons	35 Elm St., St. Thomas	South Yarmouth Tp.
Barnes, Wm. R., Co. Ltd.	243 Cumberland Ave. Hamilton	Hamilton, Springvale Waterdown Murray Tp. Northbrook
Bellyou, N.E.	R. R. 4, Trenton	Nepean Tp.
Billie, Chas. V. & Son	Box 1185, Smiths Falls	Montague Tp.
Birtch, Jas. A.	R. R. 2, Richmond	Stamford
Bisonette, W. A.	R. R. 3, Smiths Falls	Brantford
Braas Bros. Hillcrest Sand Co.	R. R. 3, Niagara Falls	Perth and Huron Counties
Brantford, City of	City Hall, Brantford	Widdifield Tp.
Brennan Paving Co. Ltd.	400 Gage Ave. N., Hamilton	Mosa Tp.
Burrows, John	447 Klock Ave., North Bay	Burford Tp.
Cameron, Chas. M.	R. R. 1, Glencoe	Scarboro Tp.
Canadian Aggregates Ltd.	Walkerville	Fuller
Conlin, Herbert E.	Highland Creek	Paris
Consolidated Sand & Gravel Ltd.	402 Harbour Commission Bldg., Toronto	Waterford
Cudmore, Mrs. Alice	R. R. 1, Hensall	Usborne Tp.
Curran & Briggs	203 Manning Chambers, Toronto	near Haliburton
Dibblee Construction Co. Ltd.	248 Albert St., Ottawa	Pt. Fortune and Alexandria
Dominion Concrete Co. Ltd.	Prescott St., Kemptville	near Kemptville
Forrester, Wm. E.	Box 201, Morewood	Winchester Tp.
Foster, R. R.	86 Spadina Ave., Ottawa	near Ottawa
Frid Bros. Ltd.	Main West & Macklin Sts.	Hamilton
Grandmaitre, D.	19 Olmstead St. N., Eastview	Rockcliffe Village
Hadley's Chatham Ltd.	47 Wellington St. W. Chatham	Thames River
Harris, E. H.	Ailsa Craig	Ailsa Craig

PRINCIPAL SAND AND GRAVEL OPERATORS, 1938 (Continued)

<u>Name of Firm</u>	<u>Head Office Address</u>	<u>Location</u>
<u>ONTARIO - Concluded</u>		
Hinde Bros.	134 Northland Ave. Toronto	Mount Dennis
Hollinger Cons. Gold Mines Ltd.	Timmins	Tisdale Tp.
Howard Sand & Gravel Co. Ltd.	Aldershot	E. Flamboro Tp.
Hydro Electric Power Commission	620 University Ave., Toronto	Little Tp.
Jupp, A. E., Construction Co. Ltd.	170 Berkeley St., Toronto	Beaverton and Wanapitea
Kingston Sand & Gravel Ltd.	235 Wellington St., Kingston	Glenburnie
Lake Shore Mines Ltd.	Kirkland Lake	Kirkland Lake
McCollum Bros.	Winona	Saltfleet Tp.
McLean, A. B. & Sons	Sault Ste. Marie	Lake Superior
McLellan, James E.	R. R. 2, Thamesford	E. Nissouri Tp.
McQuillin, W. F.	R. R. 1, Lucknow	West Wawanosh Tp.
Mintern, Tom	Brantford	Brantford
National Sand & Material Co. Ltd.	402 Harbour Commission Bldg. Toronto	Point Pelee Niagara River Eastern Cap Malahide Tp. near Fenwick River St. Lawrence Waterdown Bruce Mines Various Loring Milford Bay Thessalon
Nevill, George	R. R. 5, Aylmer	Lake Superior
Page, Jacob H.	R. R. 3, Fenwick	Exeter
Pyke Salvage Co.	506 Princess St., Kingston	Etobicoke Tp.
Quigley's	Bartonville P.O.	Billings Bridge
Rayner Construction Ltd.	29 Commercial St., Leaside	Stanley Tp.
Sandy & Salkeld	Goderich	Niagara Bar
Sarjeant Co. Ltd., The	49 Dunlop St., Barrie	Saugeen and London Tps.
Scott, Thos. J.	66 March St., Sault Ste. Marie	Lake Superior
Skinner, R.	Exeter	Exeter
Smythe, C. Ltd.	Carlton & Church Sts., Toronto	Etobicoke Tp.
Spratt, J. H.	Billings Bridge	Billings Bridge
Stewart, Fenwick	R. R. 5, Clinton	Stanley Tp.
Tees Transit Co.	77 Sterling St., Hamilton	Niagara Bar
Towland Construction Co. Ltd.	294 Dundas St., London	Saugeen and London Tps.
United Towing & Salvage Co. Ltd.	635 Common St., Montreal	Lake Superior
Warren Bituminous Paving Co. Ltd.	437 Fleet St. W., Toronto	Fenelon Falls
White, Bertha M.	209 N. Vidal St., Sarnia	near Sarnia
White, Homer & Co.	Picton	Picton
Woollatt Fuel & Supply Co. Ltd.	2171 Ottawa St., Windsor	Mersea Tp.
Wright & Co.	960 Queen St., Sault Ste. Marie	Korah Tp.
<u>MANITOBA -</u>		
Brandon, City of	City Hall, Brandon	Brandon
Building Products & Coal Co. Ltd.	Christie St., Winnipeg	Birds Hill
Greater Winnipeg Water District	185 King St., Winnipeg	Mile 31 and Mile 80 G.W.W.D. By. Ste. Anne Various
Jackson, Thos. & Sons Ltd.	370 Colony St., Winnipeg	near Rosser
Manitoba Department of Highways	Winnipeg	Riding Mountain Park
McCurdy Supply Co. Ltd.	1034 Arlington St., Winnipeg	
Mulligan, F. A.	Rosser	
National Parks Branch	Department of Mines and Resources, Ottawa	

PRINCIPAL SAND AND GRAVEL OPERATORS, 1938 (Concluded)

<u>Name of Firm</u>	<u>Head Office Address</u>	<u>Location</u>
<u>MANITOBA - Concluded</u>		
North West Gravel & Coal Co. Ltd.	612 Toronto General Trusts Bldg., Winnipeg	S ₂ 35-11-4 E
Provincial Gravel & Coal Co. Ltd.	704 Gt. West Permanent Bldg. Winnipeg	Municipality of Springfield
Riley, W. J.	Molson	Molson
Winnipeg, City of, Hydro Electric System	55 Princess St. Winnipeg	Sec.31, Tp.15- R.14 E
<u>SASKATCHEWAN -</u>		
Betteridge, Stanley	Pilot Butte	Pilot Butte
Brule, Hector	Flin Flon	Flin Flon
Eamon, H. G. & Co.	Biggar	Biggar
Elander, John	Flin Flon	Flin Flon
Flin Flon, Mun. Dist. of	Flin Flon	Flin Flon
Hudson Bay Mining & Smelting Co. Ltd.	14 Finkle St., Woodstock	Flin Flon
Mackenzie Supply Co. Ltd.	Box 507, Regina	Imperial
National Parks Branch	Department of Mines and Resources, Ottawa	Prince Albert Park
Nipawin, Town of	Nipawin	Nipawin
North Battleford	1201 King St., North Battleford	North Battleford
Prince Albert, City of	Prince Albert	Prince Albert
Saskatchewan Dept. of Highways	Regina	Various
White, E. J. W.	Box 984, Flin Flon	Flin Flon
Yorkton, City of	Yorkton	Yorkton
<u>ALBERTA -</u>		
Alberta Dept. of Highways	Edmonton	Various
Cristall Sand	10165 .. 104th St., Edmonton	Perryvale
Jefferies & Sons Ltd.	Calgary	Calgary
National Parks Branch	Department of Mines and Resources, Ottawa	National Parks
<u>BRITISH COLUMBIA -</u>		
Armstrong, City of	Armstrong	Vernon, B.C.
B. C. Department of Highways	Victoria	Various
Burnaby, District of	Edmonds, New Westminster	Mun. of Burnaby
Cascade Rock & Gravel Co. Ltd.	Lynn timer P.O.	Lynn timer
Chilliwack, City of	Chilliwack	Chilliwack Tp.
Consolidated Mining & Smelting Co. Ltd.	Trail	Trail
Cranbrook, Corp. of	Cranbrook	Cranbrook
Deeks Sand & Gravel Co. Ltd.	101 W. 1st Ave., Vancouver	Seymour Creek-North Vancouver and Coquitlam
Fernie, City of	Fernie	Fernie
Fresh Water Sand & Gravel Co.Ltd.	ft. Columbia Ave., Vancouver	Port Coquitlam
Hillside Sand & Gravel Ltd.	1075 Main St., Vancouver	Hillside, Howe Sound
Kamloops, City of	288 First Ave., Kamloops	Kamloops
National Parks Branch	Dept. Mines & Resources, Ottawa	National Parks
Nelson, City of	501 Front St., Nelson	Kootenay Dist.
Port Alberni, City of	Port Alberni	Alberni Dist.
Port Coquitlam, City of	Port Coquitlam	Port Coquitlam
Prince Rupert, City of	Prince Rupert	Prince Rupert
Producer's Sand & Gravel Co.(1929) Ltd.	1902 Store St., Victoria	Esquimalt

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