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SAND AND GRAVEL PITS

1964

This report includes statistics for industry 087—Sand Pits or Quarries of Standard Industrial Classification Manual (Catalogue No. 12-501).

Data presented in this report under the heading of Sand and Gravel Pits (Tables 1-8) reflect the full implementation of the revised Standard Industrial Classification (S.I.C.) and the New Establishment Concept including an extension of the latter to cover total activities of mining establishments (see Explanatory Notes section of this report). Commodity statistics reflecting total production from all sources, trade data, etc. are presented along the same general lines as in the earlier issues of this report.

The combination of improvements in internal procedures with the introduction of the final stage of the establishment concept in the annual Census of Mining produced changes which, for some industries, required major adjustments in industry statistical data—see Explanatory Notes. In the case of the industry under review in this report, the changes primarily affected the items relating to number of establishments and cost of materials and supplies as evidenced in the comparative series of statistics presented in Tables 1 and 2. The reduction in the number of establishments indicated is the result of

the exclusion of non-producers. These latter are no longer being included as establishments under the new definition. The higher cost of materials reflects the broadening of the coverage of materials used under the new definition—see Explanatory Notes.

Commodity statistics are shown in Table 11 and subsequent tables include sand and gravel shipped by various operators which are not classified to the sand and gravel industry. Commercial operators shipped 193,791,358 short tons valued at \$125,232,132 in 1964 compared with 189,570,503 tons valued at \$123,854,254 in the preceding year. These totals include sand and gravel used by railroads as ballast, gravel used by mines as back fill and sand recovered by dredges, as well as similar materials from other sources.

Washed or screened grades amounted to 73,582,335 tons compared with 37,433,524 tons in 1963 and the bank or pit-run grades amounted to 120,209,023 tons compared with 152,136,979 tons in 1963.

Imports of sand and gravel in 1964 were 593,455 tons valued at \$741,466 and the exports were 461,464 tons valued at \$604,080.

SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- p preliminary figures.
- * revised figures.
- x confidential to meet secrecy requirements of the Statistics Act.

TABLE 1. Principal Statistics, Sand and Gravel Pits, 1957-63

Basis: Revised Standard Industrial Classification

Year	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity	Cost of materials and supplies	Value of production	Value added ¹
1957.....	438	2,527	9,339,304	2,449,039	668,420	36,150,498	33,033,039
1958.....	452	2,508	9,365,391	2,759,529	429,094	41,123,495	37,934,872
1959.....	482	2,738	10,229,651	2,899,356	525,298	42,542,701	39,118,047
1960.....	486	2,704	10,374,485	2,912,450	552,711	43,470,043	40,004,882
1961.....	493	2,513	9,898,545	3,110,456	607,022	39,437,982	35,720,504
1962.....	511	2,722	10,142,949	3,436,089	576,222	45,795,051	41,782,740
1963.....	331	2,266	9,249,454	3,169,869	486,432	42,536,977	38,880,676

¹ Value of production less cost of fuel, electricity, process supplies and freight.

See footnote Table 2.

TABLE 2. Principal Statistics for Sand and Gravel Pits,¹ 1961-64

Basis: Revised Standard Industrial Classification and New Establishment Concept

Year and province	Estab- lish- ments	Mining activity						Total activity					
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of pro- duction	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
No.	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000		
1961													
Newfoundland.....	2	x	x	x	x	x	x	x	x	x	x	x	
Prince Edward Island.....	—	—	—	—	—	—	—	—	—	—	—	—	
Nova Scotia.....	6	40	92	134	67	65	519	387	3	10	49	166	384
New Brunswick.....	3	x	x	x	x	x	x	x	—	—	x	x	x
Quebec.....	64	214	523	742	311	457	3,944	3,176	25	106	264	964	3,163
Ontario.....	116	834	2,008	3,346	1,268	2,608	14,790	10,914	55	230	1,062	4,587	10,952
Manitoba.....	12	106	241	408	212	315	2,004	1,476	2	8	134	546	1,479
Saskatchewan.....	7	39	91	121	42	40	547	465	6	19	45	149	464
Alberta.....	15	229	512	978	313	878	3,884	2,693	2	7	281	1,293	2,765
British Columbia.....	19	147	301	758	185	296	3,247	2,767	2	6	179	932	2,763
Totals.....	244	1,653	3,884	6,637	2,449	4,691	29,506	22,365	95	385	2,062	8,793	22,456
1962													
Newfoundland.....	4	30	61	91	28	22	345	295	x	x	31	93	295
Prince Edward Island.....	1	x	x	x	x	x	x	x	—	—	x	x	x
Nova Scotia.....	8	53	123	175	91	92	727	544	3	8	61	208	541
New Brunswick.....	2	x	x	x	x	x	x	x	—	—	x	x	x
Quebec.....	69	239	562	811	341	615	4,246	3,289	23	101	292	1,020	3,280
Ontario.....	128	929	2,244	3,924	1,438	2,952	17,476	13,087	66	282	1,186	5,406	13,145
Manitoba.....	14	110	252	442	232	243	2,030	1,555	4	14	138	575	1,560
Saskatchewan.....	7	36	88	107	46	36	495	413	6	18	44	140	412
Alberta.....	15	278	624	1,242	325	1,316	5,536	3,896	4	13	347	1,632	3,886
British Columbia.....	20	137	291	739	181	351	3,426	2,894	x	x	168	916	2,889
Totals.....	268	1,836	4,309	7,604	2,705	5,638	34,504	26,161	108	445	2,293	10,069	26,216
1963													
Newfoundland.....	3	x	x	x	x	x	x	x	x	x	x	x	x
Prince Edward Island.....	1	x	x	x	x	x	x	x	—	—	x	x	x
Nova Scotia.....	7	54	124	174	83	101	748	564	3	9	65	219	560
New Brunswick.....	1	x	x	x	x	x	x	x	—	—	x	x	x
Quebec.....	50	208	477	767	334	773	4,159	3,052	11	48	266	1,001	3,042
Ontario.....	119	927	2,256	4,015	1,486	3,529	18,302	13,287	58	235	1,163	5,417	13,352
Manitoba.....	13	89	204	392	234	288	2,048	1,525	4	17	117	578	1,545
Saskatchewan.....	7	44	103	133	51	48	472	372	6	23	53	177	371
Alberta.....	15	272	576	1,188	332	1,134	5,208	3,742	3	13	342	1,555	3,730
British Columbia.....	22	130	282	776	196	408	3,750	3,145	3	13	163	963	3,138
Totals.....	238	1,761	4,110	7,568	2,759	6,310	35,228	26,159	89	360	2,209	10,038	26,209
1964													
Newfoundland.....	2	x	x	x	x	x	x	x	x	x	x	x	x
Prince Edward Island.....	2	x	x	x	x	x	x	x	x	x	x	x	x
Nova Scotia.....	8	63	150	205	90	143	922	689	4	10	80	276	691
New Brunswick.....	2	x	x	x	x	x	x	x	—	—	x	x	x
Quebec.....	52	205	475	747	304	667	4,284	3,313	14	72	258	986	3,312
Ontario.....	112	1,006	2,463	4,490	1,615	4,378	22,377	16,384	52	227	1,271	6,074	16,879
Manitoba.....	13	114	271	448	260	410	2,323	1,653	4	14	143	636	1,695
Saskatchewan.....	7	51	118	147	36	76	535	424	5	18	62	190	423
Alberta.....	13	225	471	1,077	329	1,353	5,035	3,352	3	13	289	1,448	3,379
British Columbia.....	16	140	315	902	204	719	4,769	3,846	x	x	178	1,131	3,878
Totals.....	227	1,845	4,369	8,166	2,889	7,778	40,843	30,175	85	365	2,326	10,902	30,770

¹ Refer to Explanatory Notes for description of concepts and definitions and an explanation of differences in Tables 1 and 2. See also text page 3.

TABLE 3. Employment and Payroll, for Sand and Gravel Pits, 1961 - 63
Basis: Revised Standard Industrial Classification

Year	Employees										Salaries and wages				
	Production and related workers				Admini- trative and office		Sales and distribution		Total		Production and related workers		Admini- strative and office	Sales and distrib- ution	Total
	At pits or plants		Other		Male	Female	Male	Female	Male	Female	At pits or plants					Other
	Male	Female	Male	Female							Male	Female	Male	Female	
	number										\$'000				
1961	2,100	10	-	-	328	75	-	-	2,428	85	8,126	-	1,773	-	9,898
1962	2,330	12	-	-	320	60	-	-	2,650	72	8,458	-	1,685	-	10,143
1963	1,935	10	-	-	263	58	-	-	2,198	68	7,712	-	1,537	-	9,249

See footnote Table 2.

TABLE 4. Employment and Payroll, for Sand and Gravel Pits, 1961 - 64
Basis: Revised Standard Industrial Classification and New Establishment Concept

Year and province	Employees										Salaries and wages				
	Production and related workers				Admini- trative and office		Sales and distribution		Total		Production and related workers		Admini- strative and office	Sales and distrib- ution	Total
	At pits or plants		Other		Male	Female	Male	Female	Male	Female	At pits or plants					Other
	Male	Female	Male	Female							Male	Female	Male	Female	
	number										\$'000				
1961															
Newfoundland	x	-	-	-	x	-	-	-	x	-	x	-	x	-	
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nova Scotia	40	-	-	-	6	3	-	-	46	3	134	-	32	-	
New Brunswick	x	-	-	-	-	x	-	-	x	x	x	-	x	-	
Quebec	214	-	-	-	48	2	-	-	262	2	742	-	222	-	
Ontario	834	-	-	-	184	44	-	-	1,018	44	3,346	-	1,242	-	
Manitoba	105	1	-	-	19	9	-	-	124	10	408	-	138	-	
Saskatchewan	39	-	-	-	6	-	-	-	45	-	121	-	28	-	
Alberta	229	-	-	-	45	7	-	-	274	7	978	-	315	-	
British Columbia	147	-	-	-	25	7	-	-	172	7	758	-	173	-	
Totals	1,654	1	-	-	334	73	-	-	1,988	74	6,637	-	2,155	-	
1962															
Newfoundland	30	-	-	-	1	-	-	-	31	-	91	-	2	-	
Prince Edward Island	x	-	-	-	x	-	-	-	x	-	x	-	x	-	
Nova Scotia	53	-	-	-	7	1	-	-	60	1	175	-	33	-	
New Brunswick	x	-	-	-	x	x	-	-	x	x	x	-	x	-	
Quebec	239	-	-	-	50	3	-	-	289	3	811	-	209	-	
Ontario	929	-	-	-	201	56	-	-	1,130	56	3,924	-	1,482	-	
Manitoba	109	1	-	-	18	10	-	-	127	11	442	-	133	-	
Saskatchewan	36	-	-	-	7	1	-	-	43	1	107	-	34	-	
Alberta	278	-	-	-	60	9	-	-	338	9	1,242	-	390	-	
British Columbia	137	-	-	-	25	6	-	-	162	6	739	-	177	-	
Totals	1,835	1	-	-	370	87	-	-	2,205	88	7,605	-	2,464	-	
1963															
Newfoundland	x	-	-	-	x	-	-	-	x	-	x	-	x	-	
Prince Edward Island	x	-	-	-	x	-	-	-	x	-	x	-	x	-	
Nova Scotia	54	-	-	-	10	1	-	-	64	1	174	-	45	-	
New Brunswick	x	-	-	-	x	-	-	-	x	-	x	-	x	-	
Quebec	208	-	-	-	52	6	-	-	260	6	787	-	234	-	
Ontario	927	-	-	-	188	48	-	-	1,115	48	4,015	-	1,402	-	
Manitoba	88	1	-	-	16	10	-	-	106	11	392	-	185	-	
Saskatchewan	44	-	-	-	7	2	-	-	51	2	133	-	44	-	
Alberta	272	-	-	-	56	14	-	-	328	14	1,188	-	367	-	
British Columbia	130	-	-	-	26	7	-	-	156	7	776	-	186	-	
Totals	1,760	1	-	-	360	88	-	-	2,120	89	7,568	-	2,470	-	
1964															
Newfoundland	x	-	-	-	x	-	-	-	x	-	x	-	x	-	
Prince Edward Island	x	-	-	-	x	-	-	-	x	-	x	-	x	-	
Nova Scotia	63	-	-	-	14	3	-	-	77	3	205	-	71	-	
New Brunswick	x	-	-	-	x	-	-	-	x	-	x	-	x	-	
Quebec	205	-	-	-	45	8	-	-	250	8	747	-	239	-	
Ontario	1,005	1	-	-	204	61	-	-	1,209	62	4,490	-	1,584	-	
Manitoba	113	1	-	-	16	13	-	-	129	14	448	-	188	-	
Saskatchewan	51	-	-	-	9	2	-	-	60	2	147	-	42	-	
Alberta	225	-	-	-	55	9	-	-	280	9	1,077	-	371	-	
British Columbia	140	-	-	-	34	4	-	-	174	4	902	-	229	-	
Totals	1,843	2	-	-	381	100	-	-	2,224	102	8,166	-	2,736	-	

See footnote Table 2.

TABLE 5. Production and Related Workers, Sand and Gravel Pits, 1963 and 1964

Basis: Revised Standard Industrial Classification and New Establishment Concept

Month	1963		1964	
	Male	Female	Male	Female
	number			
Establishments reporting monthly detail (large establishments only):				
January	980	—	1,066	—
February	1,018	—	1,118	—
March	1,141	1	1,226	2
April	1,451	1	1,562	2
May	1,764	1	1,779	2
June	1,836	1	1,879	2
July	1,840	1	1,856	2
August	1,840	1	1,852	2
September	1,793	1	1,825	2
October	1,753	1	1,810	2
November	1,570	1	1,705	2
December	1,194	1	1,326	2
Averages	1,515	1	1,584	2
Establishments reporting annual averages (small establishments only)	245	—	259	—
Average for all establishments	1,760	1	1,843	2

TABLE 6. Purchased Fuel and Electricity Used, Sand and Gravel Pits, 1963 and 1964

Basis: Revised Standard Industrial Classification and New Establishment Concept

Description	1963		1964	
	Quantity	Cost \$'000	Quantity	Cost \$'000
1. Large establishments reporting commodity detail:				
Bituminous coal:				
(a) From Canadian mines	ton 162	3	—	—
(b) Imported	—	—	—	—
Sub-bituminous coal (from Alberta mines only)	—	—	—	—
Anthracite coal	ton 2	—	—	—
Lignite coal	—	—	—	—
Coke	—	—	10	—
Gasoline (including gasoline used in cars and trucks)	Imp. gal. 3,451,955	1,181	3,497,987	1,188
Fuel oil including kerosene or coal oil	" 3,824,061	681	4,374,629	732
Wood	—	—	—	—
Gas:				
(a) Liquefied petroleum gases	Imp. gal. 13,258	3	16,291	3
(b) Other manufactured gas	—	—	—	—
(c) Natural gas	M cu. ft. 23,304	4	40,591	5
Other fuel .....	...	—	...	—
Electricity purchased	kwh. 25,261,108	539	28,800,351	550
Steam purchased .....	...	—	...	—
2. Small establishments not reporting commodity detail:				
Estimate for fuel and electricity .....	...	348	...	410
3. All establishments:				
Total fuel and electricity used .....	...	2,759	...	2,889
Electricity generated:				
(a) For own use	kwh. 8,582	...	500,000	...
(b) For sale	—	...	—	...

TABLE 7. Materials and Supplies, Sand and Gravel Pits,¹ 1963 and 1964

Basis: Revised Standard Industrial Classification and New Establishment Concept

Description	Cost	
	1963	1964
	\$'000	
Sand, stone or other semi-processed materials purchased and used in plant operations	1,648	1,994
Containers, shipping materials and supplies used	—	6
Operating, maintenance and repair supplies used (excluding fuel)	4,082	4,935
Amount paid out to others for work done on materials owned by establishments	579	843
Totals	6,310	7,778

¹ Refer to Explanatory Notes for explanation of differences in Tables 7 and 8 with data published in earlier years.**TABLE 8. Value of Production, Sand and Gravel Pits, 1963 and 1964**

Basis: Revised Standard Industrial Classification and New Establishment Concept

Description	Value	
	1963	1964
	\$'000	
1. Value of production	34,734	39,600
2. Amount received in payment for work done on materials and products owned by others	494	1,243
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above .....	...	...
Total value of production and work done	35,228	40,843

See footnote Table 7.

TABLE 9. Specified Taxes Paid by Companies Engaged in Sand and Gravel Operations,¹ 1964

Nature of taxes	Thousands of dollars
Dominion income tax, including tax on non-operating revenue	375
Provincial taxes	332
Municipal taxes	206
Total taxes paid	913

¹ Includes related corporate activities associated with operations of sand and gravel pits.**TABLE 10. Miscellaneous Expenditures Made by Companies Engaged in Sand and Gravel Operations,¹ 1964**

	Thousands of dollars
(a) Workmen's compensation	193
(b) Silicosis assessment	—
(c) Unemployment insurance	52
(d) Aggregate cost of structures, roads, machinery, equipment, etc., built by or purchased from outside contractors or suppliers and chargeable to Fixed Assets Account	2,001
(e) Book value of fixed assets (new structures, roads, machinery, equipment, etc., including major repairs and alterations) produced by own employees and chargeable to Fixed Assets Account	48
(f) Other capital expenditures not reported in (d) and (e)	1,049
(g) Cost of materials and supplies used in the production of machinery and equipment and in the construction of roads and new structures (including major repairs and alterations by own employees and chargeable to Fixed Assets Account)	24
(h) Cost of office supplies used during the year, not chargeable to Fixed Assets Account. Excludes cost of stamps and meter expenses	133

¹ Includes related corporate activities associated with Canadian operations of sand and gravel pits not allocable separately elsewhere.

TABLE 11. Producers' Shipments^{1,2} of Sand and Gravel, 1955-64

Year	Tons	Value
		\$
1955	127,524,474	67,775,053
1956	148,801,268	81,957,352
1957	159,829,512	91,939,354
1958	160,210,945	96,282,363
1959	185,123,746	104,651,461
1960	192,074,498	111,163,886
1961	170,750,947	104,654,132
1962	181,245,762	118,603,283
1963	189,570,503	123,854,254
1964	193,791,358	125,232,132

¹ Does not include production of natural silica sand nor of silica sand manufactured from quartz or silica rock; production of these is recorded under quartz.

² The data in above table include sand and gravel recovered by all producers regardless of statistical classification, including operators classified as establishments in the Sand and Gravel Pits industry as well as other operators which have been reclassified to other industries as a result of combinations in accordance with the New Establishment Concept. It might be noted, on this account also, that value figures in above table are higher than value figures shown in Tables 1 to 10. The latter refer only to operators classified as establishments to the Sand and Gravel Pits industry in accordance with the New Standard Industrial Classification. See Explanatory Notes.

TABLE 12. Producers' Shipments of Sand and Gravel, by Uses, 1962-64

	Washed or screened	Bank or pit-run	Total value
	tons		\$
1962			
Production: ^{1,2}			
Sand and gravel:			
Fill	518,607	9,148,046	5,063,505
Backfill for mines	96,513	2,121,864	1,162,401
For roads (roadbed, surface)	2,101,774	103,734,279	60,480,976
Concrete aggregate—Sand	10,213,988	1,143,197	10,538,571
Gravel	5,318,742	1,458,643	7,840,805
Asphalt aggregate—Sand	1,498,212	748,958	1,639,345
Gravel	643,561	754,447	1,182,787
Railroad ballast	395,495	4,483,076	2,201,709
Mortar sand	1,123,324	372,420	1,310,354
Other special uses, silica, moulding, blast, etc.	665,533	690,823	846,136
Crushed gravel:			
Backfill for mines	64,888	36,309	47,435
Roads (roadbed, surface)	5,563,108	18,365,023	16,603,857
Concrete aggregate	3,747,485	1,132,787	5,455,503
Asphalt aggregate	907,975	345,229	1,204,897
Railroad ballast	853,588	1,655,799	1,957,527
Other uses	1,091,040	251,029	1,067,475
Totals	34,803,833	146,441,929	118,603,283
1963			
Production: ^{1,2}			
Sand and gravel:			
Fill	872,079	9,559,724	5,493,734
Backfill for mines	121,443	1,633,766	876,035
For roads (roadbed, surface)	2,264,049	107,365,217	59,235,209
Concrete aggregate—Sand	10,559,016	1,521,923	11,854,017
Gravel	5,965,272	800,736	7,410,537
Asphalt aggregate—Sand	2,169,691	842,045	2,220,319
Gravel	660,326	1,980,514	3,338,537
Railroad ballast	474,476	5,353,865	2,965,073
Mortar sand	1,077,822	405,529	1,214,287
Other special uses, silica, moulding, blast, etc.	439,396	1,127,803	818,819
Crushed gravel:			
Backfill for mines	24,638	78,087	62,439
Roads (roadbed, surface)	6,091,331	16,088,413	17,414,249
Concrete aggregate	3,187,515	1,727,495	4,682,227
Asphalt aggregate	1,177,888	938,876	2,585,290
Railroad ballast	649,418	2,234,913	1,868,912
Other uses	1,699,164	478,073	1,814,570
Totals	37,433,524	152,136,979	123,854,254

See footnotes at end of table.

TABLE 12. Producers' Shipments of Sand and Gravel, by Uses, 1962-64 - Concluded

	Washed or screened	Bank or pit-run	Total value
	tons		\$
1964			
Production: ^{1,2}			
Sand and gravel:			
Fill	1,049,947	11,649,331	6,145,901
Backfill for mines	142,216	970,999	512,612
For roads (roadbed, surface)	33,434,623	64,817,995	52,313,693
Concrete aggregate—Sand	12,307,999	1,034,762	12,066,395
Gravel	5,918,690	1,204,796	6,957,122
Asphalt aggregate—Sand	1,634,049	981,813	1,812,323
Gravel	747,650	2,213,379	3,478,705
Railroad ballast	93,463	5,799,705	2,527,492
Mortar sand	1,088,190	508,297	1,287,984
Other special uses, silica, moulding, blast, etc.	723,944	693,676	1,125,956
Crushed gravel:			
Backfill for mines	—	95,963	50,599
Roads (roadbed, surface)	7,976,204	25,635,311	24,092,967
Concrete aggregate	4,801,356	1,476,213	7,587,276
Asphalt aggregate	1,604,801	1,342,695	2,378,125
Railroad ballast	552,031	1,238,218	1,239,869
Other uses	1,507,172	545,870	1,655,113
Totals	73,582,335	120,209,023	125,232,132

¹ Does not include production of natural silica sand nor of silica sand manufactured from quartz or silica rock; production of these is recorded under quartz in the bulletin "The Feldspar and Quartz Mining Industry".

² See footnote² Table 11.

³ Moulding sand and core sand production is now recorded under quartz.

TABLE 13. Producers' Shipments¹ of Sand and Gravel, by Provinces, 1962-64

Province	1962	1963	1964
Newfoundland	4,250,942	4,640,993	4,657,737
\$	3,504,594	4,276,626	3,501,694
Prince Edward Island	531,196	629,475	608,923
\$	452,906	573,345	481,283
Nova Scotia	4,375,842	6,633,581	6,562,341
\$	2,738,424	4,086,794	4,244,659
New Brunswick	5,128,365	4,417,611	4,699,626
\$	2,790,933	2,720,159	2,640,549
Quebec	44,000,000	42,375,911	44,500,000
\$	23,000,000	20,186,642	21,360,000
Ontario	76,600,813	80,259,750	76,917,396
\$	52,365,204	56,338,204	54,589,444
Manitoba	9,692,025	9,653,471	9,871,883
\$	6,770,210	6,947,039	7,311,781
Saskatchewan	5,317,336	7,368,017	9,266,648
\$	3,344,568	3,980,098	5,885,697
Alberta	13,469,848	16,139,744	16,777,687
\$	12,644,098	14,894,547	13,302,424
British Columbia	17,879,395	17,451,950	19,929,117
\$	10,992,346	9,850,800	11,914,601
Canada	181,245,762	189,570,503	193,791,358
\$	118,603,283	123,854,254	125,232,132

¹ See footnote² Table 11.

TABLE 14. Producers' Shipments¹ of Sand and Gravel, by Provinces, showing Purposes for which Used, 1964

	New-found-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	tons					
For use as follows:						
Sand and gravel:						
Fill	ton \$ 84,172	—	90,632	65,686	4,461,079	5,712,029
Backfill for mines	ton \$ 60,276	—	58,547	40,746	1,137,593	3,231,733
For roads (roadbed, surface)	ton \$ 142,216	—	—	3,240	52,506	899,023
Concrete aggregate—Sand	ton \$ 71,108	—	—	1,200	15,747	412,186
Gravel	ton \$ 3,345,964	405,000	5,396,481	4,042,491	18,563,126	37,469,885
Asphalt aggregate—Sand	ton \$ 2,448,834	150,000	3,076,247	2,020,861	6,554,349	23,794,477
Gravel	ton \$ 77,598	9,856	103,925	94,995	3,504,598	6,286,958
Railroad ballast	ton \$ 95,593	20,852	105,514	131,391	2,191,621	5,883,953
Mortar sand	ton \$ 75,359	10,125	121,260	95,016	347,293	4,392,829
Other special uses	ton \$ 98,020	22,000	125,360	97,774	113,868	4,163,874
Crushed gravel:						
Backfill for mines	ton \$ —	—	—	—	34,264	61,699
Roads (roadbed, surface)	ton \$ 56,363	—	378,672	36,170	13,627,430	10,705,397
Concrete aggregate	ton \$ 26,027	—	377,270	18,805	9,119,965	7,331,664
Asphalt aggregate	ton \$ 8,323	83,120	145,271	126,294	341,676	3,000,525
Railroad ballast	ton \$ 22,194	138,860	182,312	150,105	298,479	3,021,081
Other uses	ton \$ 1,200	81,248	29,870	30,000	377,184	1,334,490
Totals	ton \$ 4,657,737	608,923	6,562,341	4,699,626	44,500,000	76,917,396
	\$ 3,501,694	481,283	4,244,659	2,640,549	21,360,000	54,589,444
	Manitoba	Saskatchewan	Alberta	British Columbia	Canada	
	tons					
For use as follows:						
Sand and gravel:						
Fill	ton \$ 267,819	178,351	724,518	1,114,992	12,699,278	
Backfill for mines	ton \$ 217,079	165,879	398,100	835,948	6,145,901	
For roads (roadbed, surface)	ton \$ —	16,230	—	—	1,113,215	
Concrete aggregate—Sand	ton \$ —	12,371	—	—	512,612	
Gravel	ton \$ 5,301,685	5,571,206	6,520,157	11,636,623	98,252,618	
Asphalt aggregate—Sand	ton \$ 2,776,344	2,626,004	4,250,680	4,615,897	52,313,693	
Gravel	ton \$ 677,484	84,565	1,006,559	1,496,223	13,342,761	
Railroad ballast	ton \$ 781,968	112,242	1,377,875	1,365,386	12,066,395	
Mortar sand	ton \$ 553,559	96,887	442,283	988,875	7,123,486	
Other special uses	ton \$ 763,157	139,352	457,053	976,664	6,957,122	
Crushed gravel:						
Backfill for mines	ton \$ 79,654	—	293,736	31,952	2,615,862	
Roads (roadbed, surface)	ton \$ 96,642	—	342,578	25,168	1,812,323	
Concrete aggregate	ton \$ 33,302	2,767	108,576	360,096	2,961,029	
Asphalt aggregate	ton \$ 37,023	3,378	63,146	628,390	3,478,705	
Railroad ballast	ton \$ 742,621	1,363,116	587,492	539,309	5,893,168	
Mortar sand	ton \$ 299,030	512,016	238,565	204,129	2,527,492	
Other special uses	ton \$ 112,670	19,656	32,413	50,955	1,596,487	
Totals	ton \$ 100,628	19,683	65,280	46,858	1,287,984	
	\$ 150,804	162	4,177	356,176	1,417,620	
	\$ 301,015	60	6,241	283,168	1,125,956	
	Manitoba	Saskatchewan	Alberta	British Columbia	Canada	
	tons					
For use as follows:						
Sand and gravel:						
Fill	ton \$ —	—	—	—	—	95,963
Backfill for mines	ton \$ —	—	—	—	—	50,599
For roads (roadbed, surface)	ton \$ 873,574	1,367,953	4,338,569	2,227,387	33,611,515	
Concrete aggregate	ton \$ 798,412	1,511,497	3,078,287	1,831,040	24,092,967	
Gravel	ton \$ 597,511	238,027	1,421,504	315,318	6,277,569	
Asphalt aggregate	ton \$ 572,375	501,657	2,267,481	432,732	7,587,276	
Railroad ballast	ton \$ 287,129	52,473	211,756	542,146	2,947,496	
Mortar sand	ton \$ 315,028	76,133	220,364	416,320	2,378,125	
Other special uses	ton \$ —	270,162	721,575	110,143	1,790,249	
Totals	ton \$ 194,071	200,090	292,000	84,721	1,239,869	
	\$ 253,080	5,093	364,372	158,922	2,053,042	
	\$ 7,311,781	5,885,697	13,302,424	11,914,601	125,232,132	

¹ See footnote ² Table 11.

TABLE 15. Imports and Exports of Sand and Gravel, 1955 - 64

Year	Imports		Exports	
	Tons	Value	Tons	Value
		\$		\$
1955	259,408	274,820	336,304	383,445
1956	318,910	369,624	419,616	425,866
1957	262,545	349,547	321,076	391,982
1958	233,518	246,653	353,155	408,648
1959	1,096,623	571,109	485,900	537,117
1960	885,604	444,292	418,345	540,415
1961	537,972	495,609	389,495	510,922
1962	838,894	556,873	354,107	447,808
1963	561,965	540,841	356,124	454,205
1964	593,455	741,466	461,464	604,080

TABLE 16. Production¹ of Washed or Screened and Pit-run Grades, by Provinces, 1964

Province	Washed or screened	Bank or pit-run	Total	Value
				\$
		tons		\$
Newfoundland	449,900	4,207,837	4,657,737	3,501,694
Prince Edward Island	93,123	515,800	608,923	481,283
Nova Scotia	749,142	5,813,199	6,562,341	4,244,659
New Brunswick	325,487	4,374,139	4,699,626	2,640,549
Quebec	5,134,654	39,365,346	44,500,000	21,360,000
Ontario	52,584,720	24,332,676	76,917,396	54,589,444
Manitoba	2,844,765	7,027,118	9,871,883	7,311,781
Saskatchewan	1,675,697	7,590,951	9,266,648	5,885,697
Alberta	4,626,123	12,151,564	16,777,687	13,302,424
British Columbia	5,098,724	14,830,393	19,929,117	11,914,601
Totals	73,582,335	120,209,023	193,791,358	125,232,132

¹ See footnote² Table 11.

List of Establishments classified to this Industry, 1964

Note: 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.

(w) Markets washed or screened material

Name of Firm	Head office address	Location
Newfoundland:		
Coastal Sand & Gravel Ltd. (w)	Box 427, St. John's	Seal Cove
Dwyer, James & Son	Harbour Grace	Springfield
Prince Edward Island:		
Schurman, M.F. Co. Ltd. (w)	Summerside	Brooklyn
Wakelin, Everett	Charlottetown	Belle River
Nova Scotia:		
Atlantic Sand & Gravel Ltd. (w)	212 Halifax St., Moncton, New Brunswick	Lower Sackville
Lakeside Sand & Gravel Co. Ltd.	Dartmouth	Cook's Brook
MacDonald Sand & Gravel	East Lawrencetown	East Lawrencetown
Maritime Sand & Gravel (1963) Co. Ltd.	57 Queen St., Dartmouth	Halifax Co.
Noonan Sand and Gravel (w)	126 Roy Bldg., Halifax	Various
Nova Scotia Sand and Gravel Ltd. (w)	1541 Barrington St., Halifax	Sandy Desert
Twin City Sand & Gravel Ltd. (w)	Box 821, Halifax	Gaetz River and Cole Harbour
New Brunswick:		
Kent, W.J. & Co. Ltd.	150 Main St., Bathurst	Bathurst
McNulty Cartage Ltd. (w)	Lancaster	Lancaster

List of Establishments classified to this Industry, 1964 - Continued

Name of firm	Head office address	Location
Quebec:		
Aubé, A.	La Sarre	La Sarre
Beaupont Ltée	Ste. Agathe des Monts	Canton Doncaster
Belzile, Pierre	Trois Pistoles	Trois Pistoles
Blanchard, O.	St. Dominique de Bagot	St. Dominique de Bagot
Burelle, Y.	Granby	Granby
Calumet Sand Inc.	Pointe Calumet	Pointe Calumet
Chabot, B. (w)	St. Jean Baptiste	St. Jean Baptiste
Charbonneau, T. & V.	Piedmont	Piedmont
Chatenuguay Sand Inc. (w)	Box 337, St. Jean	St. Philomène
Chevrier, E.	St. Lazare	St. Lazare
Cie A. Lagace Ltée., La.	Beauport	Laval and Ste. Thérèse
Cie de Sable Ltée., La (w)	Villeneuve	Villeneuve
Cie de Sable & Gravier de St. André (w)	St. André Est	St. André Est
Cie de Sable & Gravier St. Paul Ltée	St. Paul d'Abbotsford	St. Paul d'Abbotsford
Compagnie de Construction des Blvds. du Québec	Ste. Foye	Ste. Foye
David, Jean	Trois-Pistoles	Trois-Pistoles
Debien, Jean	Rivière Gagnon	Rivière Gagnon
De Min Inc. (w)	3350 Blvd. Laurier, Lafèche	Lafèche
Desmarais, Paul	Notre Dame de Lourdes	Notre Dame de Lourdes
Domtar Chemicals Ltd. (Lime Division)	1155 Dorchester Blvd. W., Montreal	St. Emelie
Dubois & Fils Ltée (w)	Terrebonne	Terrebonne
Entreprises P.E. B Ltée	Lac St. Charles	Lac St. Charles
Filion & Frères Inc.	St. Jérôme	Terrebonne
Fortin, D. Ltd. (w)	Rouyn	Rouyn
Frontier Enterprises Ltd.	Lacolle	Lacolle
Gravel & Audet (w)	St. Hilarion	St. Hilarion, St. Urbain
Gravier Concasse Warwick Ltée	Warwick	Arthabaska, Richmond, Wolfe, Shefford
Gravier St. Raphael Inc. (w)	L'Islet	St. Raphael
Grenon, R.	St. Valentin	St. Valentin
Hains, A. Limitée (w)	837, ave. Royale, Beauport	St. Thérèse de Lisieux
Hull Sand Reg'd	62, rue Laval, Hull	Hull
Intercomtes Construction Ltée	West Shefford	West Shefford
Lacharité, A. (w)	L'Avenir	L'Avenir
Lauzon, A.	Les Cedres	Les Cedres
Lavoie, J.H. (w)	Notre Dame d'Hébertville	Lac St. Jean
Lemaire, E.	118, aves des Pins, Drummondville	Drummondville
Marchabée, M.	St. Crysostome	St. Crysostome
Metalium, Stanley	Sandy Beach, Gaspé	Sandy Beach
Milano & Fils Inc.	Grand' Mère	Grand' Mère
Pax Construction Inc.	St. Raymond	Various
Pine Beach Sand Limited (w)	St. Joseph du Lac	St. Joseph du Lac
Possierau Sable & Gravier Cie Ltée (w)	9885, rue St. Urban, Montreal	Pointe Calumet
S. Biluire, N. Inc.	St. Romuald	St. Romuald
Sables du Nord Ltée	117, rue Dupuis, Mascouche	Mascouche
Sables Classifiés de Hull Inc.	8, rue Kent, Hull	Hull
Sables Lavis Hébert Inc. (w)	Ste. Marie Salomé	St. Marie Salomé
Sables des Mille Îles, Ltée, Les (w)	12, rue Chapleau, Montreal	Various
Sablère St. Felix Energ. (w)	St. Felix de Valois	St. Felix de Valois
Simard, D. (w)	Notre Dame d'Hébertville	Notre Dame d'Hébertville
Thouin, J.	Mascouche	Lachenaie
Val Morama Development	Val Morin	Val Morin
Ontario:		
Aberfoyle Sand & Gravel Ltd. (w)	1771 Eagle St. N., Preston	Hespeler
Adams Sand & Gravel Ltd. (w)	Chatham	Harwich Twp.
Axford, K.R. (w)	35 Elm St., St. Thomas	St. Thomas
Bannerman, H.H. (w)	R.R. 4 Kincardine	Various
Barnes Gravel Supply	Sarnia	Plymouth Twp.
Barriault, Charles (w)	50 Egerton Ave., Kapuskasing	Teetzel Twp.
Bartlett, A.G. (w)	R.R. 5 Napanee	Richmond Twp.
Bell, W.J. & Son Construction Co. Ltd.	Stittsville	Stittsville
Blake, John, Sand & Gravel Ltd. (w)	West Hill	West Hill
Bolton Sand and Gravel Ltd. (w)	2949 Bathurst St., Toronto 19	Mono Mills
Braas Bros. (w)	R.R. 1, Niagara Falls	Stamford Twp.
Caledon Sand & Gravel Ltd. (w)	3185 A Bathurst St., Toronto 19	Caledon
Campbellville Gravel Supply Ltd. (w)	Campbellville	Nassagaweya Twp.
Carpenter Sand & Gravel	R.R. 5, London	Fanshawe
Charlebois, A. (w)	Pingtang	Penetang
Chatham Sand & Gravel Co. (w)	199 Stanley Ave. Chatham	Thames River
Chefero, J., Sand & Gravel Ltd. (w)	506 Westmount Ave., Toronto	Maple
City Sand & Gravel Ltd. (w)	180 Shriff St., North Bay	Widdifield Twp., South Elmsley Twp.
Clark, Arnold J.	Smiths Falls	Oxford Co.
Clark, R.S. & Son Ltd. (w)	Ingersoll	Lanark Twp.
Closs, R.S.	Perth	Orangeville
Collingwood Sand, Gravel & Construction Ltd.	Collingwood	Various
Connor Transport Limited	Maple	Various
Consolidated Sand & Gravel Limited (w)	48 St. Clair Ave. W., Toronto 7	Paris, West Paris, Malton and Locust Hill
Cooper, Alf., & Company Ltd. (w)	212 May St. N., Fort William	Paipoung Twp.
Corbett, John N. Gravel Supply	Mount Elgin	Mount Elgin
Cornwall Gravel Co. Ltd. (w)	Cornwall	Cornwall Twp.
D.C.B. Gravel Co. Ltd. (w)	Palermo	Nelson Twp.
Duff, J.C. Limited	Rexdale	York Co.
Duff Sand and Gravel	R.R. 2, Orillia	Orillia
Dumas, J. & B. Sand & Gravel	Orillia	Orillia
Dumas Sand & Gravel Ltd. (w)	Kingsville	Point Pelee, Kingsville and Lake Eire
Dunson, D.	R.R. 1, Brockville	Various
Dunlop W. & Sons	Bracebridge	Bracebridge
Dunlop Company of Canada Ltd. (w)	Box 160, Long Branch, Toronto 14	Brantford Twp.
Dunhill Sand & Gravel Limited (w)	Box 596, Fonthill	Pelham Twp.
Durbin Sand and Gravel (w)	Mountain	Mountain Twp.
Durwell Ltd. (w)	Box 1146 Kitchener	Breslau

List of Establishments classified to this Industry, 1964 - Continued

Name of firm	Head office address	Location
Ontario - Concluded:		
Foster, R.R. & Sons Ltd.	86 Spadina Ave., Ottawa	Ottawa
Gateway Gravel Ltd.	539 Cassels St., North Bay	Widdifield Twp.
General Aggregates Ltd. (w)	Oshawa	Oshawa
Goodreau, John (w)	Northwood	Harwich Twp.
Gormley Sand & Gravel Ltd. (w)	Stouffville	Whitchurch Twp.
Griffin, Frank Haulage (w)	Barrie	Vespra Twp.
Guelph Sand & Gravel Limited	48 St. Clair Ave. W., Toronto 7	Freelton and Guelph
Hancock Sand & Gravel Ltd. (w)	Sunderland	Brock Twp.
Hayward & Picket Ltd. (w)	Milton	Burlington
Highland Creek Sand & Gravel Ltd. (w)	Box 130, West Hill	Scarborough
Hoffer, E.S. & Sons (w)	Elmira	Woolwich Twp.
Holden Sand & Gravel Ltd. (w)	135 St. Clair Ave. W., Toronto 2	Niagara River and Hamilton
Hulman Construction Ltd.	Rockwood	Rockwood
Innisfil Gravel Supplies (w)	Barrie	Innisfil
Kam Aggregates Ltd. (w)	R.R. 1, Kaministiquia	Ware Twp.
Kingston Sand & Gravel Ltd. (w)	235 Wellington St., Kingston	Glenburnie
Laing, G. (w)	St. Mary's	Downie Twp.
Lake Erie Sand & Gravel Co. (w)	R.R. 3, Merlin	Tilbury, E. Twp.
Laprairie, M.	317 Spruce St. N., Timmins	Deloro Twp.
Lee Sand & Gravel Ltd. (w)	Rexdale	Stouffville
Lempiala Sand & Gravel (w)	40 Leys St., Port Arthur	Gorham Twp.
Markham Sand & Gravel Ltd. (w)	Markham	Markham
Marshall, J.F., & Sons Ltd. (w)	R.R. 5, London	Middlesex Co.
Martini Sand & Gravel Ltd. (w)	226 Dover St., South Preston	Waterloo Twp.
Massecar and Eckford	Courtland	Norfolk Co.
Maurer & Klages (w)	Hanover	Bentlck Twp.
McClellan's Sand & Gravel Ltd.	R.R. 2, Killworthy	Morrison Twp.
McColgan Sand & Gravel Ltd. (w)	R.R. 5, Barrie	Barrie
McLaws Gravel & Crushing Ltd.	R.R. 5, St. Thomas	St. Thomas
McRae, Cecil Limited (w)	Box 23, London	Westminster Twp.
Metzger, George & Son (w)	Heidelberg	Wellesley Twp.
Monarch Sand and Gravel Co. (w)	Rexdale	Vaughan Twp.
Moyer Sand & Gravel Ltd. (w)	20 Queen St., St. Catharines	Pelham Twp.
Nash, J.R., & Son (w)	R.R. 2, Northwood	Harwich Twp.
National Sand & Material Co. Ltd. (w)	48 St. Clair Ave. W., Toronto 7	Various
Northern Sand and Gravel Co. Ltd.	177 Eyre St., Sudbury	Sudbury
Oxford Sand & Gravel Limited (w)	R.R. 4, Woodstock	Oxford Twp.
Pagnutti Bros. Sand & Gravel Ltd. (w)	359 Sandra Blvd., Sudbury	Dill Twp.
Parton, A.	158 William St., Parry Sound	Parry Sound
Patterson Bros.	Grand Bend	Bosanquet Twp.
Peel Sand & Gravel Ltd.	Cooksville	Brampton
Pilon, B.	Elmvale	Flos Twp.
Pinewood Aggregates Ltd. (w)	Maple	Maple
Porcupine Equipment Ltd.	Porcupine	Murphy Twp.
Preston Sand & Gravel Co. Ltd. (w)	Preston	Preston
Regal Washed Sand & Stone Ltd. (w)	Box 181, Peterborough	Douro Twp.
Regan, John B. Co. Ltd.	West Hill	Scarborough Twp.
Ridley Construction Co. Ltd.	934 Commission St., London	Westminster Twp.
Robertson Sand & Gravel Ltd. (w)	Waterford	Townsend Twp.
Roberts, Frank H. & Sons (w)	Unionville	Whitchurch Twp.
Sabiston, James Limited (w)	Unionville	Markham Twp.
Salisbury Sand and Gravel Co.	R.R. 1, Brampton	Chinguacousy Twp.
Schneider Sand and Gravel	63 West Ave., Kitchener	Petersburg
Seduletz, N.	Kenora	Kenora
Sheiton, R.A. & Sons (w)	R.R. 5, Ingersoll	Dereham Twp.
Smith, W.D. & Son Ltd.	305 Admiral Rd., Oshawa	Pickering and Whitby Twps.
South Mountain Construction Co. Ltd. (w)	South Mountain	South Mountain
Spinks Gravel Ltd. (w)	Leamington	Gosfield S. Twp.
Spratt Sand & Gravel Ltd. (w)	R.R. 4, Ottawa	Gloucester, Huntley Twps.
Springbank Sand & Gravel Ltd. (w)	Port Credit	Various
Stouffville Sand & Gravel Ltd. (w)	Stouffville	Uxbridge Twp.
Sunderland Sand & Gravel Ltd. (w)	Sunderland	Sunderland
Superior Sand, Gravel & Supplies Ltd. (w)	347 Bay St., Toronto	Vaughan Twp.
Sutherland, Wm. J.	Bond Head	Tecumseh Twp.
Sweet's Sand & Stone Ltd. (w)	Seeley's Bay	Seeley's Bay
Telephone City Gravel Co. Ltd. (w)	Brantford	Brantford
Totten, Lorne & Co.	173 Bank St., Renfrew	Renfrew
Trent Valley Sand & Stone Ltd. (w)	Brighton	Brighton
Turnbull, L. & Son Ltd.	Grand Bend	Bosanquet Twp.
Uxbridge Sand & Gravel Ltd.	9137 Yonge St., Thornhill	Goodwood and Whitchurch Twps.
Varcoe Bros. Ltd. (w)	Barrie	Vespra District
Ward Bros.	Box 104, Wawa	Algoma District
Warren Paving Co. Ltd.	Downsview	Waterloo Twp.
West C.	1438 London Rd., Sarnia	Sarnia Twp.
Whites' Gravel Supply	R.R. 2, Stouffville	Aurora
Woollatt Industries Ltd. (w)	2999 Grand Marais Rd., Windsor	Leamington
Manitoba:		
Atchison, Henry	Pipestone	Pipestone
Bradley Sand & Gravel Ltd.	861-24th St., Brandon	Various
Fraser Sand & Gravel Co. Ltd. (w)	850 Somerset Bldg., Winnipeg	Birds' Hill
Gagne Gravel Co. Ltd.	St. Pierre	St. Pierre
Kissick, G.D.	Box 280, Miami	Miami
Lowes Bros.	MaAuley	McAuley
Main Construction Ltd. (w)	Box 598, Carman	Carman
Northwest Gravel Supply Co. Ltd. (w)	600 Panet Rd., St. Boniface	Various
Schettler, Emil (w)	Plumas	Arden Ridge, Kimesota, Tenby Ridge
Sutherland Cartage (w)	108-191 Lombard St., Winnipeg	St. Boniface
Tullman Gravel & Sand Supply Ltd. (w)	205 Stadacona St., Winnipeg	Transcona
Tordon Enterprises Ltd.	Dauphin	Dauphin
Wray Bros. (w)	Cartwright	Cartwright

List of Establishments classified to this Industry, 1964 - Continued

Name of firm	Head office address	Location
Saskatchewan:		
Bonn, W. Ltd. (w)	135-14th St. W., Prince Albert	Nisbet Forest Reserve
Hahn, H.G. Sand & Gravel Ltd. (w)	Belle Plaine	Belle Plaine
Lavigne Sand & Gravel	Rosetown	Rosetown
Nagels' Transfer	Leader	Leader
Pilot Butte Sand & Gravel Co. Ltd. (w)	Pilot Butte	Pilot Butte
Saskatoon Sand & Gravel Ltd. (w)	Sutherland PO., Saskatoon	Sutherland
Simmons, R. & Son (w)	Unity	Unity
Alberta:		
A-1 Sand Co. (w)	2431-6th Ave. N.W., Calgary	Calgary
Alpine Sand & Gravel Ltd. (w)	Box 5086, Postal Station E, Edmonton	Edmonton
Apex Gravel Ltd.	11239-83rd St., Edmonton	Sturgeon River and Strathcona
Burns J.F. Sand & Gravel Ltd. (w)	812-4th Ave. S.E., Calgary	Calgary
Dales Bros. Ltd. (w)	9935-170th St., Edmonton	Edmonton
Flshburne, Morgan Ltd. (w)	Peace River	Peace River
Gallelli Sand & Gravel Co. Ltd. (w)	703-48th Ave. N.E., Calgary	Calgary
Jarvie, J.A. Sand & Gravel (w)	Box 667, Lethbridge	Lethbridge
Stewart, Gordon L.	Box 62, Grande Prairie	Grande Prairie
Tollestrup Sand & Gravel Co. (w)	Box 474, Lethbridge	Lethbridge
Twin Bridges Sand & Gravel Ltd. (w)	Box 10, Edmonton	Edmonton, Clover Bar & Kinsella
Underwood Sand & Gravel Ltd. (w)	Edmonton	Edmonton
Yardley's Sand & Gravel (w)	5302-3rd St. S.E., Calgary	De-Winton
British Columbia:		
Abbotsford Gravel Sales Ltd. (w)	Box 1270, Abbotsford	Abbotsford
B. & B. Gravel Ltd.	Cloverdale	Langley
Butler Bros. Supplies Ltd. (w)	Box 936, Victoria	Royal Oak
Construction Aggregates Ltd. (w)	New Westminster	Britannia Beach
Highland Creek Sand & Gravel Co. Ltd.	Langley	Langley
Linton's Construction Co. Ltd. (w)	North Surrey	North Surrey
McIntosh Sand & Gravel Co. (w)	10412 Industrial Ave., Whonnock	Albion
Ocean Cement Ltd. (w)	Box 1270, Victoria	Cassidy
Ocean Cement Ltd. (w)	North foot of Columbia St., Vancouver	Maryhill and Port Coquitlam
Ocean Cement Ltd. (w)	Box 1270, Victoria	Royal Bay
Pete's Transfer	Powell River	Powell River
Premier Sand & Gravel Co. Ltd. (w)	Nelson	Nelson
Routledge Gravel Ltd. (w)	North Vancouver	Furry Creek
Salvador, Louis & Son	Box 583, Creston	Creston
Stamblay Sand & Gravel Co. Ltd. (w)	Dawson Creek	Dawson Creek
Valley Rite-Mix Ltd. (w)	Clearbrook	Clearbrook

SUPPLEMENT

The following establishments classified to other industries e.g. smelting and refining recover the commodities indicated and are included for information purposes to support the statistical material relevant to these commodities which is presented in this report.

Newfoundland:

American Smelting and Refining Company, Buchans Units (w)	Buchans	Buchans
Anglo American Development Co. Ltd. (w)	Grand Falls	Bolwood
Lincoln Construction Limited (w)	Box 428, Grand Falls	Windsor
Lundrigan's Concrete Ltd. (w)	Corner Brook	Corner Brook
Newfoundland Department of Highways	St. John's	Various
Quarry Material Company (w)	Gander	Gander
Royle Excavating Co. Ltd. (w)	Fort Pepperrell	St. John's East
Small, Oliver (w)	Lewisporte	Brown's Arm
Springdale, Town of	Springdale	Springdale
Tulk, S.	Gander	Gander

Prince Edward Island:

Hayes Paving Co. Ltd.	Summerside	Summerside
Island Construction Ltd.	Charlottetown	Iona
Larter Bros. Cement Block Co.	Charlottetown	Charlottetown
Matheson & MacMillan Ltd. (w)	Charlottetown	Kilmuir
Morrison & McRae Ltd. (w)	Summerside	Summerside
Prince Edward Island Department of Highways	Charlottetown	Various
Ramsay Washed Gravel Ltd. (w)	Summerside	Prince Co.
Wakelin, Everett	Charlottetown	Wood Islands

Nova Scotia:

Acadia Construction Co. Ltd. (w)	Box 39, Bridgewater	Bridgewater
Contad Bros. Ltd.	Dartmouth	Dartmouth
Nova Scotia Department of Highways	Halifax	Various

New Brunswick:

Bell, Charles A. (w)	Box 196, Milltown	Milltown
Berubé, J.	St. Jacques	St. Jacques
Devlin, G.	R.R. 3, St. Stephen	Charlotte Co.
Dexter Construction Co. Ltd.	Lancaster	Lancaster
Hanson, Harold L. Ltd.	485 Canada St., Marysville	Marysville
Jackson, I.L. & Son Construction Co. Ltd.	7 Albert St., St. Stephen	St. Stephen

List of Establishments classified to this Industry, 1964 - Continued

Name of firm	Head office address	Location
SUPPLEMENT - Continued		
New Brunswick - Concluded:		
Kenny, B.	Bathurst	Bathurst
Melanson, E.	Bathurst	South Bathurst
Moncton Crushed Stone Co. Ltd. (w)	Moncton	Stilesville
Murphy, E.	Red Bank	Red Bank
New Brunswick Department of Highways	Fredericton	Various
North Shore Construction Ltd. (w)	Newcastle	Northumberland Co.
Saint John, City of	74 Carmarthen St., Saint John	Little River and Silver Falls
Scott Concrete Works Ltd. (w)	90 Greenwood Drive, Barker's Point	Various
Stephen Construction Co. Ltd. (w)	Box 1345, Saint John	Lancaster
Sullivan, W.D.	Sussex Corner	Sussex Corner
Wallace, J.	Saint John	Saint John
Quebec:		
Aggregat St. Georges Ltée	Box 5400, St. George Est	St. Georges Est.
Asbestos Corporation Ltd.	Thetford Mines	Thetford Mines
Baillargeon, Philippe (w)	Iberville	Various
Barnat Mines Ltd.	Norrie	Malartic
Belzile, Pierre	Trois Pistoles	Trois Pistoles
Bourassa, A. Inc.	Trois-Rivières	St. Maurice
Brique du Nord Limitée, La (w)	Rouyn	Rouyn
Canadian Johns-Manville Co. Ltd.	310 Victoria Ave., Montreal	Shipton
Carrière Edouard Goyer (w)	St. Bruno	St. Hilaire
Carrière Vaillancourt Quarry (w)	Danville	Shipton Twp.
Casabon, Napoléon (w)	St. Édouard	St. Ursule
Chabot, A.	St. Veronique	St. Veronique
Chabot, L.	Cowansville	Cowansville
Cie Equipment & Con. de Rimouski Ltée	523 Blvd. Jessop, Rimouski	Rimouski
Coaticook, Ville de	Coaticook	Coaticook
Cole, Robert	Mansonville	Mansonville
Constructions Frontières Ltée. (Les)	Frelighsburg	Frelighsburg
Couture Cement Blocks Eng.	West Brome	West Brome
Dubé, A. Excavation Inc.	St. Adèle-en-bas	St. Adèle-en-bas
Dubois, P.	Terrebonne	Terrebonne
Durocher, O.	R.R. 2, Richmond	Richmond
East Malartic Mines Ltd.	112 King St. W., Toronto, Ontario	Malartic
Ferland, C.	South Durham	South Durham
Fréchette, T. (w)	L'Avenir	L'Avenir
Gagnon, J.J.	St. Prime	St. Prime
Grenon & Frères Ltée. (w)	Bagotville	Bagotville
Hydro Québec	75 ouest Blvd. Dorchester, Montreal	Various
Laberge & Frères Ltée	St. Martine	Chateauguay Cte.
Lamaque Mining Co. Ltd.	Bourlamaque	Bourlamaque
Manitou Barvue, Mines Ltd.	25 Adelaide St. W., Toronto, Ontario	Bourlamaque Twp.
Manson, T.	Bolton Centre	East Bolton
Miquelon & Simard	Frelighsburg	Frelighsburg
Modern Paving & Construction Ltd.	Bon Conseil	St. Clothilde and St. Lambert
Montmagny Ready Mix Inc. (w)	Montmagny	St. Raphael
Nolet, R.	Sherbrooke	Sherbrooke
Normand & Fils Inc.	488 Ave. Quebec, Sept-Îles	Sept-Îles
Opemiska Copper Mines (Quebec) Ltd.	205 - 1026 St. Jean St. Quebec	Levy Twp.
Ouellet, Lucien	St.-Foy	St.-Foy
Pavages Laurentiens (Les) Inc. (w)	Rimouski	Rimouski
Pelletier & Fils Eng.	St. Pacome	St. Pacome
Pic Construction Co. Ltée	Arvida	Arvida
Pilote, A.	St. Nazaire	St. Nazaire
Plante, A.	St. Lambert	St. Lambert
Pomerleau, L.	Bishopton	Bishopton
Provost, A.	St. Donat	St. Donat
Regional Asphalte Ltée (w)	135 Blvd. Normand, Trois-Rivières	St. Etienne
Rimouski, Ville de	Rimouski	Rimouski
Sablère Richelieu Eng.	Tracy	Tracy
Simard, D.	Notre Dame d'Hébertville	Notre Dame d'Hébertville
Théberge, J.K. Ltée	596, rue Price, ouest, Chicoutimi	Chicoutimi
Thiboutet, J.C.	La Pocatière	La Pocatière
Tremblay, Jean Joseph	1459 rue Vimy, Chicoutimi	Chicoutimi
Union des Carrières & Pavages Ltd. (w)	496-2nd Ave., Quebec	Lac St. Charles
Ontario:		
Andrews, Irvine A.	St. David's	Stamford Twp.
Angelstone Ltd.	Preston	Waterloo Twp.
Armstrong Bros. Co. Ltd.	Brampton	Chinguacousy and Caledon Twp.
Armstrong L.R.	Leonard	Cumberland
Barclay Transport Ltd.	Claremont	Pickering Twp.
Barnes, Wm. H.	R.R. 2, Parkhill	Parkhill
Baxter, R.	R.R. 4, Tottenham	Tottenham
Bayne, Jack (w)	London	London
Bellyou, N.E., Estate	Trenton	Murray
Billie Construction Co. Ltd.	Smith's Falls	Gloucester and Nepean Twps.
Black, R.H.	Stroud	Innisfil Twp.
Blacktop Paving Co. Ltd. (The)	Box 282, Bridgeport	Bridgeport
Blair Sand & Gravel Products Co. Ltd. (w)	R.R. 2, Galt	Galt
Blair, M. (w)	Arnprior	Fitzroy Twp.
Boothby, Donald	Port Cunnington	Franklin
Brantford, City (w)	Brantford	Brantford Twp.
Brett's Warehouse (w)	Kenora	Kenora
Brown, A.E. Sand and Gravel	R.R. 4, Brantford	Brantford
Browning, M.	Churchill	Churchill
Bruce Brick & Tile Company	11 Adelaide St. W., Toronto	Culross Twp.
Burnett B.W. (w)	Courtland	Windham
Burnside, C.	1009 Wellington St., Ottawa	Various

List of Establishments classified to this Industry, 1964 - Continued

Name of firm	Head office address	Location
SUPPLEMENT - Continued		
Ontario - Continued:		
Cadwell Marine Ltd. (w)	602 Erie Ave., Niagara Falls	Lake Ontario and Niagara River
Campbell, M.	Orillia	Carden Twp.
Campbell, Max	Ilderton	Lobo Twp.
Cann, Wm.	R.R. 1, Hensall	Usborne Twp.
Cardinal Construction Ltd. (w)	Box 243, Cardinal	Cardinal
Caston's, Ted Trucking	Wyevale	Tiny Twp.
Cleveland, Roy Sand & Gravel	Cedar Springs	Raleigh Twp.
Closs, O.	Lanark	Lanark
Conway, Robert A.	Embro	West Zorra Twp.
Cook, Allan G. Ltd. (w)	303 Dunlop St. W., Barrie	Various
Cooke, J. (Concrete Blocks) Ltd. (w)	Box 500, Burlington	Burlington and W. Flamboro Twps.
Cookson Construction Ltd. (w)	R.R. 3, Simcoe	Woodhouse Twp.
Cox Construction Ltd. (w)	Box 413, Guelph	Various
Coyle, Frank S. Limited (w)	Lakefield	Smith Twp.
Davey Gravel Co. (w)	R.R. 2, Orillia	Orillia
Dennis, C.	Monkton	Grey Twp.
Department of Lands and Forests	Parry Sound	Various
Devillers, Paul W.	1249 Fisher St., North Bay	North Bay
Dewar, P.M.	Box 368, Ingersoll	Ingersoll
Libblee Construction Co. Ltd.	384 Bank St., Ottawa	Ottawa area
Dinnick, G.	Orangeville	Orangeville
Dinsmore Construction Ltd.	2525 McDougall St., Windsor	Various
Doey Gravel & Construction Ltd.	Cedar Springs	Norwich Twp.
Dome Mines Ltd.	South Porcupine	South Porcupine
Dunegan, H.F.	Main St. W., Listowel	Listowel
Dorlon-Anderson Asphalt Ltd.	Box 164, Midland	Midland
Doughty, T.F. Ltd. (w)	Peterborough	Smith Twp.
Dufferin Sand & Gravel (w)	Maple	Mulmur Twp.
Durham Stone & Paving Ltd. (w)	Durham	Gleneig Twp.
Eady & Graham Construction (w)	Kinburn	Various
Earleson, J.S. & Son	R.R. 5, Cobourg	Haldimand Twp.
Eby, Mrs. T.	Kitchener	Kitchener
Edgewater Construction Co. Ltd. (w)	Box 696, Sarnia	Reece's Corners
Edson's Construction	1729 Williard St., Sarnia	Thamesville
Edwards, Howard Supply & Construction Co. Ltd.	66 Cedar St., Brockville	Edwardsburg Twp.
Erie Sand & Gravel Ltd. (w)	Kingsville	Point Pelee, Kingsville and Lake Erie
Falconbridge Nickel Mines Ltd.	7 King St. W., Toronto	Falconbridge
Farris, Clifford Sand & Gravel	Pontypool	Pontypool
Furrow, Clinton (w)	Newtonville	Clarke Twp.
Furdy, D. & L.	Morewood	Winchester Twp.
Ferguson, A.R.	Gravenhurst	Gravenhurst
Fisher Construction Ltd. (w)	140 Douglas St., Sudbury	Garson Twp.
Fowler Construction Co. Ltd. (w)	Box 630, Bracebridge	Muskoka
Franceschini Bros. Construction Ltd. (w)	Cooksville	Brampton and Caledon
Frazier Duntile Co. Ltd. (w)	2019 Carling Ave., Ottawa	Bell's Corners and Greely
Fulton, Wm.	Bobcaygeon	Verulam Twp.
Geco (Division of Noranda Mines Ltd.)	44 King St. W., Toronto	Thunder Bay
Gemmill's Transport (w)	Lanark	Lanark
Glendale Sand & Stone Ltd.	766 Wharncliffe Rd., London	Lambeth and Thamesford
Gould, A.	Renfrew	Renfrew
Graham, H.	Fenelon Falls	Fenelon Falls
Greenwood Construction Co. Ltd.	Grand Valley	Various
Griffin Bros. (Gananoque) Ltd.	Gananoque	Leeds Co.
Guerrieri Bros.	297 College St., Fort Arthur	McIntyre Twp.
Hacquoil Construction Ltd.	Montreal St., Fort William	Paipoonce
Hamilton, A.F. Ltd.	Woodstock	Woodstock
Harkreaves, W.	R.R. 5, Peterborough	Peterborough
Harmden & King Construction Ltd. (w)	Cohour	Hamilton Twp.
Hartholm Farm Ltd.	Woodstock	Woodstock
Hembruff, V.M.	Matheson	Matheson
Hill Gravel Hoist	R.R. 1, Morpeth	Morpeth
Hilltop Sand and Gravel	13 Market Crescent, Kitchener	Petersburg
Hodgins Construction	Keswick	Keswick
Hollinger Consolidated Gold Mines Ltd.	Timmins	Tisdale Twp.
Hopkins Sand & Gravel	Foxboro	Sidney Twp.
Horack, A.J.	Whitby	Pickering Twp.
Huffman, F.G.	Cedar Springs	Harwich Twp.
Hunt, N.W.	Lambeth	Lambeth
Huron Construction Co. Ltd. (w)	125 Keil Drive, Chatham	Chatham
Hydro Electric Power Commission of Ontario (w)	620 University Ave., Toronto	Various
Interprovincial Dredging Co. Ltd. (w)	Box 92, Ottawa	Ottawa River
Jonben Enterprises Ltd.	62 Hillyard St., Hamilton	Dundas
Jones Bros.	R.R. 4, London	Westminster Twp.
K.E., Construction Company (w)	Box 115, Sarnia	Sarnia Twp.
Kemsley Construction Ltd.	1190 Errol Rd. E., Sarnia	Sarnia
Kerr, J.E. (w)	Wingham	Wingham
Keyes, C.S.	Woodstock	Oxford Co.
Kriter, Wilfred (w)	R.R. 2, Rodney	Rodney
Labelle Trucking & Construction Ltd. (w)	Gatson	Dryden Twp.
Labelle, M.J. Co. Ltd.	Cochrane	Cochrane District
Lake Shore Mines Ltd.	Kirkland Lake	Kirkland Lake
Lake, Jack Construction Ltd.	1033 Pine St., London	London
Lantz, John (w)	Gadshill	Stratford
Lavis Contracting Co. Ltd. (w)	Clinton	Various
Lawrence, C.	Utterson	Muskoka
Leathbody, R.	49 Main St., Smith's Falls	Elmsley S. Twp.
Litchton, F.	Richards Landing	Jocelyn Twp.
Lobo Development Co. Ltd.	Komoka	Komoka
Longhurst Bros.	Windermere	Watt Twp.
Martin, Harold Construction Ltd. (w)	New Lowell	New Lowell
Mascioli Construction Co. Ltd. (w)	Timmins	Tisdale Twp.
McCoy, A.H. Construction Co. Ltd. (w)	Stittsville	Various

List of Establishments classified to this Industry, 1964 - Continued

Name of firm	Head office address	Location
SUPPLEMENT - Continued		
Ontario - Concluded:		
McCue, B.	Kincardine	Kincardine
McDougall, N.S. Con (Manitoulin) Ltd. (w)	Gore Bay	Gordon
McGuffin, W.W.	R.R. 5, London	London Twp.
McLellan, Jas. L. Sand & Gravel	R.R. 2, Thamesford	Oxford East
Mill Lake Stone Quarry	36 Burritt St., Parry Sound	McDougall Twp.
Miller Paving Ltd.	56 Blake St., Toronto	Various
Moore & Quinn	Smooth Rock Falls	Haggart Twp.
Moss, Bert	Auburn	Wawanosh W. Twp.
Murray, John Con. (Moorefield) Ltd.	Moorefield	Moorefield
Myers, Ronald W.	Prescott	Augusta Twp.
Neault, F.	Mattawa	Mattawa
Nelson, Fred & Sons Ltd.	Keene	Peterborough Twp.
Newbigging, A.	Appin	Appin
Nichols, G. Gravel Supply (w)	Delhi	Delhi
O'Brien, Leonard	Hawkestone	Hawkestone
Oshawa Sand & Gravel (Masulka)	877 King St. E., Oshawa	Oshawa
Olto, Construction Co. Ltd. (w)	Tavistock	Kitchener and Cooksville
Penfold, Ted	Pointe-au-Baril	Pointe-au-Baril
Pilon, B. (w)	Elmvale	Flos Twp.
Pioneer Construction Co. Ltd. (w)	Box 517, Sudbury	Nipissing
Playfair, J.	Lanark	Lanark
Poutanen Haulage	Sudbury	Broder Twp.
Port Elgin Ready Mix & Construction (w)	Port Elgin	Port Elgin
Pratt, W.W.	Gravenhurst	Wood Twp.
Premier Building Materials Ltd. (w)	55 Eglinton Ave E, Toronto 12	Various
Price, S.A. (w)	Kemptville	Kemptville
Quesnell, Eugene	40 Jeffrey St., Penetang	Penetang
Radford, G Construction Ltd.	Blyth	Blyth
Riddell's Sand & Gravel (w)	R.R. 2, Granton	Blanshard Twp.
Riddell, A.L.	Kinburn	Fitzroy Twp.
Riverside Construction Co. Ltd. (w)	Box 483, London	Middlesex Co.
Robinson, Ellwood Ltd. (w)	721 John St., Sault Ste. Marie	Various
Rossfrank Limited (w)	862 Eglinton Ave. E., Toronto	Don Mills
Rowe, A.H.	Locust Hill	Locust Hill
Ruckle, V.W. Construction Ltd. (w)	Brownsville	Various
Sandy Contracting Co. Ltd.	Goderich	Grey Twp.
Saugeen Spraying Co. Limited	Durham	Bentineck Twp.
Scott, D.	Ailsa Craig	McGillivray Twp.
Seegmiller, E. & E. Limited	525 Wendell Ave., Kitchener	Waterloo Twp.
Sharpe Bros.	Odessa	Odessa
Sisson, O.	R.R. 2, Minden	Stanhope Twp.
Skinner, R.	Huntsville	Chaffey Twp.
Smith & Jenkins	Morpeth	Howard Twp.
Smiths Construction Co. (Arnprior) Ltd. (w)	Arnprior	Arnprior
Smith, L.	Walford	Warwick Twp.
South Mountain Construction Co. Ltd. (w)	South Mountain	South Mountain
Sterling Construction Co. Ltd. (w)	2494 Riverside Drive E., Windsor	Camden Twp.
Stewart & Broad Construction Co. Ltd.	Prescott	Prescott
Stewart, Russell H. Construction Co. Ltd. (w)	Orillia	Orillia Twp.
Stonehouse, F.A. & Son Ltd. (w)	Sarnia	Lobo Twp.
Strachan, A.	R.R. 2, Oro Station	Oro Station
Swalwell, Thomas	Port Loring	Parry Sound
Sweitzer, S. (w)	Exeter	Exeter
Teedon's Sand & Gravel	Waverley	Waverley
Tetreault Construction Ltd.	North Bay	North Bay
Thornton, G.B.	Woodstock	Woodstock
Thurston, M.	Sarnia	Sarnia Twp.
Timmins, Town of (w)	Timmins	Porcupine
Timmins Gravel Products Co. Ltd (w)	Timmins	Mountjoy Twp.
Totten, Lorne & Co.	173 Bank St., Renfrew	Renfrew
Towland Construction Ltd. (w)	Box 2815, London	Various
Trenton Aggregates Ltd.	Trenton	Murray Twp.
Vallee Construction Ltd.	Timmins	Timmins
Watt, M.	Huntsville	Chaffey Twp.
Watterworth, J.L.	Wardsville	Mosa Twp.
Wellington, Village of	Wellington	Wellington
Wilkinson, G.A.	Huntsville	Brunel Twp.
Wright, Wm. J.	Wardsville	Aldborough Twp.
Yundt & McCann Construction Ltd. (w)	Stratford	Stratford
Manitoba:		
Alsip Brick, Tile & Lumber Co. Ltd.	508 Portage Ave., Winnipeg	Beausejour
Bird Construction Co.	Sargent Ave., Winnipeg	Winnipeg
Bird's Hill Gravel & Stone	Bird's Hill	Bird's Hill
Brandon, City of	Brandon	Brandon
Building Products & Coal Co. Ltd. (w)	111 Christie St., Winnipeg	Bird's Hill, Poplar Point, Seddons' Corner
Cumming & Dobbie Ltd. (w)	602-8th St. Brandon	Brandon
Forsythe, A. Coal Co. Ltd.	Portage la Prairie	Portage la Prairie
Fort Garry Building Products Ltd. (w)	Selkirk	Lockport
Gimli Construction Co. Ltd. (w)	Gimli	Gimli
Kleysen's Cartage Co. Ltd. (w)	Fort Garry	Pine Ridge
Manitoba Department of Highways	Winnipeg	Various
Manitoba Hydro	Box 815, Winnipeg	Various
Maple Leaf Construction Ltd.	777 Erin St., Winnipeg 10	Stonewall
McCurdy Supply Company Limited (w)	1063 Sargent, Winnipeg 3	Moose Nose
Nelson River Construction Ltd.	101 Dawson Rd., St. Boniface	Various
Pearce Construction Ltd.	Morden	Various
Poole Engineering Co. Ltd.	10503-109th St., Edmonton, Alberta	Various
Rosser Municipality	Rosser	Rosset
Supercrete Ltd. (w)	222 Provencher, St. Boniface	Bird's Hill
Thompson Supply Co. (w)	Boyd Bldg., Winnipeg	Thompson

List of Establishments classified to this Industry, 1964 - Continued

Name of firm	Head office address	Location
SUPPLEMENT - Continued		
Manitoba - Concluded:		
Winnipeg, City of (w)	223 James Ave., Winnipeg	Bird's Hill and Pine Ridge
Winvan Gravel & Supply Ltd.	768 Taché Ave., St. Boniface	Various
Saskatchewan:		
Arbortield Rural Municipality	Arbortield	Arbortield
Asphalt Services Ltd.	Box 1207, Saskatoon	Saskatoon
Baron, Ludwig	Burstall	Burstall
Bayne Rural Municipality	Bruno	Bruno
Coulee Rural Municipality	Swift Current	Swift Current
Craik Rural Municipality	Craik	Craik
Creighton, Town of	Creighton	Creighton
Cut Knife Rural Municipality (w)	Cut Knife	Cut Knife
Cymri Rural Municipality	Midale	Midale
Department of Municipal Affairs (w)	Regina	Various
Department of Natural Resources	Regina	Regina
Eldorado Mining & Refining Ltd. (w)	Eldorado	Beaverlodge
Frenchman Butte Rural Municipality	Paradise Hill	Paradise Hill
Gap, The, Rural Municipality	Ceylon	Ceylon
Glen Peterson Construction Ltd. (w)	Estevan	Estevan
Grassy Creek Municipality	Shaunavon	Shaunavon
Hoodoo Rural Municipality (w)	Cudworth	Cudworth
Hudson Bay Mining and Smelting Co. Ltd.	333 Broadway Ave., Winnipeg, Manitoba	Flin Flon
Hutton, G.	Flin Flon	Flin Flon
Kelvington Rural Municipality	Kelvington	Kelvington
Kindersley Rural Municipality	Kindersley	Kindersley
Kinistino Rural Municipality (w)	Kinistino	Kinistino
Kirsch Construction Ltd. (w)	Middle Lake	Middle Lake
Lajord Rural Municipality (w)	Lajord	Lajord
Leask Rural Municipality	Leask	Leask
Livingston Rural Municipality	Arran	Arran
Loreburn Rural Municipality	Loreburn	Loreburn
Marquis Rural Municipality (w)	Marquis	Marquis
Monel Rural Municipality	Hughton	Hughton
Moose Jaw Rural Municipality	Moose Jaw	Moose Jaw
Patrick, Jim Ltd. (w)	Box 1038, Saskatoon	Various
Penner, J.J. & Sons	Carrot River	Carrot River
Priedale Rural Municipality	Smiley	Smiley
Preeceville Rural Municipality (w)	Preeceville	Preeceville
Prince Albert, City of (w)	City Hall, Prince Albert	Prince Albert
Red-Mix Concrete Ltd.	River St. & 5th Ave. W., Moose Jaw	Moose Jaw
Red & Venne	Box 421, Wakaw	Wakaw
Riverside Rural Municipality	Pennant	Pennant
Rural Canadian Rural Municipality	Laporte	Laporte
St. Peter Rural Municipality (w)	Annahelm	Annahelm
Saskatchewan Dept. of Highways	Regina	Various
Schnell, Frank	Torquay	Torquay
Setrum, M.	Coronach	Coronach
Shellbrook Rural Municipality	Shellbrook	Shellbrook
Sliding Hills Rural Municipality (w)	Mikado	Mikado
Smith, T. Robson	Neilburg	Neilburg
Spalding Rural Municipality (w)	Spalding	Spalding
Spiritwood Rural Municipality	Spiritwood	Spiritwood
Star City Rural Municipality	Star City	Star City
Terrell Rural Municipality	Spring Valley	Spring Valley
Torch River Rural Municipality (w)	White Fox	White Fox
Touchwood Rural Municipality	Punnichy	Touchwood
Union Sand & Gravel Ltd. (w)	Box 116, Swift Current	Swift Current
Uranium Plumbing & Heating Co. Ltd.	Uranium City	Uranium City
Victory Rural Municipality (w)	Beechy	Beechy
Wilton Rural Municipality	Marshall	Marshall
Alberta:		
Alberta Concrete Products Co. Ltd. (w)	8635 Stadium Rd., Edmonton	Opal and Wabamun
Alberta Department of Highways	Edmonton	Various
Baxter, A.G. Contracting Co. Ltd. (w)	5320 - 1st St., Calgary	Calgary
Clarke, A. & Sons Ltd. (w)	Box 155, Cochrane	Cochrane
Consolidated Concrete Ltd. (w)	5440 - 1st St. S.W., Calgary	Various
Department of Lands and Forests	Edmonton	Edmonton
Devon Sand & Gravel Ltd.	Devon	Devon
Fish Lake Sand & Gravel Ltd. (w)	Rosedale	Rosedale
Hudson Construction Co. Ltd.	8615 - 112th Ave., Edmonton	Edmonton
Industrial Quartzite Ltd. (w)	222-720 - 7th Ave. W., Calgary	Calgary
Industrial Silica Sand Ltd. (w)	4012 Ells Drive, Edmonton	Edmonton
Kleenbim Collieries Ltd., The (w)	Bow City	Newell
Leduc Rural Municipality	Leduc	Leduc
Leduc Construction Co. Ltd.	South Edmonton	Various
Lewis, Jas. A. Engineering Co. Ltd. (w)	736 - 8th Ave. S.W., Calgary	Calgary
MacKay Sand & Gravel Co. Ltd. (w)	Box 550, Lloydminster	Lloydminster
Macleod, Ronald	R.R. 1, Innisfail	Innisfail
Mountain View, County of (w)	Didsbury	Didsbury
North Western Pulp & Power Ltd.	Hinton	Hinton
Pacific Petroleum Ltd.	800 Pacific Bldg., Calgary	Footfalls
Reed & Bodnar Construction Ltd. (w)	Black Diamond	Footfalls
S. & R. Gravel Ltd.	Box 410, Rimbey	Rimbey
Scorgie Sand and Gravel	Elmworth	Elmworth
Smith Concrete Ltd. (w)	6230 - 100th St., Edmonton	Edmonton
Stony Mobil Oil of Canada Ltd.	Mobil Oil Bldg., Calgary	Calgary
Standard Gravel & Surfacing of Canada Ltd.	Calgary	Various
Stony Plain Municipal District	Stony Plain	Stony Plain
Sundre Contracting Co. Ltd. (w)	505 - 8th Ave. S.W., Calgary	Various
Sweetman, K.	Box 296, Devon	Devon

List of Establishments classified to this Industry, 1964 - Concluded

Name of firm	Head office address	Location
SUPPLEMENT - Concluded		
British Columbia:		
Armour Salvage (1949) Ltd. (w)	Box 278 Prince Rupert	Prince Rupert
Beardsley, D.	19110 Stokes Rd., Cloverdale	Cloverdale
Blackham's Construction Ltd. (w)	Box 1120, Abbotsford	Abbotsford
Bregolis Construction, R.W.	Kamloops	Kamloops
British Columbia Department of Highways	Victoria	Various
Burquitlam Sand & Gravel Ltd. (w)	New Westminster	New Westminster
Butler Brothers Supplies (Duncan) Ltd. (w)	Box 214, Duncan	Duncan
Central Gravel Supplies Ltd.	Box 129, Mission	Mission
Cewe, Jack Ltd.	309 Cedar St., New Westminster	Coquitlam
Chetwynd Agencies Ltd.	Chetwynd	Chetwynd
Chilliwack, City of	Chilliwack	Chilliwack
Clark, H.G. Gravel & Contracting (w)	Fort Langley	Langley
Columbia Bitulithic Ltd. (w)	Granville Island, Vancouver 9	Various
Consolidated Mining & Smelting Company of Canada Ltd. (w)	Trail	Kootenay
Cranbrook, City of (w)	Cranbrook	Cranbrook
Deeks-McBride Ltd. (w)	1051 Main St., Vancouver	Various
Delta Corporation	Ladner	Delta
Dolan's Ltd. (w)	Box 193, Alberni	Alberni
Fernie, City of	Fernie	Fernie
G. & A. Trucking Ltd.	Campbell River	Campbell River
G. & H. Sand & Gravel Co. Ltd.	Powell River	Powell River
George, R.E. (w)	Whonnock	Whonnock
Gibson's Building Supplies Ltd. (w)	Gibson's	Gibson's
Grant Materials & Equipment	Box 129, Aldergrove	Matsqui
Halken Construction	Pleasant Valley Rd., Nanaimo	Nanaimo
Hamden, C.B., Cartage Ltd.	Dawson Creek	Dawson Creek
Hope	Hope	Hope
Hornby's H. General Machinery (w)	Cloverdale	Cloverdale
Island Ready Mix Ltd. (w)	Courtenay	Various
Kamloops, City of (w)	7 Victoria St., Kamloops	Kamloops
Kent, Corporation of	Box 70, Agassiz	Cemetery Mountain
Keystone Concrete Ltd. (w)	773 Cordova Bay Rd., Victoria	Saanich
Kiewit, Peter & Sons Co. of Canada Ltd.	2412 Columbia St., Vancouver 10	Various
Kimberley City of	Kimberley	Kimberley
Kirkpatrick Sand & Gravel Co. (w)	22357 - 119 A Ave. Haney	Haney
Kitimat Concrete Products (1961) Ltd. (w)	Kitimat	Kitimat
Kitsul Bros. Gravel Sales Ltd. (w)	Langley	Langley
Knight Gravel Ltd.	10720 - 84th Ave., North Surrey	North Surrey
Korpack Cement Products Co. Ltd. (w)	154 Wellington St., Trail	Trail
Langley, Township of	Murrayville	Langley
Lepp Trucking Co. Ltd.	Abbotsford	Abbotsford
Longacres Jersey Farms	Yarrow	Sumas
Matsqui, District of	Abbotsford	Abbotsford
McGarrigle Sand and Gravel	2211 McGarrigle Rd., Nanaimo	Nanaimo
McGauley Ready Mix Concrete Co. Ltd. (w)	Trail	Kootenay
Merriam, Frank (w)	Wynndel	Wynndel
Mission City, Town of	Mission City	Mission City
Mutter, G.W.M.	Cobble Hill	Cobble Hill
Nanaimo, City of	455 Wallace St., Nanaimo	Nanaimo
Norby Bros. Construction Ltd.	Box 715, Fort St. John	Taylor
Norgaard Ready-Mix Ltd.	Merritt	Merritt
North Cowichan, District of	Duncan	Duncan
Ostrensky, Chas.	Creston	Creston
Paco Cement Products (w)	Garibaldi	Garibaldi
Parker's Redi-Mix (w)	4801 - 20th St. N., Vernon	Vernon
Penticton, City of	Penticton	Penticton
Penticton Gravel & Excavating	42 Forbes St., Penticton	Osoyoos
Pitkethly Bros. Div. of Steel Bros. Co. (Canada) Ltd. (w)	8699 Angus Drive, Vancouver	Vancouver
Port Alberni, City of (w)	Port Alberni	Port Alberni
Quadling & Son (w)	Yarrow	Yarrow
Quesnel Redi-Mix Cement Co. Ltd. (w)	Box 1046, Quesnel	Quesnel
Roes, Oscar	Langley	Langley
Revelstoke, City of (w)	Revelstoke	Revelstoke
Scamen, G.	Creston	Creston
Sunnyside Gravel	2638 - 156th St., White Rock	White Rock
Surrey, District of	Box 700, Cloverdale	Surrey
Taylor, E.R. Construction Co.	North Vancouver	North Vancouver
United Contractors Ltd. (w)	1865 Stewart St., Vancouver 6	New Westminster
Valley Aggregates	Sardis	Atcheltz Reserve
Valley Concrete Products Ltd.	Penticton	Eric Creek
Valley Ready Mix Ltd. (w)	22648 Lougheed St., Haney	Haney
Van Boeyen, Henry	Haney	Thorn Hill
West Kootenay Power & Light Co. Ltd.	1385 - 1387 Cedar Ave., Trail	Trail
Western Sand & Gravel Ltd.	Kamloops	Kamloops
White Rock Sand & Gravel (w)	R.R. 2, Cloverdale	New Westminster

EXPLANATORY NOTES

(Including Concepts and Definitions)

INTRODUCTION

The Census of Mines, Quarries and Oil Wells is an annual mail survey covering Canada's Mineral Industries based on the Standard Classification of Industries. While principal statistics are collected and compiled for all mineral industries not all can be published separately by province because of the confidential nature of the data in certain provinces.

The reporting unit for the Census is designated as the establishment (see definition of Establishment in following section) and a return is requested from every establishment classified to a mineral industry. When an establishment is operated for only part of a year a report is required covering the period of operation.

There are four different questionnaires used in this Census: (a) short form (introduced in 1965) (b) long form (c) head office questionnaire and (d) commodity questionnaire. The short and long forms are used to obtain principal statistics and commodities shipped from establishments classified to mineral industries and differ only in the amount of detail requested.

The head office questionnaire is generally used for company head offices and/or auxiliary units separately located from the mineral establishment(s), (see following notes on Head offices and auxiliary units). The Commodity questionnaire is used to survey certain establishments to collect information on the quantity and value of goods of own production shipped or used by such establishments in order to achieve full coverage of domestically produced commodities. (See the following note under Value of production).

General

This report is one in a series of 18 publications which relate to the operations of industries comprising Major Groups 1, 3, and 4 of Division 4, Mines (including Milling) Quarries and Oil Wells of the revised Standard Industrial Classification (S.I.C.). These groups are respectively Metal Mines, Non-metal Mines and Quarries and Sand Pits. Industries comprising Major Group 2 (Mineral Fuels) are covered in a separate series of reports. The industries included in Major Group 5, Services Incidental to Mining are not covered by separate reports. However, certain relevant statistics are published in various publications, for example, "Contract Drilling for the Mining Industry" (Catalogue No. 26-207), "Construction in Canada" (Catalogue No. 64-201) and a special report "Private and Public Investment in Canada" (available on request from the Bureau or the Queen's Printer). The Bureau has also developed a new survey "Annual Survey of Mining and Exploration Companies". This survey is being introduced for the 1967 reporting period and will attempt to bring together details on exploration, development and capital and repair expenditures for the mining universe (excluding oil and gas).

The publication of this series of 18 reports constitutes the final phase of the implementation of the revised Standard Classification for these three Major Groups (see above). Because of its size and complexity, this project has to be carried out in several stages and over a period of years. These stages were as follows: (a) reclassification of establishments according to the revised S.I.C. (b) implementation of a new establishment definition (c) an extension of the establishment definition to cover the non-mining activities of mining establishments. The first stage was completed with the 1960 Census of Mines, etc. and the results were published in the 1960 and 1961 reports on the basis of the revised Standard Industrial Classification. This part of the project was confined entirely to a re-coding of existing reporting units. Under the revised Standard Industrial Classification reporting establishments are classified or allotted to specific industries in the classification system on the basis of the value of principal products made or shipped. Full details concerning the revised classification system are contained in the "Standard Industrial Classification Manual", Catalogue No. 12-501, which is available from either the Queen's Printer or the Dominion Bureau of Statistics.

The second stage in the project consisted of the implementation of the new definition of the reporting unit i.e. "establishment" as it applied to mining activities of mining establishments (see following note on Establishment). Results of the 1962 Census of Mining reflected this change in concept and, in order to provide comparability of data for previous years, the 1962 reports contained principal statistics on the basis of the new establishment definition for years back to 1957. This naturally included the projection of stage one.

The third stage in the project which was the extension of the definition of the establishment to cover total activities of mining establishment, is reflected in the 1964 data presented in the present report. By definition "total activity" relates to all operational data and excludes such non-operational items as rent, interest and dividends. Statistics on man-hours included in the earlier publications for the mining industry will continue to be included as part of the regular series but will be confined to production and related workers as in the reports for the Census of Manufactures. Adjustments and revisions made in the statistics for mining activities covering the period 1961-63 and carried in the mining series of publications for this period were further revised in the course of the final stage of the programme to bring them in line with reporting procedures followed in the 1964 Census of Mining which reflect the final application of the new concept. The 1961-63 statistics on mining statistics on the new basis are thus not comparable with those published in earlier issues in this series. However, the 1961-63 statistics are shown in this publication in both their previously published and revised forms in order to provide a link with the immediate past.

Reference has already been made to changes implemented and in the course of implementation in the mining industries in reports published in this series prior to the 1964 issues; however a more complete account of the changes and additions and brief descriptions of the principal industry statistics are given in the following sections of those notes. This latter includes as well a special section dealing specifically with the impact of a new concept in the treatment of the Smelting and Refining industry on the metal mines industries. A description of conceptual and definitional changes appropriate to the statistics for Major Group 4, Mineral Fuels will be included in the relevant industry reports for this group.

Metal Mines

The effect of the application of a special concept to the reporting procedures followed by plants carrying on integrated mining/smelting/refining operations will be evident in the comparison of the 1961-64 data particularly for the items Materials and supplies and Value of production shown in the publications on Metal Mines and the data published in reports prior to 1964. The industries in which the application of this concept had a major effect are those included in S.I.C. Major Group 1 - Metal Mines of the Annual Census of Mining (Mines (including Milling) Quarries and Oil Wells) but more particularly the following:

Copper-Gold-Silver Mines
Nickel-Copper Mines
Silver-Lead-Zinc Mines

These industries which are dominated by a sector of vertically integrated companies involved in mining and manufacturing (smelting and refining) operations have historically created significant distortions in the statistics for these industries. These were caused, for the most part, as a result of applying a value to the ores, concentrates, etc. which were part of the materials (inputs) of the Smelting and Refining industry. The method of valuation used was based on the recoverable metal content of these materials, that is, ores, concentrates, etc. A similar procedure was followed in valuing the output portion of these mines. Since the major output of the mines served as an input to the Smelting and

Refining industry and in turn became a part of the output of the Smelting and Refining industry there was, in effect, a duplication of values for recoverable metal content in the mining and manufacturing sector (smelting and refining). The procedure followed also tended to understate the total output value of the mines sector because the recoverable metal content was valued at a lower level in the processing operations that is, as ores, concentrates, etc. before smelting and/or refining.

Prior to the full implementation of the establishment concept to include total activities, the "Materials and supplies" section included primarily a limited number of consumable materials such as explosives, drill steel, lubricants, etc. Many kinds of supplies, for example, maintenance and repair supplies were not reported. The extension of the Materials and supplies section in accordance with the total activities concept to provide for a more complete coverage of materials and supplies accounts for a major part of the increase in the total cost of Materials and supplies used. In the case of the vertically integrated companies the procedure followed omitted treatment charges such as milling, smelting refining, etc. from the input side of the mines sector involving these companies as well as from the output side of the Smelting and Refining industry. As a result the cost of materials (inputs) reported, particularly for the Industries in the mines sector mentioned above was considerably understated.

As a result of the foregoing it was necessary to find some statistical device which would eliminate the above practices and permit the derivation of more meaningful principal statistics - for both the metal mines and for the smelting and refining industry.

While it has been suggested that smelting and refining should be treated as part of the metal mines, and that the statistics should be compiled on this basis, this would be difficult to justify from the statistical viewpoint. Smelting and refining by the nature of its operations constitutes a

manufacturing activity and is considered such, not only in the Canadian and International classification systems but also in the systems of most foreign countries. To include it as part of the mining universe would not only make international comparisons virtually impossible but would affect the importance of Canada's manufacturing industries even more drastically than the changes which resulted from the approach adopted.

After a thorough study of these problems and consultations with the firms involved, it was found that the only satisfactory solution was to continue to consider smelting and refining as a manufacturing industry and to treat such operations of vertically integrated companies as "custom" operations regardless of whether or not the smelting and refining plants (establishments) of such companies were concerned solely with the smelting and refining of ore, concentrates, etc. of their own company. This procedure eliminated the need to arbitrarily value the ores, concentrates, etc. transferred to the smelter and to value the output of the smelter and refinery in terms of commodities produced. Although, for the purpose of commodity statistics, these are still valued on the basis of recoverable metal content, the revenue from integrated operations accrues to the mines concerned and is not duplicated, as in the past, in both the mining and the smelting and refining industries. Thus the revenue from smelting and refining in such integrated operations now consists primarily of treatment costs of own ores, etc. plus any revenue from toll charges of non-company ores, by-products, etc.

The effects of allocating the final revenues of the vertically integrated companies included in this industry to the metal mining industries and the broadening of coverage for materials used, as well as any changes resulting from the implementation of the revised Standard Industrial Classification and the New Establishment Concept, are reflected in the tables of principal statistics for the years 1961 to 1964. Additionally, these tables reflect the inclusion of the non-mining activities, i.e. the total activity concept.

CONCEPTS AND DEFINITIONS

Establishment

A mining establishment is typically a mine, mine/mill (concentrator), quarry, pit, bog, or plant principally engaged in commercial production activities. In many cases a mining company consists of a single establishment but it is not uncommon for a company to consist of a number of establishments some of which may be in mining i.e. mine/mill and others in manufacturing i.e. smelter, cement plant, etc. In addition a number of locations may be involved. Such firms are requested to submit a separate Census of Mining report for each mineral establishment which can meet the reporting requirements embodied in the following definition of the "establishment".

"The smallest unit which is a separate operating entity capable of reporting the following principal statistics:

- Materials and supplies used
- Goods purchased for resale as such
- Fuel and power consumed
- Number of employees and salaries and wages
- Man-hours worked and paid
- Inventories
- Shipments or sales."

Each establishment is required to report on all the activities carried out within its accounting boundaries (except non-operating revenues such as rent, interest and dividends) and data on the different activities (mining etc., trading in goods not of own manufacture, construction by own labour force, revenue from services, etc.) are requested to be reported separately. It should be noted that the statistics for separate activities are not completed consistent since some respondents cannot distinguish, in their records, materials, shipments and inventories relating solely to their own mining activities. For example, inventory of commodities purchased

for re-sale may not be distinguishable from inventory of own mineral commodities. Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level and for studies or statistical measures requiring accurate coordinated data, the "total activity" statistics should be used.

The number of establishments represents the number of operating units that are principally engaged in the activities of the mineral industries to which they have been classified. These units do not necessarily represent the total number engaged in the production of a commodity mainly produced in a certain industry. Some commodities are produced as secondary products in other mineral and non-mineral industries. It should be noted that head offices and auxiliary units which are surveyed separately are not included in the establishment count, (see following notes on Head offices and auxiliary units).

Head Offices and Auxiliary Units

Head offices and auxiliary units of companies classified to the mineral industries such as sales offices, administrative offices, warehouses, laboratories, etc. are now surveyed as part of the Census of Mining.

These head offices and auxiliary units are either included in an establishment report or are surveyed by means of the head office questionnaire. The former is the most common case where a single establishment firm has its executive personnel, sales office, etc. located at the site of the mine (establishment). The special head office questionnaire is generally used where a firm, regardless of the number of establishments, has separately located offices or auxiliary units. Such offices or units do not constitute establishments within the Census of Mining as they do not normally generate operational revenues, but give rise only to cost of operations

(mainly salaries and wages) which are automatically included in the value of shipments or sales. Although not considered as establishments, and hence, not included in the "establishment" count for an industry, the operational costs are reflected in either the "Industry" statistics (3 or 4 digit level) or the "Major group" statistics (2 digit level) according to the following rules:

- (a) In the case of single establishment firms, statistics of offices and units located in a different municipality to the mining establishment are classified to the same industry (3 or 4 digit) as the mining establishment;
- (b) In the case of multi-establishment firms, the statistics for such offices and units are coded to the same industry as the establishments of the firm, when all establishments are in the same industry (3 or 4 digits). When establishments of such firms are coded (1) to different industries within a major group, (2) to industries in different major groups or (3) to industries in different divisions of the Standard Industrial Classification, then the statistics are included in the major group totals (2 digit level) in which the major part of the company's operations are classified. Although this may result in some distortion of major group statistics in the case of (2) and (3) the statistics at the industry (3 or 4 digit) level in all cases will be left free of these company-wide data.

Employees

(a) Production and related workers - Mining activities

In addition to those engaged directly in mining production activities, they include those employed in storing, inspecting handling, packing, warehousing, etc. They also include employees engaged in maintenance, repair, janitorial and watchman services and line supervisors (working foremen) engaged in similar work to that of the employees they supervise. For those establishments reporting on the "long" form, production and related workers engaged in mining activity are reported as those receiving pay during the last pay period of each month, an average for the year being obtained by summing the monthly figures and dividing by 12. This procedure is followed even though the establishment did not operate in all months in order to arrive at equivalent annual full-time employment. The numbers are somewhat affected by turnover, in that employment is overstated when an employee changes employment during a pay period. The man-hours of production and related workers in mining activity represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays, etc.). In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in average hourly earnings and does not represent hourly wage rates which are collected and published by the Department of Labour and which are based on selected occupations.

(b) Production and related workers - Non-mining activities

Such employees include those on mining establishments' payrolls engaged in activities such as construction undertaken for the use of these establishments and any other production workers who are not engaged directly in the production of ore and/or concentrates.

(c) Administrative and office employees

This category includes all executive and supervisory officials such as presidents, vice-presidents, comptrollers, secretaries, treasurers, etc., together with managers, professional, technical and research employees, superintendents and plant supervisors above the line supervisor or working foreman level, and clerical staff. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical, etc. It should be noted that prior to 1961 this category also included working owners and partners. Also included in this category are employees located at head offices or auxiliary units separately located from the establishment; in accordance to the rules outlined under "Head offices and auxiliary units" above.

(d) Sales and distribution workers

This category includes office personnel whose salaries are charged to selling expense, e.g. travelling salesmen. It may also include some sales employees who are reported as part of a mining establishment but are not working at the establishment. These are generally broken down by location in cases where more than 15 employees are involved in any one location. The figures exclude persons working on a commission basis who are not considered regular employees of the establishment.

(e) Total employees

This total comprises the foregoing categories including employees located at separately located head offices and auxiliary units. The numbers of employees included under categories (b), (c) and (d) are reported in the form of annual averages and represent as closely as possible full time employment; adjustments are made when reported figures indicate the existence of part-time or seasonal employment.

Working Owners or Partners

These are not now included in the statistics of employees and salaries and wages. There is some duplication in numbers when a person owns more than one establishment and is reported as a working owner on each Census return. Withdrawals of working owners are defined as amounts withdrawn by owners or partners for normal living expenses excluding withdrawals for payment of income tax.

Salaries and Wages

Salaries and wages refer to gross earnings of employees before deductions for income tax and employees contributions to social services such as sickness, accident and unemployment insurance, pensions, etc. They include all salaries, wages, bonuses, profits shared with employees, the value of room and board where provided, commissions (paid to regular employees only) as well as any other allowance forming part of the worker's earnings. Payments for over-time are included.

Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars, trucks, locomotives, etc.), not to purchases unless the quantities are substantially the same. Any fuel and electricity produced by establishments for internal consumption are not included in the total cost. Values represent laid down cost at the establishment including freight, duty, etc. Although fuel and electricity used is considered part of mining activity it should be noted that it also includes relatively small amounts used in non-mining activities since these cannot be reported separately.

Materials and Supplies

(a) Mining activities

Figures represent quantities and laid down cost values, at the establishment, of materials, supplies and purchased components owned and used during the year in mining activities and related processes. These statistics represent only commodity items or physical goods (cost of services or overhead charges such as advertising, insurance, depreciation, etc. are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Included are maintenance and repair supplies not chargeable to fixed assets accounts and any amounts charged by other establishments for work done on materials owned by the reporting establishment. Cost of repairs or maintenance done by outside contractors and cost of returnable containers are not included.

(b) Non-mining activities

1. Purchases for re-sale as such

Figures represent cost of materials or products purchased from others by the reporting establishment (or received as transfers from other establishments of the reporting company) for re-sale as such in the same condition as purchased. Included are any finished products received on consignment from other countries.



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2. Other materials and supplies used

Figures represent the cost of materials and supplies, if any, used in new construction and in the production of machinery and equipment (for the use of the reporting establishment) by the establishment's own employees. Included are materials used for any capital repairs and alterations carried out by the establishment's employees. Amounts paid to outside contractors for construction and repair work are not included nor is the cost of purchased machinery and equipment. Also included is the cost of office supplies not chargeable to fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment-operated cafeterias and lunch counters, first aid and medical supplies, laboratory supplies, etc.

Value of Production

(a) Value of production of goods produced in the establishment

These figures represent the values in Canadian dollars of products shipped by the reporting establishments adjusted by changes in value between closing and opening inventory values of goods-in-process and finished products on hand. Included are revenues from repairs and custom work performed for other establishments and the cost (book value) of any goods produced by the mining establishment and shipped on a rental basis.

All products and by-products of own production shipped from the establishment are covered, including transfer shipments to sales outlets, distributing warehouses or to other processing plants of the reporting firm, when such units are treated as separate establishments. Production values are net of returned goods, discounts, returns, allowances, sales tax, excise taxes and duties, returnable containers and charges for outward transportation by common or contract carriers. Transportation or delivery expense incurred by the reporting establishment's own carriers are included.

Shipments of goods of own production of establishments which are coded to some other division of the Standard Industrial Classification (on the basis of principal activity) but which are engaged in mining as a subsidiary activity are collected by means of the Commodity questionnaire referred to earlier. Such shipments together with shipments of goods of own production of establishments forming the universe of mineral industries are compiled and recorded under appropriate headings in the various mineral industry publications; however, operational details relating to the production of such commodities are **not** included in the **principal** statistics shown in the reports for individual mineral industries.

(b) Shipments of goods not of own manufacture

These figures represent the net selling value at establishment (net of discounts, returns, allowances, sales

taxes and excise duties and taxes and transportation charges by common or contract carriers) of all products or materials (including products transferred from other establishments of the reporting firm) sold as such in the same condition as purchased or received as transfers. All sales of consignment goods from other countries are included.

(c) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs, alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishment's own employees and for which depreciation accounts are maintained. Included also are any revenues from the sale of electricity, servicing revenues, commissions on sales (when not included in value of sales), revenue for company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishment's own products, sale of used materials (excluding sale of used fixed assets) research and development work, etc. As mentioned previously the figures do not include non-operating revenue such as rent, dividends, interest, etc.

Value Added

(a) By mining activities

Figures are compiled by deducting the cost of operating materials, supplies, etc. and fuel and electricity consumed from the value of production.

(b) By non-mining activities

The figures are compiled by deducting the cost of goods purchased for re-sale (adjusted for changes in the value of inventories of goods purchased for re-sale) and the cost of non-mining materials and supplies used from the value of shipments of goods not of own manufacture, plus other revenue.

(c) By total activities

The figures consist of value added by mining activities plus value added by non-mining activities. "Value added" is sometimes referred to as net output or net production. However, to arrive at the National Accounts concept of net production, or Gross Domestic Product at "Factor cost" it would be necessary to subtract also the cost of advertising, insurance and other business expenses which are not collected as part of the annual Census of mining. "Value added" figures for the primary industries, manufacturing and construction are published in DBS publication Catalogue No. 61-202. "Survey of Production".