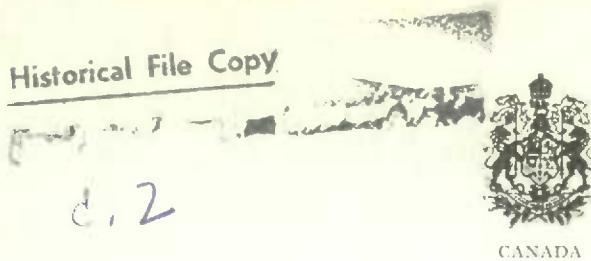


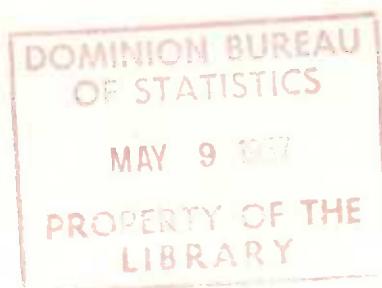
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THE SALT INDUSTRY

1956



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NOTICE

The annual reports prepared by the Industry and Merchandising Division of the Bureau of Statistics are divided into 3 volumes, as follows: **Volume I** — The Primary Industries, including mining, forestry and fisheries; **Volume II**— Manufacturing; **Volume III**— Merchandising and Services. The volumes are made up of parts, and the parts in turn are subdivided according to the industries which they comprise.

Volume I consists of the following parts:

- Part I — Mineral Statistics
- Part II — Forestry Statistics — Operations in the Woods
- Part III — Fisheries Statistics

Part I Includes the following reports which constitute the complete series on Mineral Statistics of Canada. Individual reports are issued as the information becomes available; they are arranged in a form suitable for binding.

- A — General Review of the Mining Industry, 50¢
- B — The Gold Mining Industry, 50¢
- C — The Silver-Lead-Zinc Mining Industry, 25¢
- D — The Nickel-Copper Mining, Smelting and Refining Industry, 25¢
- E — The Iron Mining Industry, 25¢
- F — The Miscellaneous Metal Mining Industry, 25¢
- G — The Smelting and Refining Industry, 25¢
- H — The Coal Mining Industry, \$1.00
- I — The Crude Petroleum and Natural Gas Industry, 25¢
- J — The Asbestos Mining Industry, 25¢
- K — The Feldspar and Quartz Mining Industry, 25¢
- L — The Gypsum Industry, 25¢
- M — The Peat Industry, 25¢
- N — The Salt Industry, 25¢
- O — The Talc and Soapstone Industry, 25¢
- P — The Miscellaneous Non-metal Mining Industry, 25¢
- Q — The Cement Manufacturing Industry, 25¢
- R — The Clay and Clay Products Industry, 25¢
- S — The Lime Industry, 25¢
- T — The sand and Gravel Industry, 25¢
- U — The Stone Industry, 25¢
- V — Contract Drilling in the Mining Industry, 25¢

THE SALT INDUSTRY

1956

The producers of common salt or sodium chloride in 1956 shipped 1,590,804 tons valued at \$11,401,966 compared with 1,244,761 tons valued at \$10,122,299 in 1955. The value of containers has been excluded from these valuations. About 32 per cent of the total tonnage was recorded as the salt content of brine. This brine was pumped from the wells to chemical plants which produced caustic soda, chlorine, etc. There was a notable increase in the shipments of rock salt which were 640,027 tons in 1956 compared with 267,984 tons in the preceding year.

Ontario continues as the leading province; its plants produced 85 per cent of the total output. Nova Scotia had the second largest production, followed by Alberta, Saskatchewan and Manitoba.

In Nova Scotia the Sifto Salt Limited were sinking a shaft on rock salt deposit near Pugwash. Exploration work was done on salt deposits near

London and also at Goderich, Ontario. The plant at Watford, Ontario, which had been producing coarse salt ceased operations.

Thirteen plants were operated by eight firms. There were 785 persons employed, to whom \$2,740,685 were paid as salaries and wages. Fuel and electricity cost \$988,301, including 16,050,180 kwh. of purchased electricity at a cost of \$147,932. Electricity generated for the firms' own use totalled 11,721,430 kwh. Process supplies cost \$603,270 and the value of containers was \$1,862,712.

Exports of salt, largely rock salt, during 1956 were 333,935 tons valued at \$2,286,830. Imports totalled 319,124 tons valued at \$1,605,746. The apparent consumption of salt in Canada, computed from producers' shipments plus imports less exports, without allowance for change in stocks, totalled 1,575,961 tons.

TABLE 1. Principal Statistics for the Salt Industry, Significant Years, 1921-1956

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity at works	Cost of process supplies and containers	Gross value of products including containers (f.o.b. works)	Net ² value of production
	No.	No.	\$	\$	\$	\$	\$
1921	13	508	411,832	527,013	661,631	2,335,316	1,146,672
1929	8	424	516,453	249,664	543,022	2,121,108	1,328,422
1931	7	363	446,984	184,001	491,357	2,395,506	1,720,148
1933	9	400	473,420	191,373	591,182	2,531,056	1,748,501
1937	9	543	653,136	183,117	610,498	2,334,016	1,540,401
1939	9	547	741,736	276,267	508,511	2,957,982	2,173,204
1941	9	668	1,018,652	450,291	725,675	3,852,499	2,676,533
1944	9	710	1,302,143	652,126	846,298	4,786,084	3,287,660
1946	9	713	918,566	597,112	993,304	4,480,839	2,890,423
1949	12	698	1,565,210	699,443	1,205,317	6,621,483	4,716,723
1951	12	689	1,633,222	973,257	1,596,119	9,201,265	6,631,889
1953	12	676	1,057,318	959,927	1,866,106	8,405,789	5,579,756
1954	13	669	1,380,647	758,120	1,944,611	9,854,135	7,151,404
1955	13	691	2,347,080	1,019,017	2,280,268	11,869,077	8,569,792
1956	13	785	2,740,685	988,301	2,465,982	13,264,678	9,810,395

1. Includes brine and dry salt used in producers' own associated plants.

2. Gross value less cost of fuel, electricity, process supplies and containers.

TABLE 2. Production and Shipments¹ of Salt, 1955 and 1956

	1955			1956		
	Production	Shipments		Production	Shipments	
		Quantity	Value, excluding containers		Quantity	Value, excluding containers
	tons	tons	\$	tons	tons	\$
Fine vacuum salt	430,549	430,327	7,223,928	435,098	428,956	6,318,723
Coarse grainer salt	1,158	1,142	21,300	—	32	594
Mined rock salt	275,104	267,984	1,874,472	638,651	640,027	4,066,249
Salt recovered in chemical operations	17,756	16,005	64,609	17,219	14,208	57,332
Total dry salt	724,567	715,458	9,184,309	1,090,968	1,083,223	10,442,898
Salt content of brines used and shipped	529,303	529,303	937,990	507,581	507,581	959,068
Total salt and salt content of brine	1,253,870	1,244,761	10,122,299	1,598,549	1,590,804	11,401,966
Value of containers	—	—	1,690,714	—	—	1,862,712
Total value, including containers ..	—	—	11,813,013	—	—	13,264,678

1. Includes brine and dry salt used in producers' own associated plants.

TABLE 3. Shipments of Salt by Producers, 1947-1956

Year	Tons	\$	Year	Tons	\$
1947	728,545	4,436,930	1952	971,903	7,774,815
1948	741,261	4,836,028	1953	954,928	6,974,501
1949	749,015	5,566,725	1954	969,887	8,340,163
1950	858,896	7,011,306	1955	1,244,761	10,301,466
1951	964,525	7,905,977	1956	1,590,804	11,401,966

TABLE 4. Producers' Shipments of Salt, by Provinces, 1947-1956

Year	Nova Scotia		Ontario		Manitoba		Saskatchewan		Alberta	
	Tons	\$	Tons	\$	Tons	\$	Tons	\$	Tons	\$
1947	40,107	416,332	633,766	3,132,165	24,974	449,608	-	-	29,698	438,825
1948	61,799	700,164	619,598	3,265,654	25,251	420,430	-	-	34,613	449,780
1949	86,612	1,030,126	607,206	3,477,583	18,734	367,186	8,104	144,526	28,359	547,304
1950	101,930	1,080,154	696,582	4,639,867	16,592	378,297	18,186	373,701	25,606	539,287
1951	127,252	1,631,904	772,585	4,789,990	16,778	358,391	28,192	653,130	19,718	472,562
1952	138,845	1,565,814	757,025	4,401,780	18,113	403,699	33,540	789,000	24,380	614,522
1953	127,819	1,272,463	749,046	3,919,810	18,078	420,631	35,100	760,082	24,885	601,515
1954	150,589	1,838,559	733,066	4,440,418	17,809	439,104	37,227	899,849	31,196	722,183
1955	144,862	1,808,302	998,789	5,845,340	18,954	477,614	40,748	976,298	41,408	1,014,745
1956	132,539	1,652,839	1,347,697	7,428,474	21,068	440,150	42,814	882,988	46,654	996,921

TABLE 5. Producers' Shipments of Salt, by Months, 1954-1956

Month	1954	1955	1956	Month	1954	1955	1956	
	Tons				Tons			
January	77,421	92,536	120,668	July	76,377	82,588	130,151	
February	73,845	82,601	128,317	August	80,617	116,476	152,296	
March	73,689	81,357	103,037	September	77,617	127,666	150,079	
April	75,751	76,137	95,144	October	88,793	129,355	168,945	
May	77,569	89,264	97,667	November	91,266	136,581	165,167	
June	79,712	93,433	110,075	December	97,230	136,767	169,258	
	Total				969,887	1,244,761	1,590,804	

TABLE 6. Production, Imports, Exports and Consumption of Salt, 1954-1956

	1954		1955		1956	
	tons	\$	tons	\$	tons	\$
Producers' shipments	969,887	8,340,163	1,244,761	10,122,289	1,590,772	11,401,372
Imports:						
Table salt	24	7,718	39	19,677	45	28,278
Salt for the use of fisheries	58,745	315,581	49,621	299,622	58,985	330,012
Salt, in bulk, n.o.p.	270,802	1,308,995	279,578	1,127,418	242,133	962,505
Salt, in bags, barrels, etc., n.o.p.	40,841	519,134	36,017	437,133	17,961	284,951
Total imports	370,412	2,151,428	365,255	1,883,850	319,124	1,605,746
Exports	1,198	25,935	146,159	988,489	333,935	2,286,830
Apparent consumption	1,339,101	...	1,463,857	...	1,575,961	...

TABLE 7. Consumption of Salt in Specified Canadian Industries, 1954 and 1955

Industry	1954		1955	
	Quantity used lb.	Cost at works \$	Quantity used lb.	Cost at works \$
Acids, alkalies and salts:				
Brine (salt content)	883,666,874	643,359	1,093,261,400	998,415
Dry salt	408,319,049	2,308,451	451,786,417	2,478,181
Artificial abrasives	202,000	2,413	—	—
Slaughtering and meat packing	92,000,000 ²	800,000	—	—
Sausage and sausage casings	2,392,131	30,895	2,535,028	30,337
Animal oils and fats	175,000 ²	1,800	—	—
Fish processing	45,964,400	499,846	—	—
Foods, breakfast	1,741,963	20,521	1,861,641	21,937
Biscuits	2,320,065	34,673	2,444,796	36,722
Bread and bakery products	23,359,055	362,609	25,619,319	386,472
Macaroni, vermicelli, etc.	200,549	3,480	73,690	2,546
Miscellaneous food preparations	11,022,929	165,891	14,003,616	204,072
Butter and cheese	274,655	...	289,555
Cheese, process	644,450	10,073	662,780	9,148
Concentrated milk products	7,652	...	5,622
Starch and glucose ¹	1	1	1	1
Fruit and vegetable preparations	23,323,207	278,890	25,916,912	321,460
Breweries	1,729,694	24,529	1,347,265	19,071
Malt and malt products ¹	1	1	1	1
Stock and poultry foods, prepared	38,478,000	481,122	43,336,000	540,446
Leather tanneries	11,906,312	113,818	13,447,874	138,386
Soaps and cleaning preparations	4,571,390	34,714	3,903,068	28,816
Dyeing and finishing of textiles	3,541,843	42,494	4,559,226	52,718
Artificial ice	478,430	5,726	849,995	7,507
Pulp and paper mills	99,524,000	598,029	96,222,000	549,039
Vegetable oil mills	29,443	299	49,552	456
Confectionery, cocoa, etc.	455,338	8,084	681,435	12,421
Miscellaneous chemicals	21,571,578	48,142	25,675,506	58,759
Feed mills	3,684,000	54,133	3,338,000	38,460

1. Combined under "Miscellaneous food preparations".

2. Estimated.

TABLE 8. World Production of Salt, by Countries, 1950-1954
 (Taken from the Yearbook, United States Bureau of Mines)

Country ^{1, 2}	1950	1951	1952	1953	1954
Short tons					
North America:					
Canada	858,851	963,557	973,207	959,898	963,357
Costa Rica	9,259	6,002	2,500	4,289	4,519
Guatemala	12,679	13,295	13,199	16,736	12,804
Honduras	4,847	5,126	5,291	11,500 ³	11,000 ³
Mexico	162,040	181,881	189,597	246,763	246,917
Nicaragua	12,315	13,546	14,568	15,400	16,035
Panama	5,511	6,532	7,155	4,764	7,692
Salvador	17,600 ³	30,000 ³	19,800 ³	38,250	41,100
United States:					
Rock salt	3,927,267	4,662,194	4,567,531	4,458,393	4,824,708
Other salt	12,702,542	15,544,937	14,977,421	16,330,610	15,554,812
West Indies:					
Bahamas	67,200	57,100	89,600	165,000	148,357
Antigua	6,181	7,710	6,553	5,937	4,664
Turks and Caicos Islands	67,197	23,520	18,368	11,046	11,000 ³
Cuba	65,330	55,410	61,734	56,232	56,000 ³
Dominican Republic:					
Rock salt	2,540	2,502	2,869	4,183	47,239
Other salt	15,146	8,920	18,457	15,064	15,948
Haiti	28,000	28,000	33,500	33,500	33,500
Netherlands Antilles	3,300	3,300 ³	2,920	3,300 ³	3,300 ³
South America:					
Argentina	330,000	460,000	540,000	498,775	550,000 ³
Brazil	875,434	1,371,763	860,483	839,192	880,000 ³
Chile:					
Rock salt	51,487	53,933	56,262	39,129	} 50,000
Other salt	1,038	384	1,076	1,345	
Colombia:					
Rock salt	117,857	121,348	184,778	163,836	190,117
Other salt	38,630	30,937	42,109	52,208	33,413
Ecuador	20,978	36,064	44,553	15,831	22,000 ³
Peru	73,305	75,502	87,758	84,860	83,000 ³
Venezuela	62,213	42,902	127,923	80,012	91,948
Europe:					
Austria:					
Rock salt	1,196	763	1,261	1,349	1,409
Other salt	360,925	399,360	368,255	365,485	394,661
Bulgaria	4	4	4	4	4
Czechoslovakia	4	4	4	4	4
France:					
Rock and salt springs	2,460,667	2,848,109	2,254,734	2,432,301	2,666,666
Other salt	742,268	474,809	723,115	618,506	545,643
Germany - West:					
Rock salt	2,519,549	2,824,118	2,674,205	3,522,953	3,141,310
Brine salt	304,775	310,306	305,654	410,900	342,336
Greece	112,798	90,868	96,480	94,080	90,000 ³
Italy:					
Rock salt and brine salt	822,492	1,226,707	835,005	1,431,036	676,000 ³
Other salt	631,430	438,852	715,903	1,104,277	498,160
Malta	2,014	4,234	1,679	4,103	3,618
Netherlands	451,484	535,039	457,250	503,664	563,835
Poland ³	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000
Portugal:					
Rock salt	46	43	50	54	60
Other salt ⁵	33,913	32,379	25,301	3,325	2,513
Spain:					
Rock salt	339,763	405,440	413,650	434,098	439,200
Other salt	993,815	984,690	722,014	1,093,819	1,172,201
Switzerland	103,617	125,663	120,482	112,877	128,419
U.S.S.R. ³	5,500,000	6,100,000	6,600,000	6,800,000	7,200,000
United Kingdom:					
Great Britain:					
Rock salt	45,920	60,480	50,400	48,160	4
Other salt	4,692,809	5,173,290	4,363,529	4,495,689	4
Northern Ireland	14,330	14,607	12,321	11,000	12,143
Yugoslavia	144,403	105,432	163,559	136,045	110,000 ³
Asia:					
Aden	286,570	340,819	421,209	269,274	4
Afghanistan	38,581	27,268	26,125	30,020 ³	4
Burma	23,652	70,862	65,385	69,909	107,456
Ceylon	72,855	40,774	54,250	65,970	57,500

See footnotes at end of table.

TABLE 8. World Production of Salt, by Countries, 1950-1954 — Concluded

Country ^{1, 2}	1950	1951	1952	1953	1954
Short tons					
Asia — concluded:					
China	3,300,000	3,300,000	3,900,000	4,400,000	6,100,000
Cyprus	4,556	12,344	—	2,196	5,249
India:					
Rock salt	5,655	6,096	6,711		
Other salt	2,929,777	3,056,975	3,158,592	3,913,201	3,351,022
Indochina (Vietnam)	83,469	103,516	146,530	117,947	116,899
Indonesia	413,366	529,761	356,046	293,214	143,300
Iran ^{3, 6}	110,000	220,000	240,000	240,000	220,000
Iraq	13,074	18,191	21,272	20,612	20,000
Israel	8,818	10,858	13,816	23,141	26,511
Japan	460,924	474,440	477,521	507,944	468,261
Jordan	4	2,989	8,132	7,778	11,000
Korea, Republic of	192,776	93,207	224,722	212,400	198,558
Lebanon ³	7,200	7,700	7,700	9,900	17,000
Pakistan:					
Rock salt ⁶	162,226	154,796	143,662	161,855	4
Other salt ⁶	212,401	253,505	188,379	151,745	4
Philippine Islands	62,041	57,629	18,486	52,690	52,990
Portuguese India	19,409	34,808	23,567	17,606	4
Syria	21,128	4,408	17,653	21,479	14,330
Taiwan (Formosa)	192,974	302,877	343,602	178,536	406,232
Thailand (Siam)	220,000	275,000	275,000	275,000	330,000
Turkey:					
Rock salt	25,482	24,977	34,759	29,962	28,660
Other salt	316,425	275,568	321,423	354,020	458,561
Yemen	—	—	—	110,000	110,000
Africa:					
Algeria	83,396	107,234	90,768	66,139	108,434
Anglo-Egyptian Sudan	44,924	50,943	58,765	60,473	55,000
Angola	44,614	49,228	63,394	63,923	60,810
Belgian Congo	606	643	683	893	928
Canary Islands	6,693	17,338	16,800	18,872	4
Cape Verde Islands	21,792	26,572	19,941	11,715	23,326
Egypt	594,163	757,329	549,384	418,878	496,552
Eritrea	192,904	198,416	170,858	209,439	210,000
Ethiopia:					
Rock salt ³	11,000	11,000	11,000	16,211	22,000
French Equatorial Africa	4,000	4,300	4,700	4,500	6,800
French Morocco:					
Rock salt	19,300	4,860			
Other salt	50,719	51,859	44,000	44,968	35,375
French Somaliland	88,000	60,800	71,000	67,202	63,389
French West Africa ³	73,000	73,000	55,000	40,000	24,000
Italian Somaliland	1,700	2,200	5,500	5,000	5,500
Kenya	20,637	21,374	18,760	23,392	21,051
Lybia:					
Cyrenaica	—	800 ³	—	—	2,200
Tripolitania	9,921	13,228	13,228	12,125	16,535
Mauritius	2,873	3,748	2,425	2,646	3,417
Mozambique	10,959	9,607	10,580	12,012	4
South West Africa:					
Rock salt	4,316	5,187	7,592	5,176	5,403
Other salt	14,223	43,960	36,661	40,262	42,792
Spanish Morocco ³	275	275	275	275	275
Tanganyika	13,749	17,480	21,225	22,159	23,823
Tunisia	108,876	161,496	103,066	153,675	180,000
Uganda	8,171	8,674	4,528	8,419	8,052
Union of South Africa	117,281	165,121	154,956	140,610	172,185
Australia	296,800	336,001	310,240	347,201	425,000
New Zealand	—	—	784	—	1,680
Total (estimated)¹	53,000,000	60,000,000	58,000,000	63,200,000	63,400,000

1. In addition to the countries listed, salt is produced in Albania, Bolivia, Gold Coast, Hungary, Leeward Islands, Madagascar, Nigeria and Romania, but figures of production are not available. Estimates are included in the total.

2. This table incorporates a number of revisions of data published in previous salt chapters.

3. Estimate.

4. Data not available; estimate included in the total.

5. Exports.

6. Year ended March 31, of year following that stated.

TABLE 9. Employees and Their Earnings in the Salt Industry, 1952-1956

Year	Number of employees					Man-hours worked	Earnings			
	Administration		Workmen		Total employees		Administration	Workmen	Total	
	Male	Female	Male	Female						
							\$	\$	\$	
1952	87	27	488	49	651	1,465,210	400,809	1,506,410	1,907,219	
1953	103	24	501	48	676	1,379,682	409,851	1,547,467	1,957,318	
1954	107	23	489	50	669	1,380,647	510,402	1,557,022	2,067,424	
1955	99	24	515	53	691	1,476,322	493,964	1,853,116	2,347,080	
1956	121	28	591	45	785	1,534,015	631,427	2,109,258	2,740,685	

Note. Administration employees include executives, superintendents, other working officials, and professional and clerical employees.

TABLE 10. Number of Workmen in the Salt Industry, by Months, 1955 and 1956

Month	1955		1956				Total	
	Total	Surface	Under-ground	Mill				
		Male	Male	Male	Female			
January	511	144	47	415	48	654		
February	541	136	38	420	45	639		
March	467	109	32	414	39	594		
April	455	88	28	407	43	566		
May	466	90	32	416	44	582		
June	506	93	30	427	45	595		
July	498	95	29	439	48	611		
August	527	115	31	451	56	653		
September	700	135	40	441	44	660		
October	714	144	50	440	46	680		
November	720	161	55	436	44	696		
December	683	171	62	433	44	710		
Average	568	123	40	428	45	636		

TABLE 11. Fuel and Electricity Used in the Salt Industry, 1956

Kind	Unit of measure	Quantity	Cost at plant
	\$		
Bituminous coal (a) From Canadian mines	short ton	16,994	187,837
(b) Imported	"	27,703	264,541
Sub-bituminous coal (from Alberta mines only)	"	—	—
Anthracite coal	"	—	—
Lignite coal	"	—	—
Coke (for fuel only)	Imp. gal.	9,503	3,766
Gasoline, (includes gasoline used in cars and trucks)	"	—	—
Kerosene or coal oil	"	3,432,147	341,010
Fuel oil	"	—	—
Wood (cords of 128 cubic feet of piled wood)	cord	—	—
Gas (a) Liquefied petroleum gases (propane, etc.)	Imp. gal.	—	—
(b) Other manufactured gas	M cu. ft.	—	—
(c) Natural gas	"	591,856	43,215
Other fuel	k.w.h.	16,050,180	147,932
Electricity purchased for power and lighting	"	—	—
Electricity purchased for other purposes	"	...	988,301
Total (cost only)			
Electricity generated (a) For own use	k.w.h.	11,721,030	—
(b) For sale	"	41,600	334

Directory of Firms in the Salt Industry, 1956

Name of firm	Head or executive office	Location of plant
Nova Scotia:		
Malagash Salt Co. Limited	65 Provost St., New Glasgow	Cumberland Co.
Sifto Salt Limited	1400 Metcalfe St., Montreal, Quebec	Amherst
Ontario:		
Brunner Mond Canada, Ltd.	Amherstburg, Ontario	Amherstburg
Canadian Salt Co. Ltd.	625 Dorchester St. W., Montreal, Quebec	Windsor
Canadian Rock Salt Co. Ltd.	Ojibway	Ojibway
Dow Chemical of Canada Ltd.	600 University Ave., Toronto	Sarnia
Sifto Salt Limited	1400 Metcalfe St., Montreal, Quebec	Sarnia and Goderich
Warwick Pure Salt Co. Ltd.	R.R. No. 5, Watford	Lambton Co.
Manitoba:		
Canadian Salt Co. Ltd.	625 Dorchester St. W., Montreal, Quebec	Neepawa
Saskatchewan:		
Sifto Salt Limited	1400 Metcalfe St., Montreal, Quebec	Unity
Alberta:		
Canadian Salt Co. Ltd.....	625 Dorchester St. W., Montreal, Quebec	Lindbergh
Western Chemical Ltd.	Michael Bldg., Calgary	Duvernay





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