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THE SALT INDUSTRY

1954

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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 Miscellaneous Metal Mining Industry, 25¢
- F — The Non-ferrous Smelting and Refining Industry, 25¢
- G — The Coal Mining Industry, \$1.00
- H — The Crude Petroleum and Natural Gas Industry, 25¢
- I — The Asbestos Mining Industry, 25¢
- J — The Feldspar and Quartz Mining Industry, 25¢
- K — The Gypsum Industry, 25¢
- L — The Peat Industry, 25¢
- M — The Salt Industry, 25¢
- N — The Talc and Soapstone Industry, 25¢
- O — The Miscellaneous Non-metal Mining Industry, 25¢
- P — The Cement Manufacturing Industry, 25¢
- Q — The Clay and Clay Products Industry, 25¢
- R — The Lime Industry, 25¢
- S — The Sand and Gravel Industry, 25¢
- T — The Stone Industry, 25¢
- U — Contract Drilling in the Mining Industry, 25¢

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THE SALT INDUSTRY

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The Canadian producers shipped 969,887 tons of common salt or sodium chloride valued at \$8,340,163, excluding the cost of containers, during 1954. In the preceding year the shipments amounted to 954,928 tons valued at \$6,994,501 f.o.b. works. Of the total output, Ontario plants produced 76 per cent, Nova Scotia 15 per cent and the remainder was produced in Manitoba, Saskatchewan and Alberta. A new chemical plant was operated at Two Hills, Alberta, by Western Chemicals Limited which produced caustic soda and chlorine from salt brine.

Eight firms operated 13 plants. The industry employed an average of 669 persons to whom

\$1,380,647 were paid in salaries and wages. Fuel and electricity cost \$758,120, including 11,172,710 kwh. of purchased electricity at a cost of \$86,187. Electricity generated for the firms' own use totalled 23,912,444 kwh. Process supplies cost \$430,639 and the value of containers was \$1,513,972.

Exports of salt in 1954 amounted to 1,198 tons valued at \$25,935. Imports totalled 370,412 tons valued at \$2,151,428. The apparent consumption of salt in Canada, computed from producers' shipments plus imports less exports, without allowance for change in stocks, totalled 1,339,101 tons.

TABLE 1. Principal Statistics for the Salt Industry, Significant Years, 1921-1954

Year	Establishments	Employees	Salaries and wages	Cost of fuel and electricity at works	Cost of process supplies and containers	Gross value of products shipped ¹ during year, 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	1,148,672
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
1950	13	643	1,521,593	837,453	1,343,157	8,100,113	5,919,503
1951	12	689	1,633,222	973,257	1,596,119	9,201,265	6,631,889
1952	12	651	1,907,219	1,045,911	2,014,335	9,056,079	5,995,833
1953	12	676	1,957,318	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

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

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

TABLE 2. Production and Shipments¹ of Salt, 1953 and 1954

	1953			1954		
	Production	Shipments		Production	Shipments	
		Quantity	Value, excluding containers		Quantity	Value, excluding containers
	tons	tons	\$	tons	tons	\$
Fine vacuum salt	378,467	375,928	5,605,107	411,184	414,799	6,871,812
Coarse grainer salt	4,911	4,934	100,042	1,458	1,750	32,495
Mined rock salt	71,034	70,510	536,190	80,652	81,006	672,363
Salt recovered in chemical operations	47,339	45,409	126,775	19,821	22,090	86,284
Total dry salt	501,751	496,781	6,368,114	513,115	519,645	7,662,954
Salt content of brines used and shipped	458,147	458,147	606,387	450,242	450,242	677,209
Total salt and salt content of brine	959,898	954,928	6,974,501	963,357	969,887	8,340,163
Value of containers	—	—	1,431,288	—	—	1,513,972
Total value, including containers	—	—	8,405,789	—	—	9,854,135

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

TABLE 3. Shipments of Salt by Producers, 1945-1954

Year	Tons	\$	Year	Tons	\$
1945.....	673,076	4,054,720	1950	858,896	7,011,306
1946.....	537,985	3,626,165	1951	964,525	7,905,977
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

TABLE 4. Producers' Shipments of Salt, by Provinces, 1945-1954

Year	Nova Scotia		Ontario		Manitoba		Saskatchewan		Alberta	
	Tons	\$	Tons	\$	Tons	\$	Tons	\$	Tons	\$
1945.....	37,825	254,138	578,697	2,920,973	27,133	499,561	—	—	29,421	430,048
1946.....	38,371	329,579	441,679	2,408,279	26,166	446,472	—	—	31,769	441,835
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

TABLE 5. Producers' Shipments of Salt, by Months, 1952-1954

Month	1952	1953	1954	Month	1952	1953	1954
	Tons				Tons		
January	83,076	80,125	77,421	July	80,306	76,025	76,377
February	80,281	69,206	73,845	August	82,656	82,518	80,617
March.....	73,423	72,412	73,689	September	80,729	85,977	77,617
April	73,433	74,219	75,751	October	99,089	83,594	88,793
May	77,163	84,561	77,569	November	81,000	83,291	91,266
June.....	86,196	79,691	79,712	December	74,551	83,309	97,230
	Total			Total	971,903	954,928	969,887

TABLE 6. Production, Imports, Exports and Consumption of Salt, 1952-1954

	1952		1953		1954	
	tons	\$	tons	\$	tons	\$
Producers' shipments	974,903	7,774,815	954,928	6,974,501	969,887	8,340,163
Imports:						
Table salt	32	2,843	24	2,307	24	7,718
Salt for the use of fisheries	69,549	400,669	60,121	369,042	58,745	315,581
Salt, in bulk, n.o.p.	183,641	1,082,334	210,826	1,115,000	270,802	1,308,995
Salt, in bags, barrels, etc., n.o.p. ..	34,902	573,809	36,362	531,025	40,841	519,134
Total imports	288,124	2,059,655	307,333	2,017,474	370,412	2,151,428
Exports	2,844	44,631	2,354	32,499	1,198	25,935
Apparent consumption	1,257,183	9,789,839	1,259,907	8,959,476	1,339,101	10,465,656

TABLE 7. Consumption of Salt in Specified Canadian Industries, 1952 and 1953

Industry	1952		1953	
	Quantity used	Cost at works	Quantity used	Cost at works
	lb.	\$	lb.	\$
Acids, alkalies and salts:				
Brine (salt content)	885,849,780	501,941	896,445,936	557,957
Dry salt	376,693,927	2,090,487	377,397,326	2,048,022
Artificial abrasives	602,000	5,762	578,000	5,878
Slaughtering and meat packing	99,058,574	919,232	92,554,820	809,698
Sausage and sausage casings	1,824,995	20,547	1,415,792	27,082
Animal oils and fats	214,000	2,134	174,500	1,745
Fish processing	51,356,000	540,501	50,945,100	535,092
Foods, breakfast	1,721,492	19,051	1,730,351	18,735
Biscuits	2,834,690	41,645	2,469,962	34,244
Bread and bakery products	23,136,451	336,901	23,071,619	336,119
Macaroni, vermicelli, etc.	57,293	1,181	60,251	1,340
Miscellaneous food preparations	10,679,460	143,038	9,878,810	144,231
Butter and cheese .....	...	225,597	...	260,739
Cheese, process	714,082	9,524	576,659	7,763
Concentrated milk products .....	...	5,719	...	5,279
Starch and glucose ¹	1	1	1	1
Fruit and vegetable preparations	27,315,642	300,416	24,671,405	293,603
Breweries	1,296,186	27,786	1,979,997	29,200
Malt and malt products ¹	1	1	1	1
Stock and poultry feeds, prepared	41,950,000	502,074	34,362,000	400,636
Leather tanneries	14,301,149	125,685	14,788,659	136,567
Soaps and cleaning preparations	4,552,892	30,918	4,537,281	32,359
Dyeing and finishing of textiles	4,432,841	48,946	3,587,978	44,547
Artificial ice	594,374	6,685	602,516	6,834
Pulp and paper mills	60,994,000	376,376	54,370,000	369,967
Vegetable oil mills	66,995	1,927	52,805	1,179
Confectionery, cocoa, etc.	438,035	7,589	455,960	6,910
Miscellaneous chemicals	18,210,147	30,569	18,170,913	37,164
Feed mills .....	...	...	2,124,000	26,576

1. Combined under "Miscellaneous food preparations".

TABLE 8. World Production of Salt, by Countries, 1949-1953

(Taken from the Yearbook, United States Bureau of Mines)

Country ^{1, 2}	1949	1950	1951	1952	1953
Metric tons					
North America:					
Canada.....	681,278	779,132	874,120	882,374	864,756
Costa Rica.....	8,200	8,400	5,445	2,268	3,891
Guatemala.....	11,962	11,502	12,061	11,974	15,183
Honduras.....	11,503	4,397	4,650	4,800	10,400 ³
Mexico.....	124,700	147,000	165,100	172,500	4
Nicaragua.....	10,230 ³	11,172	12,289	13,216 ³	13,971
Panama.....	3,408	5,000	7,480	11,500 ³	4,331
Salvador.....	16,000 ³	16,000 ³	27,200 ³	18,000 ³	34,700
United States:					
Rock salt.....	3,124,637	3,562,738	4,229,449	4,143,573	4,044,565
Other salt.....	11,002,165	11,523,492	14,102,056	13,587,217	14,814,803
West Indies:					
Bahamas.....	60,960	60,960	51,800	81,300	150,000
Turks and Caicos Islands.....	61,765	60,960	21,337	16,663	4
Cuba.....	59,874	59,266	50,267	56,004	51,013
Dominican Republic:					
Rock salt.....	2,412	2,304	2,270	2,603	3,795
Other salt.....	8,140	13,740	8,092	16,744	13,666
Haiti.....	8,000 ³	4	4	30,400	30,400
Netherlands Antilles.....	370	3,000	4	2,645	4
South America:					
Argentina.....	703,421	468,800	806,613	932,749	452,482
Brazil.....	805,632	794,181	1,244,444	780,618	759,801
Chile:					
Rock salt.....	35,079	46,709	48,927	{ 50,000 ³	50,000 ³
Other salt ³	4,450	942	348		
Colombia:					
Rock salt.....	102,160	106,918	110,085	167,628	148,630
Other salt.....	23,932	35,045	28,066	38,201	47,362
Ecuador.....	15,291	19,031	32,717	40,418	24,000 ³
Peru.....	55,968	66,501	68,494	79,613	76,934
Venezuela.....	71,926	56,439	38,920	116,050	72,586
Europe:					
Austria:					
Rock salt.....	719	1,085	692	1,144	1,224
Other salt.....	304,792	327,426	362,294	334,076	331,563
Bulgaria.....	4	4	4	4	4
Czechoslovakia.....	4	4	4	4	4
France:					
Rock and salt springs.....	1,772,067	2,059,123	2,327,581	1,953,454	2,000,000 ³
Other salt.....	742,721	604,550	343,900	656,000	600,000 ³
Germany - West:					
Rock salt.....	1,624,423	2,285,699	2,562,000	2,426,001	3,195,973
Brine salt.....	250,118	276,488	281,505	277,285	372,763
Greece.....	86,776	102,329	82,434	87,525	4
Italy:					
Rock salt and brine salt.....	804,435	746,153	1,112,851	749,526	1,298,216
Other salt.....	471,913	572,824	398,120	649,457	1,001,784
Malta.....	1,807	1,827	3,841	1,523	3,722
Netherlands.....	334,360	409,580	485,380	414,811	456,917
Poland.....	836,253	1,000,000 ³	1,000,000 ³	1,000,000 ³	1,000,000 ³
Portugal:					
Rock salt ⁵	41	42	39	45	45
Other salt ⁵	16,903	30,765	29,374	22,953	3,016
Spain:					
Rock salt.....	288,896	308,228	367,809	375,257	393,308
Other salt.....	546,836	901,575	893,297	655,001	992,297
Switzerland.....	100,000 ³	94,000	114,000	109,300	102,400
U.S.S.R. ³	5,000,000	5,000,000	5,500,000	6,000,000	6,200,000
United Kingdom:					
Great Britain:					
Rock salt.....	41,658	41,658	54,867	45,722	50,000 ³
Other salt.....	3,761,417	4,257,250	4,693,135	3,958,532	4,000,000 ³
Northern Ireland.....	13,000	13,000	13,251	11,177	10,000 ³
Yugoslavia.....	108,900 ³	131,000	95,646	148,378	123,418
Asia:					
Afghanistan.....	6,000	35,000	24,737	23,700	4
Aden.....	303,302	259,972	308,136	292,355	240,423
Burma.....	31,692	21,457	64,285	59,316	63,420
Ceylon.....	28,780	66,093	36,990	49,215	59,847

See footnotes at end of table.

TABLE 8. World Production of Salt, by Countries, 1949-1953 — Concluded

Country ^{1, 2}	1949	1950	1951	1952	1953
Metric tons					
Asia — concluded:					
China ³	2,000,000	3,000,000	3,000,000	3,500,000	4,900,000
Cyprus	—	4,133	11,198	—	1,952
India:					
Rock salt	4,229	5,130	5,530	6,088	
Other salt	2,017,831	2,657,852	2,773,244	2,865,430	3,212,998
Indochina	113,600	75,722	93,908	144,000 ³	107,000
Indonesia	320,000	375,000	480,592	323,000	266,000
Iran	100,000 ³	100,000 ³	76,252	200,000 ³	220,000 ³
Iraq	8,989	11,861	16,503	19,298	4
Israel	6,500	8,000	9,850	12,534	20,993
Japan	395,676	418,144	430,405	433,200	460,800
Jordan	4	4	2,712	7,377	4
Korea, Republic of	183,812	174,884	84,556	203,365	192,686
Lebanon ³	2,500	6,500	7,000	3,500	4,000
Pakistan:					
Rock salt ⁶	177,709	147,169	140,429	130,323	146,833
Other salt ⁶	138,600	132,687	229,976	170,895	151,745
Philippine Islands	52,276	56,283	52,280	16,770	47,794
Portuguese India	18,132	17,608	31,577	21,380	15,972
Syria	21,619	19,167	3,999	16,013	19,485
Taiwan (Formosa)	253,948	175,063	274,766	311,711	171,450
Thailand (Siam) ³	150,000	200,000	250,000	250,000	250,000
Turkey:					
Rock salt	17,920	20,330	21,584	34,000	27,000 ³
Other salt	298,425	284,912	249,970	302,000	358,500 ³
Yemen	—	—	—	—	100,000
Africa:					
Algeria	101,676	75,656	97,281	82,343	60,000
Anglo-Egyptian Sudan	43,029	40,754	46,215	53,311	4
Angola	41,286	40,473	49,228	57,510	57,809
Belgian Congo	813	550	583	620	810
Canary Islands	5,283	6,072	15,729	15,241	4
Cape Verde Islands	19,301	19,769	24,106	18,090	4
Egypt	349,878	539,016	687,038	498,393	380,000 ³
Eritrea	85,760	53,922	60,000 ³	40,000 ³	40,000 ³
Ethiopia:					
Rock salt ³	10,000	10,000	10,000	10,000	14,706
French Equatorial Africa ³	1,800	3,600	3,900	4,300	4,100
French Morocco:					
Rock salt	6,633	17,509		40,000	40,794
Other salt	36,630	46,012	45,971		
French Somaliland	60,000	80,000	55,200	64,400	60,965
French West Africa ³	50,000	66,000	66,000	50,000	36,000
Italian Somaliland ³	3,000	1,500	2,000	3,000	4,500
Kenya	18,820	18,722	19,084	17,019	20,886
Lybia:					
Cyrenaica	500 ³	—	2,500 ³	—	—
Tripolitania	6,000 ³	9,000	12,000	12,000	11,000
Mauritius	5,200	2,606	3,400	2,200	2,400
Mozambique	11,004	9,942	8,700 ³	10,505	4
South West Africa:					
Rock salt	2,468	3,915	4,706	6,887	4,696
Other salt	13,730	12,903	39,380	33,258	36,525
Spanish Morocco ³	254	254	254	254	254
Tanganyika	14,970	12,473	15,858	19,255	17,889
Tunisia	98,085	98,771	146,507	93,500	139,412
Uganda	7,400	7,413	7,869	4,108	7,638
Union of South Africa	162,936 ⁷	106,396	149,795	140,574	127,559
Australia	248,932 ³	269,253	304,815 ³	281,446	314,976
Total (estimated) ¹	43,000,000	48,000,000	54,000,000	53,000,000	56,000,000

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.

7. Year ended June 30, of year stated.



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TABLE 9. Employees and Their Earnings in the Salt Industry, 1950-1954

Year	Number of employees					Man-hours worked	Earnings			
	Administration		Workmen		Total employees		Administration	Workmen	Total	
	Male	Female	Male	Female						
1950	89	24	487	43	643	-	328,189	1,193,404	1,521,593	
1951	134	36	470	49	689	1,385,463	367,019	1,266,203	1,633,222	
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	

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, 1953 and 1954

Month	1953			1954		
	Male	Female	Total	Male	Female	Total
January	488	42	520	476	40	516
February	491	45	536	491	53	544
March	467	51	518	454	44	498
April	474	48	522	463	42	505
May	484	47	531	475	52	527
June	507	51	558	488	48	536
July	526	51	575	523	56	579
August	537	50	587	519	53	572
September	535	46	581	500	58	558
October	529	55	584	496	57	553
November	501	50	551	492	52	544
December	496	41	537	474	48	522
Average	501	48	549	489	50	539

Directory of Firms in the Salt Industry, 1954

Name of firm	Head or executive office	Location of plant
Nova Scotia: Malagash Salt Co. Limited	65 Provost St., New Glasgow	Cumberland Co.
Dominion Salt Co. Ltd.	2240 Sun Life Bldg., Montreal, Quebec	Amherst
Ontario: Brunner Mond Canada, Ltd. Canadian Salt Co. Ltd. Dominion Salt Co. Ltd. Dow Chemical of Canada Ltd. Purity Flour Mills Ltd. Warwick Pure Salt Co. Ltd.	Amherstburg, Ontario 625 Dorchester St. W., Montreal, Quebec 2240 Sun Life Bldg., Montreal, Quebec 204 Richmond St. W., Toronto 287 MacPherson Ave., Toronto R.R. No. 5, Watford	Amherstburg Windsor Sarnia and Goderich Sarnia Goderich Lambton Co.
Manitoba: Canadian Salt Co. Ltd.	625 Dorchester St. W., Montreal, Quebec	Neepawa
Saskatchewan: Dominion Salt Co. Ltd.	Unity, Saskatchewan	Unity
Alberta: Canadian Salt Co. Ltd. Western Chemicals Ltd.	625 Dorchester St. W., Montreal, Quebec	Lindbergh Two Hills