The Harkness Files



Volume XII

Natural Gas Statistics

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The Harkness Files
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Preface

The Harkness Files
Volume XII
Natural Gas Statistics

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~~ac~~ Emerald #1	Acme Blakeley	Acme Heemer	Acme Pos mile	Ajax 1 well
	6810	5858	974	
	6305	5211	728	
	5420	4096	680	
	5015	3451	502	
	2449	2381	248	
	1849	1613	208	
1677	1159	1154	18	
1035	1105	894	302	474
1240	809	1099	414	717
1326	1270	661	472	645
1735	2039	2071	528	634
1273	3686	2808	396	540
8269	37916	31297	5470	3010
	69213			
1122	3993	2628	366	573
1096	3296	2211	332	533
820	3047	1732	262	479
952	2053	1420	292	531
887	1149	605	266	510
923	921	804	336	537
655	870	848	336	
670	803	959	214	373
514	1878	904	238	554
822	1952	972	212	248
1027	1808	1132		566
828	2242	1073	196	489
10316	24012	15288	3050	5393
	39300			
767	2677	1107	198	409
668	2315	1279	176	330
589	2198	1375	212	329
642	2435	1217	268	464
	9625			

Chatham
May 1st 1945

UNION GAS COMPANY OF CANADA, LIMITED
and its Subsidiaries

YEAR ENDING March 31st 1945

Volume of Gas Production and Sales (exclusive of Haldimand Division)

All figures represent thousands of cubic feet.

	Fiscal Years ended 31st March								
	1937	1938	1939	1940	1941	1942	1943	1944	1945
Production									
Natural Gas									
Company Wells	4,865,295	5,063,999	5,153,612	5,998,711	6,631,609	6,367,344	4,445,414	3,294,905	2,845,477
Purchase									
Petrol Oil & Gas Co.	43,839	38,900	33,107	28,159	23,176	19,896	15,943	13,966	13,642
Ajax Oil & Gas Co.	336,782	476,086	444,886	198,328	144,972	144,143	113,261	99,583	85,912
American Engineering	65,697	60,930	57,611	53,428	47,454	40,471	41,511	42,202	37,583
Others	11,529	22,535	3,360	5,505	-	9	9	298	-
Total Natural Gas:	5,321,140	5,662,450	5,692,576	6,284,131	6,847,211	6,571,863	4,616,138	3,450,954	2,982,614
Mixed Still Gas 1000 B.T.U.							945,819	2,097,431	2,169,105
Oil Gas 425 B.T.U.					8,493	57,958	119,921	181,333	242,182
Propane 2525 B.T.U.						8,714	1,978	15,302	35,387
Total Input:	5,321,140	5,662,450	5,692,576	6,284,131	6,855,704	6,638,535	5,683,856	5,745,020	5,429,288
Sales									
Domestic and Commercial: Union Co.	1,454,077	1,592,714	1,571,435	1,726,051	1,809,680	1,673,722	1,614,526	1,761,418	1,788,623
Windsor Co.	1,250,180	1,410,687	1,369,741	1,475,531	1,583,656	1,486,801	1,255,556	1,284,549	1,290,118
London Co.	1,287,653	1,652,427	1,584,852	1,766,034	1,925,750	1,724,800	862,758	699,760	724,852
Total Domestic and Commercial:	3,991,910	4,655,828	4,526,028	4,967,616	5,319,086	4,885,323	3,732,840	3,745,727	3,803,593
Industrial: Union Co.	478,247	513,938	516,381	602,070	606,247	647,369	573,631	493,105	367,835
Windsor Co.	273,048	314,257	300,720	342,513	518,505	683,785	838,025	825,149	686,427
London Co.	80,428	88,304	103,420	144,027	169,067	177,838	130,121	129,044	128,928
Total Industrial:	831,723	916,499	920,521	1,088,610	1,293,819	1,508,992	1,541,777	1,447,298	1,185,190
Dominion Natural Gas Co. Ltd.	-	-	-	-	25,649	4,472	-	-	58,270
Central Pipe Line Co.	-	-	-	-	-	-	2,427	6,061	8,198
Total Sales:	4,823,633	5,572,327	5,446,549	6,056,226	6,638,554	6,398,787	5,277,044	5,199,086	5,055,251
Company use and Free Gas	84,500	86,643	81,133	87,347	94,528	112,398	157,091	210,078	208,648
	4,908,133	5,658,970	5,527,682	6,143,573	6,733,082	6,511,185	5,434,135	5,409,164	5,263,899
Wells in Use -	217	217	226	229	264	287	292	283	257

all in Million Cubic Feet

PRODUCTION FROM Present Operating Wells

YEAR	Company Owned wells: Haldimand Norfolk	Company Owned wells: Tilbury Field	Syndicate: Haldimand Norfolk	Syndicate: Tilbury Dome
1946	1300.8	783.3	938.9	167.8
47	1204.3	730.0	842.7	143.1
48	1111.8	679.0	755.8	124.6
49	1029.4	630.0	679.0	108.1
1950	952.0	590.0	611.3	93.0
1	880.7	550.0	547.9	83.0
2	814.4	515.0	492.2	72.4
3	753.1	482.0	441.9	60.0
4	696.9	450.0	396.6	54.7
5	644.7	420.0	356.2	48.9
6	596.5	392.0	318.8	44.5
7	552.3	366.0	287.2	39.6
8	510.2	341.0	257.9	27.0
9	472.1	317.0	231.7	3.5
1960	436.0	296.0	208.5	3.1
1	403.0	276.0	187.6	2.7
2	373.0	258.0	167.8	2.4
3	345.0	241.0	157.2	2.1
4	319.0	225.0	135.5	—
5	295.0	210.0	121.0	—
1966	273.0	196.0	109.7	—

PRODUCTION FROM FUTURE DRILLING HALDIMAND-NORFOLK FIELD

YEAR	By Company	By Syndicate	Total
1946			3.190.4
47	146.0	61.0	3.126.1
48	386.0	130.0	3.106.2
49	438.0	185.0	3069.5
1950	553.0	233.0	3032.3
1	642.0	270.0	2973.6
2	717.0	301.0	2912.0
3	785.0	329.0	2857.0
4	848.0	345.0	2801.2
5	905.0	379.0	2753.8
6	957.0	401.0	2709.8
7	1005.0	421.0	2671.1
8	1049.0	439.0	2642.1
9	1089.0	456.0	2569.3
1960	1126.0	471.0	2540.6
1	1159.0	485.0	2513.3
2	1190.0	498.0	2489.2
3	1218.0	510.0	2.467.3
4	1244.0	521.0	2444.5
5	1267.0	531.0	2425.0
1966	1288.0	540.0	2006.7

Maximum Months Delivery

	Present wells	Future wells	Total
1946	3556		355.6
47	340 9	26 5	366 6
48	311 4	55 8	367 2
49	285 7	79 8	365 5
1950	262 6	100 7	362 3
1	241 2	116 9	358 1
2	221 8	130 5	352 3
3	203 6	142 8	346 4
4	187 5	154 2	341 7
5	172 6	164 6	337 3
6	158 9	174 2	332 9
7	146 5	182 8	329 3
8	133 9	190 8	324 7
9	121 3	198 2	319 3
1960	111 8	204 7	316 5
1	103 2	210 7	313 7
2	95 2	216 4	311 4
3	87 2	221 5	309 2
4	80 7	226 3	307 9
5	74 5	230 5	305 9
1966	68 8	234 3	303 1

Maximum Day Delivery

	Present wells	Future wells	Total
1946	12 3		12 3
47	12 1	0.9	13 2
48	11 1	2.2	13 1
49	10 1	2 8	12 9
1950	9 3	3 6	12 9
1	8.6	4 1	12 7
2	7 9	4 6	12 5
3	7 2	5 1	12 3
4	6 6	5 5	12 1
5	6 1	5 9	12 0
6	5 6	6 2	11 8
7	5 2	6 5	11 7
8	4 7	6 8	11 5
9	4 3	7 0	11 3
1960	4 0	7 3	11 2
1	3 6	7 5	11 1
2	3 3	7 7	11 0
3	3 1	7 9	11 0
4	2 9	8 0	10 9
5	2 6	8 2	10 8
1966	2 4	8 3	10 7

	Propane and other gas Purchased	Total
	302.3	3492.4
	400 :	3526 1
	400 :	3506 2
	400 :	3469 5
	400 :	3432 3

Customers

	Domestic		Gen Industrial		
1937	46 389	242	210		46 841
38	48 317	232	212		48 761
39	41 897	238	206		42 341
40	43 862	307	314		44 483
41	45 049	320	257		45 626
42	45 176	259	240		45 623

Total	12,661.4	8163.0	7,300.5	913.7	17932.0	7576.0	54,486.6

In 1966 all reserve acreage will have been drilled and depletion will be a steady decline

Reserves as above

From Present Company Wells 20,824.4

From Present Syndicate Wells 8,214.2

" Future Drilling 25,448.

Total 54,486.6

Maximum Month 1946 - Feb. 424,921

" " 1947 do - 418,273

Maximum Day 1946 - Jany 21st - 15,304

" " 1947 - Jany 23 - 15,726

DOMINION NATURAL GAS CO LTD

43	44,969	255	239	45,463
44	45,583	254	243	46,080
45	46,462	258	246	46,968
46	47,766	253	249	47,768

Sales of Tea from Tuscarora Twp.

Year	Ajax	Petrol
1944		
~~1943~~ 1943		
~~1942~~		
~~1941~~ 1942	38 847	89 121
1941	41 094	88 802
1940	44 886	88 296
1938	26 272	58 218
1937	22 241	56 275
1936		

	Wells	RP.	OF.
Seneca			
Dominion Nat Gas Co	32	86	121
Central Seneca Gas Syndicate	3	52	19
Dominion Nat Gas Co	10	64	41
	72	69	444
Total	117		625
Cayuga North			
Western Dev Gas Co	2	162	6
Lyncharoom Rubber	8	122	35
Indian River Gas Oil Syndicate	16	94	136
North Cayuga Gas Syndicate	8	80	21
Caufield Gas Co	7	160	75
W C Patterson	7	158	55
Caufield Gas Syndicate	7	-	21
Dalrell Detroit Gas	5	120	13
Dominion Nat Gas Co	56	116	502
Total	116		867
Cayuga South Gifford & Son	4	70	12
Indian Gas Co	5	83	18
Dominion Nat Gas Co			285
Total	9		315
Cashaqua Western Dev Gas Co	12	75	49
Nat Emerson	9		43
A Rickey	3		13
E Shepherd	1	70	4
Burdell Gas Syndicate	2	50	7
P. Jackson	1		2
Elizabeth Glenny	7	84	23
Sundy	3	92	26
Boonville Gas Syndicate	3	151	19
Lincoln Gas Co	5		6
Dominion Nat Gas Co	87		654
	134		846
Moulton Smith & Elder	2	40	22
do.	4	72	18
do.	6	93	94
Canadian Nat Gas Co	16	94	40
Lincoln	2	150	9
Emerson Bros	4	80	7
J. Riley	2	92	9
Stromwell Gas Co	2	158	6
P. Jackson	15		45
Dominion Nat Gas Co	43		338
	91		578
Oneida Cyclops	3	173	23
Jackson Bros	2	-	7
Mohawk	1	150	2
Feathers Gas	2	175	37
Shaw & Shank	7		57
Emerald	1	200	7
Dominion Nat Gas	26		339
	42		472
Onondaga			
Onondaga	9		47
Tuscarora	78		560

Summary of Low Pressure by Townships

	No Wells	Average Rock Pressure	Total Open Flow
Seneca	117	64	625
Cayuga North	116	110	367
Cayuga South	67	80	315
Canboro	139	70	906
Moulton	97	89	668
Oneida	55	112	545
Burbrook	39	55	269
Caistor	23	70	201
Gainsboro	1	40	2
Glanford	10	47	152
Sherbrook	12	100	390
Wainfleet	11	87	47
Humberstone	16	58	82
	703		4569
	6		
Gaunsby Gas Co	57	65	662
Onondaga	9	65	47
Tuscarora	78	83	560
Pt Colborne Welland	48	90	174
	192		1443

DOMINION NATURAL GAS CO

	Dominion Wells				Syndicate Wells	
	Total	Open Flow	No Measured	Rock Pressure	Total	Open Flow
Year	31st Dec.	June			Wells	
1924	978	25 916 (18 187)				
25	914	17 734 (15 514)				
26	897	30 300 (16 263)				
27	895	32 287 (19 000)				
28	996	35 876 (18 794)				
29	1044	40 042 (23 159)				
1930	1077	37 593 (22 374)				
31	1105	36 138 (21 243)				
32	1083	32 638 (20 921)				
33	1067	31 705 (19 291)				
34	1050	28 649 (18 278)			520	11 753
35	1035	27 956 (17 562)			694	46 618
36	1013	25 417 (16 170)			805	47 747
37	991	24 065 (16 054)		178	865	76 469
38	964	23 036		174	920	183 465
39	957	21 838		170	941	195 230
1940	952	20 260		163	939	59 302
41	962	17 150		154	879	15 120
42	1004	17 487	983	154	914	13 185
43	1071	17 241	1029	155	892	10 525
44						

information for the past year ending:-

OPERATING REVENUES	M.C.F.	Amount
Residential	-	-
House Heating	-	-
Commercial	-	-
Industrial	-	-
Town Border or Wholesale	-	-
Other Sales	-	-
Total M.C.F.	-	
Total Gas Revenues		-

In addition we must have the forfeited discounts, meter rentals

Preliminary Industrial

	More than one family on a meter Commercial no heating 1R	Gas fired furnaces houses with out any chimney 1HH	Upper Apts Hardship cases. Where no storage space 2	No heat Convers Burners where other fuel can be used 3	Total
St Catharines	423	244	344	433	1444
Brantford	212	69	351	353	985
Galt	70	144	269	242	725
Paris	14	26	83	33	156
Woodstock	30	68	352	152	602
Ingersoll	24	55	157	164	400
St Thomas	93	330	396	755	1574
Leamington	249	–	183	700	1132
Simcoe	76	552	766	1255	2649
Tillsonburg	3	67	346	105	521
Dunnville	83	289	420	556	1348
Pt Colborne	106	163	163	171	603
Selkirk	33	69	156	72	330
Mt Hamilton	10	15	19	20	64
Leamington	72	68	212	221 679 474	1695
Belmont	6	6	7	10 10	39
Beachville	1	–	3	5	9
Fonthill	12	2	8	68	90
Fisherville	2	8	5	3 11 3F 13	39
	1379	2256	4462	5126	12808
				6510	14680

EXEMPTION APPLICATIONS BY TOWNS

DOMINION NATURAL GAS CO. LTD.

	OK 1R	OK 1HH	#2	out #3	? 3F	Totals
Simcoe	104	550	789	686	529	2649
Dunnville	43	289	463	344	233	1372
~~Leamington Town~~	~~72~~	~~68~~	~~212~~	~~331 474~~	~~619~~	~~1695~~
St. Thomas	102	341	407	357	409	1616
Brantford	236	82	387	187	139	1031
Leamington *Dominion*	59 ~~59~~	100 ~~100~~	227 ~~227~~	357 ~~354~~	382 ~~382~~	1125 ~~1125~~
St. Catharines	430	256	362	250	213	1511
Galt	79	144	282	144	85	734
Hamilton	16	14	16	10	15	71
Paris	14	27	83	16	22	162
Pt. Colborne	103	123	194	74	108	602
Woodstock	30	68	352	108	50	608
Tillsonburg	3	67	348	66	43	527
Ingersoll	31	56	164	95	63	409
Selkirk	36	55	162	62	32	347
Totals	1286	2172	4227	2756	2323	12764

INDEPENDENT COMPANIES

Fisherville	2	8	5	13	11	
Belmont	6	6	7	10	10	
Beachville	1	--	3	3	2	
Fonthill	12	2	8	68	--	
Total	21	16	23	94	23	177
Total Both	1307	2188	4250	2850	2346	12941
Town of Leamington	72	68	212	221 474	619	1695
Grand Total	1379	2256	4462	3545	2965 6510	14,680

CONSOLIDATION NATURAL GAS CO. ETC.

TOWN-TION APPLICATIONS BY TOWNS

Simcoe	104	316	782	586	529	2049
Dunnville	43	209	469	341	239	1372
~~Lowbridge Twins~~	~~75~~	~~69~~	~~~~	~~~~

TOTAL APPLICATIONS
FOR EXEMPTION FROM GAS RATIONING
SATURDAY, august 23, 1947

Grade	1 R	- 1307
	1HH	- 2188
	2	- 4250
	3	- 2850
	3F	- 2346
	specials	- 44
		12985 Total

1695 Leaming Tons
14,680.

Grade 1. HH

A. Straight gas fired central heating units.
B. Premises without chimney.

Grade 1R.

A. Large water heater installations.
B. Cases where more than one family served through one meter. Large accounts with no gas heating.

Grade 2.

A. Extreme Hardship cases.
B. Upper rooms without storage facilities for other fuel.
C. Special cases not otherwise provided for: Rinks, theatres, Lounges, Beer halls, etc.

Grade 3.

A. Conversion burners in coal furnaces. can use 5 M.
B. Any auxiliary heating.
Disallow

Grade 3F.

Any place where other fuel can be used but necessary to purchase heating appliance to do so.

TOTAL APPLICATIONS
FOR EXEMPTION FROM GAS RATIONING
SATURDAY, August 23, 1942

Grade	1	- 1307
	1HW	- 2188
	2	- 4250
	3	- 2850
	3F	- 2346
	specials	- 44
		12985 Total

Grade 1.

A. Straight gas fired central heating units.
B. Premises without chimney.

Grade 1R.

A. Large water heater installations.
B. Cases where more than one family served through one meter. Large accounts with no gas heating.

Grade 2.

A. Extreme Hardship cases.
B. Upper rooms without storage facilities for other fuel.
C. Special cases not otherwise provided for: Rinks, theatres, Lounges, Beer halls, etc.

Grade 3.

A. Conversion burners in coal furnaces.
B. Any auxiliary heating.

Grade 3F.

Any place where other fuel can be used but necessary to purchase heating appliance to do so.

NATURAL GAS RESERVES

Year	New Open Flow	
1937	181 364	Statement: —
1938	111 402	89 wells drilled in
1939	63 907	1940 (supplying Dominion
1940	71 389	with a reserve of about
		24 million cu ft.
		? ? ?

This includes Brownsville

	NO. OF WELLS			OPEN FLOW (M.C.F.)		
	1938	1939	1940	1938	1939	1940
Dominion Natural Gas Co.	884	862	859	16,042	15,351	14,727
Syndicates	797	799	819	14,786	12,689	11,341
Southern Ontario Gas Co.	102	97	93	6,994	6,487	5,596
Syndicates:						
(a) Western Division	28	30	36	21,395	23,445	15,708
(b) Eastern Division (Brownsville)	66	72	34	142,399	136,353	29,873
TOTALS	1,877	1,860	1,841	201,616	194,325	77,245

NATURAL GAS RESERVES

Year	New Open Flow
1937	181 364
1938	111 402
1939	63 907
1940	71 389

Statement:—
89 wells drilled in 1940 (supplying Dominion with a reserve of about 24 million cu ft.
? ? ?

This includes Bronsonville

DOMINION NATURAL GAS CO. LTD.

	NO. OF WELLS			OPEN FLOW (M. cu.ft.)		
	1938	1939	1940	1938	1939	1940
(a) Company	986	959	952	23,036	21,838	20,323
(b) Syndicate	891	901	889	178,580	172,487	56,922
TOTALS	1,877	1,860	1,841	201,616	194,325	77,245

(a) Company wells controlled by the Dominion Natural Gas Company, Limited.

(b) Syndicate wells supplying gas to " " " " "

These readings are true as from "summer to summer"
More particularly May-June to May-June.

DOMINION NATURAL GAS CO. LTD.

	No. of Wells			Open Flow (M. cu. ft.)	
	1938	1939	1940	1938	1939
(a) Company	964	959	952	23,056	21,658
(b) Syndicate	891	901	889	178,580	172,467
TOTALS	1,877	1,860	1,841	201,636	194,325

(a) Company wells controlled by the Dominion Natural Gas Company, Limited.

(b) Syndicate wells supplying gas to " " " "

(APPROX 870 BTU) HAMILTON NATURAL

	Month	Union	Dominion	Propane Coke Oven Mixture	Propane Mix on 1040 Basis	Total 1040 BTU	Industrial	Domestic
1944	April	15 205	86	56 022	48 000	63 291	16 000	47 291
	May	13 747	26 374	22 128	19 149	59 230	16 000	43 230
	June	11 609	39 087	—		56 696	16 000	34 696
	July	10 493	36 470	—		46 963	16 000	30 963
	Aug	10 130	38 133	—		48 263	16 000	32 263
	Sept	12 803	43 872	—		56 675	16 000	40 675
	Oct	14 002	51 321	—		65 323	16 000	49 323
	Nov	15 476	22 932	26 599	22 955	61 363	16 000	45 363
	Dec	14 815	4 458	62 169	58 108	72 381	16 000	56 381
1945	Jany	8 989	— —	81 780	70 713	79 711	16 000	53 711
	Feb	6 323	— —	19 073	51 154	63 477	16 000	47 477
	March	11 170	— —	58 247	55 980	67 150	16 000	51 150
		144 731	262 733	376 018	327 059	734 523	192 000	

KEUFFEL & ESSER CO., N. Y. NO. 359-11G
10 X 10 to the ½ inch, 5th lines accented.
MADE IN U.S.A.

Chapter I: Gas Wells and their Production

The Harkness Files
Volume XII
Natural Gas Statistics

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YEAR	[illegible] Dec. 31st	Abandoned	DRILLED Dry	DRILLED Producin	OPEN FLOW M CU FT	ANNUAL PRODUCTION	ACRES Employees	Wages Paid
1908	568					$ 1 145 307		
1909	660					$ 1 271 303		
1910						$ 1 [illegible]		
1911	1027		34	254	[illegible]	$ 1 [illegible]		
1913	1605		49	211		$ 2 055 768	336	237 600
1914	1665		28	120		12 474 745	392	224 492
1915						$ 2 215 808		
1916	350		16	102		14 094 521		
1917						$ 2 622 838		
						15 211 523		
						$ 582 823		

NATURAL GAS STATISTICS

YEAR	No. Wells Producing on Dec. 31st	No Abandoned	No. Wells Drilled Dry	No. Wells Drilled Producing	No. Wells Drilled Open Flow M. Cu. Ft.	Annual Production M. Cu. Ft.	Acres under Lease	Rental Paid $
						$ 2.036.245	Employes	Wages
1912	1478		67	247		12 529 463		
1916	1889	74	38 (44)	139		17.966.301	581	299.379
1917			52	121		19.601.912		
1918			31	66		13.120.286		
1919	1900		18	75	20.146	11.601.485		
1920	1887	45	21	73	9.203	10.729.329		
1921	1915	114	21	115	18.716	8.523.234		
1922	1907	109	40	89	10.180	8.568 301	261 020	153.643
1923	2004	67	27	95	14.460	8 128 413	345 827	112.459
1924	2201	82	22	73	9.257	7 370 914	306 497	147.737
1925	2125	176	22	75	9.690	7 257 274	265 161	113.572
1926	2126	78	35	86	13.996	7 776 496	207 765	113.471
1927	2217	62	30	119	16.476	7.311.214	197 347	83.810
1928	2272	64	57	129	16 764	7 632 740	325 109	142.246
1929	2349	42	76	118	24.962	8 583 187	422.472	304.791
1930	2452	55	72	158	41.548	7 943 416	593 085	368.600
1931	2606	52	81	196	45.123	7 419 534	1.006 814	488.976
1932	2707	42	32	151	8.870	7 386 154	723 182	240 021
1933								
1934								
1935								
1902	169	Essex 18, Welland 120, Bruce 2, Haldimand 29	13	18	Haldimand near Dunnville		Emp 107	Wages 556.18
1901	158		14	16			129	59140
1900	175	Essex 52, Welland 75	4	7			161	43.6[illegible]
1899							95	40.149

369 [illegible] pipe

368 [illegible]

306 [illegible]

TILBURY FIELD

NEW WELLS ABAND — ANNUAL MEASUREMENT

Year	DRY	PRODUCING	ROCK PRESSURE		OPEN FLOW		No	TOTAL R.P.	TOTAL WELLS	ROCK PRESSURE TOTAL	ROCK PRESSURE CUMULAT	OPEN FLOW	OPEN FLOW CUMULAT	LOSS R.P.	LOSS OPENFLOW	PRODUCTION ANNUAL	PRODUCTION CUMULATIVE
1905		1							1							[illegible]	
6																2 000 000	
7	3	16							? 16							415 600	
8		4							17							848 000	
9	1	13							35							3 041 000	
1910	1	7							36							3841 000	
11		22							70							5 649 000	
12		14							96							7 752 500	
13		37							131							7.975.800	
14	9	32							192							10 121 600	
15		23							233							10.819 100	
16	2	34							246							13 752 500	
17	11	29							275							15 284 875	
18	12	9							270							8 847 802	
19	6	16							274							7 412 732	
1920	6	6					9		275							6 800 264	
21																5 386 159	
22																5 484 618	
23																5 069 215	
24																4 757 847	
25																4 966 207	
26																5 365 432	
27																4 994 071	
28																5 228 451	
29																5 780 061	
1930																4 840 014	

Fred. G. CLAPP

The following table gives the statistics of natural gas production in the Province of Ontario, Canada, since 1892[1]:—

Statistics of Natural Gas production in the Province of Ontario, Canada, 1892–1912[2].

Year.	Wells Bored in the Year.		Producing wells.	Miles of gas pipe.	Workmen employed.	Gas Production.		Wages for labour.
	Productive.	Non-productive.				Quantity. (Cubic feet.)	Value.	
1892	.....	.....	.....	.....	.....	.....	$150,000	.....
1893	.....	.....	107	117	59	.....	238,200	$24,592
1894	.....	.....	110	183	99	.....	204,179	53,130
1895	.....	.....	123	248	92	.....	282,986	73,328
1896	.....	.....	141	287	87	.....	276,710	47,527
1897	.....	.....	140	297	84	.....	308,448	42,338
1898	.....	.....	142	315	85	.....	301,599	31,457
1899	.....	.....	150	341	95	.....	440,904	40,149
1900	.....	.....	175	306	161	.....	392,823	43,636
1901	.....	.....	158	368	129	.....	342,183	59,140
1902	.....	.....	169	369	107	.....	195,992	55,618
1903	.....	.....	210	312	138	.....	196,535	79,945
1904	.....	.....	176	231	.....	.....	253,524	53,674
1905	.....	.....	273	462½	130	.....	316,476	88,865
1906	.....	.....	332	550	108	2,534,200,000	533,446	64,968
1907	.....	.....	582	810	191	4,155,900,000	746,499	110,832
1908	.....	.....	656	850	152	4,483,000,000	988,616	106,786
1909	.....	.....	744	987	171	5,388,000,000	1,145,307	103,672
1910	145	30	828	982	186	7,263,427,000	1,271,303	118,786
1911	268	38	1,179	1,296	287	10,863,871,000	1,807,513	183,663
1912	178	41	1,247	1,448	277	12,529,463,000	2,036,245	184,351

[1] The first year in which records of natural gas production were kept was in 1892.
In part from—
Min. Resources, U.S., 1910, pp. 324-5; 1912, pp. 341-342.
Geol. Survey of Canada, Vol. 8, 1893, Pt. S, 1899.

From Company Records

GAS Exported to Buffalo from Provincial Natural Fuel Company Cos records furnished by C M Glennie ex Pres

Year	Exported Mcuft	Earnings $	Gross Receipts gas sold to Buffalo
1891	535000 @12½¢	66 878.63	
1892	1 271 652	158 956.57	
1893	1 294 986	161 873.28	
1894	1 052 789 at 12½¢	131 598.70	
	4.154.457	519 307.18	

1898	82 347.81
99	89 514.28
1900	77 922.56
01	92 531 14
02	82 849 29
03	88 014 .96
04	184 915 .76
05	144 837.27

License #5 Jany 8th 1908 by Dept Min of Inland Revenue with permission to export 650 000 Mcuft for year ending March 31st 1908

License #9. Apr 1st 1908 do do do. permission to export 600 000 Mcuft for year ending March 31st 1909.

They had a license up to the fiscial year ending March 31st 1909.

Ontario Bureau of Mines 1895

Natural Gas in Ontario

		1895	1894	1893	1892
Producing wells	No	122	110	107	73
Gas Produced	M cu ft	3,320,000	1,653,500	2,342,000	
Value of Gas	$	282,986	204,179	238,200	160,000
Miles pipe line		248	183½	117	150
Workmen	No	92	99	59	
Wages for Labor	$	73,328	53,130	24,592	55,000

The number of wells bored during the year was 27 of which 19 were producing gas. These were fairly distributed between the Essex and Welland fields, but the non-producing wells were with one exception in the latter. The large increase in production took place in the Essex field, as a result of the laying of a pipe line from the wells to Windsor, Walkerville and Detroit. Perfectly reliable figures of production are not procurable. They are to a large extent estimates, and therefore it is hardly safe to venture upon comparisons especially of product and value. In previous reports of the Bureau accounts were given of the principal companies operating in Welland county.

PETROLEUM 1897

PRODUCERS

Petrolia—

Refiners Petrolia

NATURAL GAS PRODUCED 1897

LEAMINGTON.	miles Pipe	Value of Prod $	Wells oper.	Drilled Dry	Drilled Prod	Employees Men	Employees Wages $
Corp of Leamington	11	12000	2	–	2	4	738
(Copus) National Gas & Oil Co Ltd	120	190370	23	1	5	30	11720
Standard O & G Co	–	None	8	2	1	7	6000
(King) Kingsville N.G & O Co	25	10000	1	–	–	5	1250
HALDIMAND	1½						
(Masseeur) Consumers N.G Co of Dunnville	1½	925	2	–	–	1	95
(Carmody Pres) Dunnville N.G. Co	5	2700	8	–	1	–	–
CALEDONIA							
R.E. Walkers	¼	553	1	–	–	–	–
Caledonia N.G Co (Scott)	1	600	3	–	–	1	36
		4779					
WELLAND							
Provincial N.G & Fuel	120	77500	68	3	3	30	21000
John Reed	1	3000	4	–	–	2	500
Mutual N.G. Co. (Noble)	10	8000	8	1	1	3	600
Bertie N.G Co (Kilmon Sec)	2	2800	3	–	1	1	200

PETROLEUM 1838

PRODUCERS

	Crude Produced	Value	Men	Wages
MOORE				
Ramsbury Alco (1 1/2 [illegible])	840	1176	3	300
John M Elliot	150		1	100
BOTHWELL				
Pu[illegible]	7 141	1094	[illegible]	[illegible]

	Crude Distilled	Value	Employees Men	Employees Wages
REFINERS				
Petrolia Imperial Oil Co	336 [illegible]	[illegible]	271	150 162
Bothwell Co	102 [illegible]	150 [illegible]	15	6 233
National Oil Co (Sold to Bushnell) 1/2 year	29 [illegible]	[illegible]	16	5 482
SARNIA				
Bushnell Co	[illegible]	[illegible]	227	97 347

NATURAL GAS PRODUCED 1898

LEAMINGTON	Miles Pipe	VALUE OF NAT GAS PRODUCED	WELLS OPER	DRILLED Dry	DRILLED Prod	EMPLOYEES men	EMPLOYEES Wages
Village of Kingsville	17	6 000	1	–	–	3	500
H.C. Kennedy Natural Gas & Oil Co of Ont.	12½	192 289	26	–	4	31	11967
H Wigle STANDARD GE Co or ESSES	40	– –	8	1	1	15	6750
HALDIMAND							
Central N.G. Co (Galbraith)	½	100	1	–	–	–	–
Messrs Consumers N.G. Co of Dunnville	1½	925	2	–	–	1	50
Dunnville N.G. Co	5	2480	8	–	–	1	200
CALEDONIA - CAYUGA							
John F Carmody Cayuga	½	250	1	–	–	–	40
Robt Walker (Caledonia)	½	300	1	–	–	–	–
		4065	13	–	–		
WELLAND							
Bertie Nat Gas	2	2600	3	–	–	–	300
Provincial N G & Fuel	120	88 000	74	–	7	20	9600
Chas A White (10 partners)	2	600	1	–	–	3	50
John Reeb	2	2000	12	1	4	5	1500

lot 4 Con. III Louth.

John H Broderick 2½ miles west of St Catharines

John Fenton lot 11 Con 6. Barton Twp lot 4 Con III Louth.

NATURAL GAS PRODUCED 1899

LEAMINGTON	Miles Pipe	VALUE	Total Wells Owned	DRILLED Dry	DRILLED Prod	EMPLOYEES Men	EMPLOYEES Wages
Town of Kingsville (W.C. Kennedy See Treas)	10	5500	3	–	2	2	1000
Nat Gas & Oil Co of Ontario	130	238 757 2KK 257	45	-	9	34	14049
HALDIMAND							
Dunnville N.G. Co Ltd	8	3500	3	-	3	?	500
Citizens Gas Co Dunnville							
Rob[t] E Walker Calidonia	–	200	1	–	–	–	–
WELLAND							
Bertie N.G. Co	2½	3200	3	1	–	1	200
Humberstone Mutual NG (Snider)	1	600	1	–	–	2	50
John Reeb	5	5000	9	–	3	3	1000

Rob[t] E Walker Calidonia

G.M. VanValkenburg Forest 1 private well

Carmody well Cayuga idle this year

Lachlan McCallum Stromness one private well

Kingsville Town Harrington well Chas Leigh well Side Rd well

C D Rowe lot 5 Con VI (?) FLR Harwich Twp private

PETROLEUM 1900

Mooks

John Ramsbury	500	750		300
John M Elliott		400		

BOTHWELL

Bannerman & Brower	5716	10469	4	2241
F.R. Mitchinick	1400		2	721

REFINERY

Imperial Oil Co. Sarnia 66 051 1126777 345 162377

Petrolia closed permanently

National Oil Co. sold to Bushnell

Petrolia Oil Co. [illegible]

Imperial Oil Co. Petrolia closed permanently

Consumers Oil Refining [illegible] gone out of business

NATURAL GAS PRODUCERS 1900

	Miles Pipe	VALUE	Wells oper	DRILLED DRY	DRILLED PROD	Employees men	Employees wages
LEAMINGTON							
UNITED G&O Co	130	276306	52	2	6	125	28436
Town of Kingsville	7	6000	4	–	1	2	800
HALDIMAND							
J.E. Cormody	2	900	2	–	–		25
Dunnville Nat Gas Co	10	10000	5	–	–	2	600
Robt E Walker Caledonia	½	100	1	–	–	–	–
WELLAND							
Provincial NG	130	88202	77	1	–	20	10825
John Reeb	6	??	10	–	1	3	1000
Bertie Nat Gas Co	2½	3500	4	–	–	1	250
Carroll Bros	15	??	14	1	1	4	1200
			105	2	2		

Mutual
Central Gas Co of Dunnville 1 Synd well sell to members only lot 11. S. Broad St

Jno H Broderick private well 3 miles N 1/4 of St Kitts

NATURAL GAS PRODUCERS 1903

	Miles Pipe	GAS VALUE	Wells Oper	DRILLED Dry	DRILLED Prod.	Employees men	Employees Wages
WELLAND							
Welland Co Lime Works (Reed)	12	?	15	–	2	5	2300
Bertie Nat Gas Co	4½	3200	4	–	–	1	400
Humberstone Mutual N.G.Co.	1	600	1	–	–	2	50
Mutual Nat Gas Co	20	25000	40	–	–	10	5000
Provincial Nat Gas Co	165	54275	97	9	14	90	54275
			157	9	16		
HALDIMAND							
Peoples N.G.Co.	20	8500	25	–	2	3	1100
Dunnville Nat Gas Co	12	10000	13	–	1	4	1200
Private		500	5				
			43	–	3		
LEAMINGTON							
United Gas & Oil Co	40	12000	1	–	–	15	12000
Town of Kingsville	5	864	3	–	–	1	240
" " Leamington	31	14660	5	1	1	3	1375
			9	1	1		
BRUCE							
Grey & Bruce G & O Co	1½	2000	2	2	–	4	2000

NATURAL GAS PRODUCERS 1904

	Miles Pipe	Gas Value	Wells Oper.	DRILLED Dry	DRILLED Prod	Employees Men	Employees Wages
WELLAND							
Empire Limestone	30	6240	20	÷	2	3	232
Provincial N.G.	175	228860	120	7	23	80	49500
Bertie N.G.Co.	3	3900	5	–	1	2	500
Humberstone Mutual N.G.Co.	1½	650	2	2	1	1	60
			147	9	27		
HALDIMAND							
Selkirk Gas & Oil Co (J.M. Holmes)	5	3/12 4000 M 600	1	–	1	5	1332
ONONDAGA Bow Park Co		½ 2585	5	5	3	1	450
Cockshutt Plow	½	1000	1	–	–	–	–
BRUCE							
Grey Bruce O & G	1¼	1347	1	1	–	2	600

NATURAL GAS PRODUCERS 1901

	Miles Pipe	Nat Gas Value	Wells Oper.	Wells Drilled Dry	Wells Drilled Prod	Employees Men	Employees Wages $
WELLAND							
Carrol Bros	15	?	15	–	1	4to6	600
Welland Co Lime Works (Reeb)	6	10 000 ?	10	1	–	3	300
Bertie Nat Gas.	3	2900	4	–	–	1	300
Provincial N.G.	121	104774	83	1	6	25	13760
Humberstone (Snider) Mutual N.G.Co	1	600	1	–	–	2	150
			113	2	7		
HALDIMAND							
J.F. Carmody	1½	800	4	–	2	1	240
Dunnville N.G.Co	10	10 000	8	–	3	3	800
Private wells		500	5	–	–	–	–
LEAMINGTON							
Town of Leamington	30	10,828	5	–	1	3	1350
" " Kingsville	12	7605	5	–	–	2	600
United G&O Co	163	185 375	10	11	3	72	37306
BRUCE							
Grey & Bruce O&G. (2 mths)	1¼	250	3	1	3	8	3639

NATURAL GAS PRODUCERS 1902

WELLAND							
Welland Co Lime (Reeb)	10	?	13	2	4	4	2000
Bertie Nat Gas	2	3200	4	–	–	1	250
Humberstone Mutual (Snider)	1	600	1	–	–	2	150
Empire Limestone	15	?	19	–	3	?	?
Provincial N.G.Co	120	99014	83	6	2	22	14201
			120	8	9		
HALDIMAND							
Imperial N.G. Aikens	8	4000	8	–	6	2	500
Dunnville N.G. Co	12	10.000	14	1	9	3	1000
J.F. Carmody	1	500	3	–	1	1	300
Private	*	500	5	–	–	–	–
			30	1	16		
LEAMINGTON							
United G&O. Co.	163	59200	10	4	2	57	29743
Town of Kingsville	12	2228	3	–	–	1	465
" " Leamington	30	6155	5	–	–	3	1600
			18	4	2		
BRUCE							
Grey & Bruce O&G Co	7	2000	4	2	2	7	3094

NATURAL GAS PRODUCERS 1905

	Miles Pipe	NAT GAS VALUE	Wells Oper'd	DRILLED Dry	DRILLED Prod	Employees Men	Employees Wages
WELLAND							
Mutual Nat Gas Co	4	20 000	5	–	5	10	4,000
Welland Co Lime Works (Reeb)	15	?	18	–	3	4	2 000
Empire Limestone Co	30	5,280	22	–	–	4	2,500
Provincial Nat Gas Co	182	233 175	131	3	12	55	39,205
			176	3	20		
HALDIMAND							
Dominion Nat Gas Co. (Pittsburg)	213	134,054 M. 32319 166373	87	2	38	50	40 000
ESSEX							
Leamington Oil Co B.A. Welshead. Sec. (Detroit)	11 3	16 321	3	1	2	2	440

NATURAL GAS PRODUCERS 1906

WELLAND							
Provincial Nat Gas	232	218.009	142	1	11	30	25210
Humberstone Mutual Snider Nat Gas	1½	650	2	–	–	2	60
Mutual Nat Gas Co	8	40 000	39	5	9	10	4000
Bertie Nat Gas Co	4	4036	5	–	–	1	450
Welland Co Lime Works	18	?	21	–	2	2	1,000
Empire Limestone	–	?	16	–	–	–	–
			225	6	22		
HALDIMAND							
Dominion Nat Gas Co Pittsburg		202132	104	8	55	60	33,548
LEAMINGTON							
Leamington Oil Co	11 3	18,308					

NATURAL GAS PRODUCERS 1907

PRIVATE PRODUCERS

	No Wells
~~WELLAND~~	
D Livingston	1
Haldimand NG Co (Edgecomb)	1
XX Century Gas Co	1
Jas McDonald	1
Merchants Gas Co 5 stoves	1
Francis Arderly	1
Moulton Sta Gas Co	2
Broad St Gas Co M.O. Melick Dunnville	1
Kohler Gas Co Kohler Village JJ Link	1
~~E.T. Snider~~	1
M.H. Eaglesham 1½ miles N of Dunnville on Grand River	1 wound
E.T. Snider at Cayuga	1
Alder St Gas Co	2
West End Gas Co Dunnville	2
South Cayuga Gas Co Isaac Overholt	1

NATURAL GAS PRODUCERS 1907

WELLAND

		Miles Pipe	Gas Value	Quantity Mcu ft	Wells Oper	Wells Drilled Dry	Wells Drilled Prod
Provincial							
Provincial Nat Gas & Fuel		226	201 624 @ 20	1008 120	140	9	11
Industrial Nat Gas Co	Coulter Crowland	5	2500	12 500	6	–	6
Ontario Iron & Steel Co	Crowland Humberstone	7	333	16 661	9	1	9
Sterling Gas Co	Humberstone Wainfleet	4	5364	26 840	10	2	10
United Gas Cos	Wainfleet	66	58 530	292 653	36	5	5
Welland Co Lime Works	Wainfleet	1.8	9.000 est	45000 est	23	2	–
Plymouth Cordage Co	Crowland	3	–	–	3	–	–
Bertie N.G.Co	Bertie	4	4365	21825	5	–	–
Empire Limestone Co	Humberstone Bertie	14	2 500 est	12 500 est	16	–	–
Mutual Nat Gas Co Ltd	Humberstone Crowland	9	47 000	235 000 est	43	1	5
				1671 099	291	20	46

HALDIMAND

Producers N.G.Co	Ramhom Walpole	5	4½ 6072	30362	20	–	4
Dominion Nat Gas Co		304	297670		158	11	67
Selkirk Gas & Oil Co		4	1500	15000	5	1	4
Pt Colborne	Welland	18	7238		12	–	3
Jose J.M. Holmes	Selkirk	20	18349	183490	20	1	10
S.A. Thompson Nanticoke Gas Co	lot 375 Con II Walpole	1¼	677	6.770	2	–	1
John W. Hager Regah Nat Gas Co	Hagersville	4½	348	1394	3	–	–
Pt Maitland Gas Co		1	361	3600	2	–	–
McBay Poland & Kirk	Moulton Sta	½	120	700	2	–	–
Alder St N.G.Co.	Dunnville	½	124	1240	2	–	–
Hall & Smith	Attercliffe	½	500	2.500	2	–	–
Cheapside N.G.Co		1¾	2200	25 000	3	1	–
Queens Knitting Mills Co	Dunnville	½	450	2 250	2	–	–
F.R. Lalor	Moulton	5	710	5797	3	–	1
Haldimand N.G.Co		1	130	650	2	–	–
Canfield Nat Gas Co	Canfield.	1	873	4 360	3	–	–
Hagersville Light & Fuel Co	Hagersville	¾	791	7915	3	–	–
Lint & Emerson	Canboro	1¾	649	6 490	3	–	–
		¼	519	2.595	1	–	–
Fisherville Gas Co	No1 No2 Canboro	¼	358	1.790	1	–	–
					1	–	–
M.M. Sundy Twentieth Century Gas Co			73	365	1	–	–
Depoty Bros.	Dunnville		162	1.079	1	–	–
			339,874		2	15	90
			3897		255		

NATURAL GAS PRODUCERS 1907

		miles Pipe	Production in mcf	Value dollars	Wells Drilled Oper	Dry	Prod
KENT Co							
J.N. Holliday	lot 11&12 Con XIV Tilb East	5	3½ months	991	2	–	2
J.A. Trembly	lot 12 M.R.N.	12		3150	1	–	1
H Cockshutt	Lot 11, 13, 14 MR	2		2396	2	3	2
Maple City O&G Co	1 Fletcher Side Road	10		2563	4	–	4
Volcanic O&G		18		37225	5	–	5
Leamington Oil Co	Romney				2	–	2
				46,325	16	3	16
ESSEX							
Beaver Oil & Gas Co	Kingsville	30		11124	16	–	5
Leamington Oil Co	Leamington	14		19349	6	–	4
				30,573			

NATURAL GAS PRODUCED 1908.

WELLAND	Miles Pipe	Value	Quantity M cu ft	Wells Operated	Drilled Dry	Drilled Prod
Provincial N.G.Co	232	187 037		144	8	6
Sterling Gas Co	6	14 265		18	–	10
Bertie N.G.Co	3½	4 637		6	–	1
Welland County Lime Works (Reeb)	21	7286		27	–	4
Industrial Nat Gas.	6	4 500		8	–	–
UNITED GAS COYS	67	49 782		35	2	10
Ontario Iron & Steel	11	3 000		15	–	2
Empire Limestone	14	2 500		17	–	–
Mutual Nat Gas (Eugene Reeb)		59 000		39	–	–
Hellandport Nat Gas	½	300		3	–	–
Humberstone Mutual Snider N.G.	1	1400		1	–	–
	8	$283.925		278	8	23
		$343 562	← Reporting			
HALDIMAND						
Dominion Nat Gas Co	309	455 648	113 912	175	8	21
United Gas Co	67	49 782	12 446	35	2	10
Producers N.G.Co.	10	46 512	13156	46	5	13
Pt Colb - Welland	15	8547		15	–	3
Holmes Gas Co		8 900	89 000			
Jose M Holmes *	9	2 226	27 700	20	–	–
Selkirk Gas & Oil Co (M.C. Holmes) *	3	5 358	53 358	5	–	–
Hagersville Light & Fuel (Sty Howard)	1¼	444	4 440	2	–	–
Lint & Emerson	2	625		3	–	–
Cheapside N.G.Co. *	1	600		3	–	–
J.J. Lawson	7	682	6820	4	–	1
F.R. Lalor	4	915		3	–	–
Regah N G Co John H Hager	4½	411	1644	3	–	–
Canfield N.G.Co.	1¼	890		3	–	–
Matt & Smith	½	400		3	–	–
Pt Maitland Gas Co	1	416		2	–	–
Nanticoke Nat Gas Co *	1	775	7750	2	–	–
No 2 *	½	306		1	–	–
Fisherville Gas Co No 1 *	½	519		1	–	–
Moulton Station Synd.		418	550	2	–	–
West End Gas Co		279	1 395	2		
Alder St Gas Co		110	563	2	–	–
S Cayuga Gas Co		375	1 875	1	–	–
Broad St Centre		320	1 600	1	–	–
Kohler Gas Co } Private		225	1 150	1	–	–
Depotty Bros		113	587	1	–	–
Private Wells		460	2 325	7		
Alice Stephens and 4 others		100	500	1		
		$86,088		344	15	48
M M Lundy sold to Ralston						
Norfolk Gas Co	8	9255		10	–	3

NATURAL GAS PRODUCERS 1908

KENT		Value	Quantity	Wells Oper	Drilled Dry	Drilled Prod
J.H. Haliday	5½	2 390	47800	3	–	–
Volcanic O&G Co	40	71 527		9	–	4
Maple City Gas Co	10	5 466	109 320	4	–	–
J A Tremblay	9	1 560	31 200	1	–	–
Leamington Oil Co		17 300		* 6		

* last years report

ESSEX THIS MAY BE TILBURY						
Leamington Oil Co	3	10 082		6	–	4
Beaver Oil & Gas Co.		31 996	159 950	15	2	3

KENT PETROLEUM PRODUCTION	Value	Value
Norton Church Bentley Benson Sold to International Oil & Mining Co		
Barnard Argus Roth [illegible]	15 512	33,230
Harry Bradley	4 841	6 [illegible]
Leamington Oil Co	9 133	11 724
Edw A Teskey	625	1 25[illegible]

PETROLEUM PRODUCTION 1908				
Imperial Oil Co				
Dutton	12 268	Dutton	13	72[illegible]
Essex	16 117	Essex	9	335
Bothwell	39 820	Bothwell	39	228
Richardsons (Chatham)	2 883	Tilbury Romney	20[illegible]	284
Thamesville	85[illegible]	Thamesville	–	537
Moore Twp	25 667	Lambton	265	369
Oil Springs	[illegible]		528	360
Tilbury + Raleigh	170 589			
Romney	11 165			
Petrolia Co	171 019			
	513 632			
Canadian Oil Co	7 290			
	520 922			

NATURAL GAS PRODUCED 1909

	Miles Pipe	Value	M cu ft Quantity	Wells Operated	Drilled Dry	Drilled Prod.
WELLAND						
Provincial Nat Gas Co.	244	176,230	587 433	154	1	–
Welland County Lime Works	22	12,353	123 530	33	1	3
Sterling Gas Co	30	20,500	68 330	43	–	4
Bertie Nat Gas Co	6	5,481	27 405	6	–	–
Industrial Nat Gas Co	8	6,761	39 770	13	–	5
Empire Limestone Co	14	2,500	25 000	17	–	–
Humberstone Mutual Nat Gas	1	800	3 000	1	–	–
Ontario Iron & Steel Co	9	1,200	12,000	7	–	–
			886 468	274	2	12
HALDIMAND						
Dominion Nat Gas Co	325	550 233	1 375 560	218	8	44
Producers Nat Gas Co	10	58,466	12½ 734,850	77	2	24
Port Colborne-Welland Co	17	8 931	22,328	16	–	1
Selkirk Gas & Oil Co	2	5016	55 000	8	–	3
Holmes Gas Co	6	24 312	10 243,112	25	–	5
United Gas Co Wainfleet Moulton	73	54 290	180,970	37	3	11
John H Hager (Regal Gas Co)	4½	380	10 3 800	4	–	–
West End Gas Co	½	200	2 000	2	–	–
Cheapside Nat Gas Co	1½	1 700	24 300	3	–	–
McBay Poland & Kirk	½	100	10-20 1 000	2	–	–
F.R. Lalor	5	845	5 725	3	–	–
Alder Street Nat Gas Co	½	140	703	2	–	–
Nanticoke Nat Gas Co	½	832	8 320	2	–	–
Hagersville Light & Fuel	1	275	1,100	2	–	–
Canfield N G Co		840	3,360	3	–	–
Dunnville Gas Developement (Lawson & Brady)	6	1 636	40,900	* 3	1	–
Port Maitland Gas Co.	1¼	546	5 460	2	–	–
Sundy Gas Well Co (Rolston)	1	356	1 780	2	–	–
Mrs Alice Stephens 5 customers	1	1 000	200	1	–	–
South Cayuga Gas Co	1	2 000	400	1	–	–
Broad St Centre Gas Co 8 customers	1	2 600	260	1	–	–
Merchants Gas Co 5 customers	½	500	100	1	–	–
E.T. Snider	½	1 750	175	1	–	–
Kohler Gas Co	½		215	1	–	–
Fisherville Gas Co No. 1.				1	–	–
Fisherville Gas Co No. 2.	½	39	390	1	–	–
Private Wells		100	1 000	5	–	–
			2,773,008	424	14	88
NORFOLK 61 835			46 107 2			
Norfolk Gas Co	7	11 500	60 000	8	–	–
D.B.S. return		14 374	100 000			
KENT Maple City O & G Co	25	5 892	39 280	3	–	–
McEwen Bros (J.A. Trembley)		575	5,750	1	–	–
J.N. Holliday Co	6	3 121	62 420	2	–	–
Volcanic O & G Co	105	107 128	857,000	18	–	10
Leamington Oil Co	3	85 000	642 008	9	1	3
Beaver O & G Co			1,766,468	2	–	–
				35	1	13
ESSEX						
Beaver O & G Co	63	38,482	192,420	10	1	3

Private Wells.

O. Livingston	1	Sherbrooke	
F. Arderlay	1	Byng Dunn Tp	430
Mrs Jas. McDonald	1	1 of 6 Con I S N Cayuga	
Haldimand Nat Gas	1		390
R.E. Walker		Caledonia	
Watt & Smith	2 in 1909	Attercliffe	

NATURAL GAS PRODUCERS 1910

	Miles Pipe	Gas Value	Quantity		WELLS Prod.	Drilled Dry	Drilled Prod.
WELLAND							
Sterling Gas Co	10	19815	66051	✓	40	—	1
Bertie Nat Gas Co	3½	5431	21724	✓	6	—	—
Provincial Nat Gas Co	246	198.645	653.794	✓	162	4	17
Empire Limestone Co	14	5 000	50 000	✓	17	2	2
Humberstone Mutual NG	1½	1,100	4.427	✓	3	-	2
Industrial N G Co 15" lines	10	20 200	119 000	✓	19	-	4
Helland Co Lime Works	20	11.900	119 020	✓	30	-	-
	6		1,034,016		277	6	26
HALDIMAND							
Midfield N.G.Co.	6	905	6 473	✓	8	—	3
Dominion N.G.Co. Abd 3 Sold 3	350	578.036	1,335, 115	✓	276	16	64
Producers N.G.Co.	10	49428	621 186	✓	90	5	23
F.R. Lalor	5	1236	8 900	✓	5	—	2
Selkirk Gas & Oil Co	4	7.905	89.791	✓	10	—	3
Port Colborne - Helland Co	23	8,844	35 376	✓	21	—	5
United Gas Co	73	7821	26071	✓	39	1	3
Holmes Gas Co	7½	21811	218 107	✓	33	-	7
Lint & Emerson	2	65	650	✓	3	-	-
Hagersville Light & Fuel	1	255	1020	✓	2	-	—
Cheapside N.G.	2	160	2 227	✓	3	-	—
JJ Lawson & Bradley	-	225	5 500	✓	3	-	—
Canfield N.G.Co.	1½	855	3 420	✓	3	-	-
Kohler Gas Co	1	240	1.600	✓	1	-	-
Fisherville Gas Co #1		407	2 034	✓	1	-	-
			2.397.470		498	22	110
NORFOLK							
Norfolk Gas Co	10	15 021	79357	✓	9	-	1
KENT							
Leamington Oil Co	5	215 164	1.643 138	✓	11	1	2
Volcanic O&G Co	110	218.677	1,792.941	✓	20	-	5
Maple City O&G Co	8	15.609	116 465	✓	3	—	—
J.N. Halliday Co	5	2 788	55 760		1	—	—
McEwen Bros	-	-			1	—	—
			3606 839		36	1	7
ESSEX							
D.B.S.		57 845					
Beaver O&G Co		81 658	289 225	✓	12	-	2
			7 406 907		832	29	146
		#1,491,239	7,263,427		T.W. Gibson Figures		

Helka Fred

Fletcher JJ Binbrook + private well

Peninsular Gas Co.

Well drilled by W. Haslett Pt Burwell 752 M 7 ers Pt lot 14 II Bayham

NATURAL GAS PRODUCERS 1911

	Miles Pipe	Quantity	Value	Wells Prod	Drilled Dry	Drilled Prod
WELLAND						
Provincial N G & Fuel	257	677434	207551	173	4	16
Welland Co Lime Works	15	109195	10920	20	-	3
J.A. Coleman	11½	7639	1528	3	-	-
Empire Limestone	14	41 000	5000	17	2	1
United Gas Co	73	36537	13154	39	1	3
Sterling Gas Co	50	82900	24880	45	-	7
Humberstone Nat Gas Co	2	5077	1269	3	-	-
Bertie Nat Gas Co	3	24 000	6000	7	-	1
Wellandport Nat Gas Co	3	3 000	750	3	-	-
Industrial Nat Gas Co	10½	68500	11000	23	1	6
Canadian Steel Foundries	11	20 000	3000	15	-	-
J A Steel	6½	17540	3439	5	-	-
		1,092,822		355	9	37
HALDIMAND						
Dominion Nat Gas Co	400	1,003,995	350 000	299	10	42
D. Kindy & Son	2	39 683	3383	7	-	4
Ontario Pipe Line Co	5	16 465	1646	7	-	2
Alfred Lamb	1	100 147	10,015	15	1	5
Utor Gas Co (R.F. Miller)	2	28855	2885	17	-	15
Haines & Root		569223	85255	68	12	68
Holmes Gas Co	8	141 358	14136	32	-	-
Kohler & Aikens	8	10949	2190	15	-	15
Home Nat Gas Co	-	-	-	6	3	3
Jas E Hoover	¼	39365	3739	4	-	1
Walter B. Lamb	¾	112,695	10706	9	-	6
Selkirk G & O	4½	46313	4438	11	-	1
Midfield Nat Gas Co	6	8,029	1265	10	1	2
Producers N.G. Co	10	481747	40281	95	2	5
F.R. Lalor	5	9,732	1,606	5	-	-
Pr Colborne – Welland Gas Co	20	54751	13869	20	-	6
North Shore Gas Co	¾	73423	7361	12	-	-
Aldrich Gas Co	3	86.951	8,260	10	-	-
Beck Aikens & Lalor	3½	6,663	866	14	-	-
D.E. Hoover		7,695	752	2	-	-
Lawson & Bradley sell to Mutual		7033	1758	3	-	-
Springvale N.G. Co drilled in 1905	1½	1769	389	3	-	-
Lint & Emerson	2	2020	505	4	-	-
Cheapside N.G. & O.Co	2	2 000	140	3	-	-
Rolston & Bennet	2	3,031	606	2	-	-
Nanticoke Nat Gas Co	1	3460	605	2	-	-
Canfield Nat Gas Co	1½	2842	568	3	-	-
Canboro N G Co	1	2994	534	2	-	-
Hagersville Light & Fuel Co	1	419	105	2	-	-
Pr Maitland Gas Co	-	1000	250	1	-	-
South Cayuga Nat Gas Co	2	660	132	1	-	-
Kohler Gas Co	1	1450	215	1	-	-
Fisherville Gas Co 1 & 2	1	2300	460	2	-	-
		1,628,697		687	29	175
Onondaga						
North West Gas Co		14.637	1464	5	1	1
A M VanSickle		16 960	1696	3	-	2
Onondaga O & G Co		14665	1466	6	-	6
Standard N.G. Co	10	113946	13800	25	-	15
		160 208	18 426			
NORFOLK						
Norfolk Gas Co pr Dover		74179	15046	11	-	-
Enterprise Gas Co Delhi	8	31 250	6251	5	-	-
Medina N.G. Co	19	75579	10359	8	1	8
Pr Rowan N.G. Co.	3	16108	5401	8	-	8
			37,057			
OXFORD						
Oxford O & G. Co. Innerkip	2½	5000	700	4	-	4
KENT						
Ridgetown Fuel & Supply	32	155384	29986	13	-	6
Leamington Oil Co (Canadian Gas Co)		2,056,503	289,929	14	-	3
United Fuel & Supply Co	75	1 672 955	252 023	11	-	-
Maple City O & G Co	18	116465	14000	4	-	1
Volcanic O & G Co	125	2.922.162	345.316	32	-	12
Halliday Co	5	14117	2117	2	-	-
Beaver O & G Co	45	325000	65000	4	-	-
		7.262 586				
				70	-	22

NATURAL GAS PRODUCERS 1912

	Miles Pipe	Volume	Value	Wells Operated	Drilled Dry	Drilled Prod.
WELLAND						
- Stallings & Mahon Bacher	60	63800	10250	50	1	6
+ Empire Limestone	12	10000	1200	176	2	1
+ Provincial N.G.Co.	253	732 651	233 531	183	7	15
+ Bertie N G Co	5	24 000	6 000	8	–	2
- Welland Co Lime		61 580	6 158	30	–	–
Industrial N G Co	30	77 536	12 923	46	–	3
Humberstone Mutual	2	4 483	1 254	2	–	–
Niagara Nat Gas Co	10	11 311	2 262	3	–	–
- J A Coleman		985 361		507	10	21
Humberstone Mutual Nat Gas & Fuel Co						
HALDIMAND						
United Gas Co	75	–	–	40	–	–
Aikens & Kohler } sell to	8			17	–	2
Aikens Beck & Lalor } United	5	73 940	9 637	21	1	6
Aikens Smith & Lalor } Gas Co		96 755	16 800	?	?	?
Dominion N.G.Co	437	1424026	798 542	343	15	47
- Holmes Gas Co	7	57140	5714	32	–	–
- Walter B Lamb	2	59 370	6452	11	–	2
- Alfred Lamb sell to	1	69 326	7050	15	–	–
- Names & Root Dominion	75	467 269	70 000	102	3	29
- D Kindy & Sons	2	34 970	3 100	7	–	–
- F L Shively	6	42 540	4254	18	2	11
Utor Gas Co no return		196 018	19600	174		
Selkirk Gas	4	36 200	3772	10	–	–
Midfield N.G.Co	9	6 284	1388	10	1	–
F R. Lalor	5	10 000	2000	5	–	–
Producers N.G.Co. Walpole Rainham	10	227 269	24126	77	2	3
Dunn N G Co Dunn Tp	6	15000	7000	20	–	20
Pr Colborne - Welland	20	62500	15625	23	1	3
Jos E Hoover Walpole	3	30 956	2940	6	–	–
D.E. & A.E Hoover Rainham		41 534	4153	8	–	2
North Shore Gas	1	71 013	8905	15	–	3
Aldrich Gas Co	2	98098	9319	12	1	3
Jas Marshall	22	15,000	3750	18	3	7
Home N.G.		2448	825	4	–	–
Lint & Emerson	2	5000	468	3	–	–
Cheapside N.G.	2	8 184	818	3	–	–
Chippewa O & G	–	–	–	23	–	23
Rolston & Bennett	–	3 000	600	2	–	–
Canfield N G Co	2	3 704	740	3	–	–
Sell to Dunn Cayuga Gas Co	1	1235	246	1	–	–
Canboro Gas Co	1	790	158	1	–	–
Hagersville Gas Light →	1	679	170	2	–	–
Fisherville Gas		2 229	460	1	–	–
Springvale Gas Co		1 248	250	3	–	–
				817	29	161
ONONDAGA						
Standard N.G.Co.	10	38 509	7701	28	2	3
Onondaga O & G		8933	1786	6	0	2
A H Van Sickle		10 307	2079			
Telephone City O & G		2 578	515			
Crystal City O & G		834	167			
Commonwealth Gas		1.360	272			
David Danskin		3.058	611			
Alex Hamilton		1.856	371			
Ham Hager		1 449	290			
Northwestern Gas	–	13 806	2769	5	1	–
John Deagle & H Howell		486	97	2	–	–
		85 765				
NORFOLK						
Norfolk Gas Co	9	60 887	13628	11	–	2
Enterprise Gas Co	10	31 793	7979	7	1	1
Pr Rowan Gas (sold to Dominion)	6	20 002	6597	9	–	1
OXFORD						
Oxford O & G Co.	2	3.040	760	3	–	1
ELGIN						
Medina Nat Gas Co	50	183 537	32003	13	1	5
KENT						
Union N.G.	260	4 695 100	745728	69	1	8
Canadian Gas Co Tilbury E & Romney		2 560 106	367 965	17	–	3
Beaver Romney Twp		369 290	73858	7	–	3
Maple City O & G Co Romney & Tilbury East		118 087	14.914	3	–	–
		7,742 583		96		14

NATURAL GAS.

The total value of the production of natural gas in Canada in 1912 was, according to returns received, $2,362,700, as compared with a value of $1,907,678 in 1911, and $1,346,471 in 1910.

The quantity of gas produced in 1912 was about 15,286,803 M feet, as compared with 11,644,000 M feet in 1911, and 8,000,000 M feet in 1910.

The value of the production in Ontario in 1912 was returned as $2,036,245; Alberta, $289,906; and New Brunswick, $36,549. In 1911 the Ontario production was valued at $1,807,513, and that in Alberta, $110,165.

The value of the gas, as reported by the producers, varies from 5 cents to 30 cents per M feet, but these prices do not represent what the consumer has to pay. In some cases the producer also owns the distribution pipe line and receives the full price paid by the consumer. In other cases the producer may sell to a pipe line company who either sells directly to consumers or may in turn re-sell to other pipe line companies for retail distribution; in such cases as these the producer only receives a fraction of the amount paid by the consumer, but he is saved the expense of distribution. The statistics given herewith represent, as far as possible, the value received by the producer or owner of the gas wells, whether such producer be the owner of the distribution line or not.

Statistics of the production of natural gas in 1912, and of the annual production since 1892, are shown in the tables following:—

Gas Production, 1912.

Province.	No. men.	Wages.	No. wells, 1912.				Production.		
			(a) Operating	Drilled (b) Prod.	Drilled (c) Dry	(d) Incomplete	M. cub. ft.	Value.	Average.
								$	cts.
New Brunswick			19	2	4	2	173,903	36,549	21
Ontario			1,478	247	67	16	12,529,463	2,036,245	16¼
Saskatchewan						2			
Alberta			35	15	1	6	2,583,437	289,906	11¼
Total	433	302,012	1,532	264	72	26	15,286,803	2,362,700	15½

(a) Total number of producing wells at end of year.
(b) Number of producing wells drilled during the year.
(c) Number of non-producing wells drilled during the year.
(d) Number of incomplete wells at end of the year.

NATURAL GAS—TABLE 1.

Annual Production Since 1892.

Calendar Year.	Value.	Calendar Year.	Value.
	$		$
1892	150,000	1903	202,210
1893	376,233	1904	328,376
1894	313,754	1905	379,561
1895	423,032	1906	583,523
1896	276,301	1907	815,032
1897	325,873	1908	1,012,660
1898	322,123	1909	1,207,029
1899	387,271	1910	1,346,471
1900	417,094	1911	1,907,678
1901	339,476	1912	2,362,700
1902	195,992		

Returns received showed 1,532 producing wells in Canada, of which 264 were completed during the year. Seventy-two non-producing wells were also drilled during 1912, while 26 others were not completed at the end of the year.

In New Brunswick, the Maritime Oil Fields has now 19 producing wells in Albert county, and during 1912 gas was delivered to the Moncton Tramways Electricity and Gas Co., Ltd., for distribution in Moncton and Hillsborough.

Since beginning operations this Company has put down 25 wells, which show a total daily capacity of nearly sixty million cubic feet of gas.

Returns received from Ontario natural gas producers showed 1,478 producing wells in that Province at the close of 1912, of which 247 were completed during the year. Sixty-seven non-producing wells were also drilled, while 16 others were not completed at the end of the year.

In this Province the three principal producing fields are known as the Welland county, the Haldimand-Norfolk, and the Essex-Kent. The gas is used for lighting, heating, and manufacturing quite generally throughout the district in which it is available. Formerly, considerable quantities of gas were exported to Detroit and Buffalo, adjacent respectively to the Essex and Welland fields, but this export has now ceased. Under the provisions of Chapter 16, 6-7 Edward VII, entitled, "An Act to regulate the exportation of electric power and certain liquids and gases," assented to April 27, 1907, the export of natural gas is prohibited except under special license issued by the Governor in Council

In order to conserve the supply of natural gas, and as far as possible prevent its waste, the Ontario Legislature, in 1908, passed an "Act to prevent the wasting of natural gas and to provide for the plugging of all abandoned wells" (Edward VII, Chapter 47), by which power was conferred upon inspectors appointed under the Act, to enforce the stopping of waste. The Supplementary Revenue Act, 1907 (Ontario Statutes), also contained provisions which have been even more effective than those of the first-mentioned Act, and the enforcement of these laws has, according to the Bureau of Mines, reduced the waste of gas to a minimum.

Gas is supplied in over sixty different towns and villages, as well as generally to consumers in a number of townships.

In Alberta, the completion of the pipe line from Bow Island to Lethbridge and Calgary and intermediate points has resulted in a large increase in the utilization of natural gas, the total production in 1912 being reported as approximately 2,583 million cubic feet, valued at $289,906. In 1911, the production was approximately 780 million feet, valued at $110,165.

The production of gas in the Province has been obtained altogether from the two fields known as the Medicine Hat field, which has been producing since 1891, and the Bow Island district, the gas from which was commercially utilized for the first time in 1912. There were thirty-five producing wells at the close of the year, of which fifteen had been drilled during 1912, while six wells were in process of drilling at December 31.

In a summary report[1] for the Mines Branch, Mr. F. S. Clapp states that:—

> 'Gas is sold for domestic consumption in the city of Medicine Hat for fifteen cents per 1,000 cubic feet, and for manufacturing purposes at five cents per 1,000 cubic feet. The city has, however, made a number of contracts for supplying gas to manufacturing plants free of cost for a five-year period. This appears to be a very short-sighted policy, in view of what is now known regarding the length of life of gas producing territory when drawn upon freely. Moreover, the value of natural gas as a fuel is too great to justify its waste by being given away. The rates for natural gas in the cities of Calgary, High River, Lethbridge, Macleod, and other towns situated on the Western Canada pipe line, are fixed at twenty cents per 1,000 for manufacturing and thirty-five cents for domestic purposes.'

Natural gas rights in Manitoba, Saskatchewan, Alberta, the North West Territories, the Yukon, etc., are the property of the Crown, and their disposal is now subject to the regulations approved by Order in Council dated the 11th day of March, 1910.

These regulations provide for a rental of 25 cents an acre for the first year and 50 cents an acre each subsequent year, lease to be for twenty-one years, renewable on conditions, and no applicant to be allowed to lease the gas rights under an area of more than 1,920 acres.

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[1] Summary Report of the Mines Branch, Department of Mines, 1912, page 50.

1912

The following is a list of the principal firms operating natural gas wells:—

Operator and address.	Location of wells.	No. producing wells, Dec. 31.
New Brunswick.		
Maritime Oil Fields, Ltd., Moncton, Box 196	Albert Co., Stony Creek Dist.	19
Ontario.		
Provincial Natural Gas and Fuel Co., Niagara Falls	Welland Co.	183
Bertie Natural Gas Co., Ltd., Ridgeway	" Bertie Tp.	8
Empire Limestone Co., Buffalo, 4th and Virginia Sts.	" Humberstone Tp.	16
Niagara Natural Gas Fuel Co., Ltd., Sherkston	" "	2
Humberstone Mutual Natural Gas and Fuel Co., Humberstone	" "	3
Miner and Melenbacker, Humberstone	" "	1
Industrial Natural Gas Co., Port Robinson	" " and Crowland Tps.	46
The United Gas Co., Ltd., St. Catharines, 45 King	" Wainfleet Tp.	40
Welland County Lime Works Co., Ltd., Port Colborne	" "	30
Sterling Gas Co., Ltd., Port Colborne	" "	52
J. A. Coleman, Wellandport	" "	3
Dominion Natural Gas Co., Ltd., 1334 Marine Nat. Bk. Bldg., Buffalo	Haldimand, Lincoln, Wentworth, Norfolk, and Elgin counties	343
F. R. Lalor, Dunnville	Haldimand Co., Moulton Tp.	5
J. J. Lawson, Stromness	" "	3
Canboro Natural Gas Co., Canboro	" Canboro Tp.	2
Ricker and Mower, Canboro	" "	2
Melick, Moote, and Lymburner, Canboro	" "	10
Koehler and Aikins, Cayuga	" "	17
Lint and Emmerson, Attercliff	" "	3
Melvin G. Hart, Attercliff Station	" "	2
Port Maitland Natural Gas Co., Ltd., Port Maitland	" Dunn Tp.	1
The Dunn Natural Gas Co., Ltd., Dunnville	" "	23
Aikens, Lalor, and Smith, Dunnville	" " and Sherbrooke Tps.	10
Aikens, Lalor, and Beck, South Cayuga	" " and S. Cayuga Tps.	21
South Cayuga Natural Gas Co., South Cayuga	" " "	1
The Midfield Natural Gas Co., Hamilton, 32 Stinson	" N. Cayuga Tp.	10
Canfield Natural Gas Co., Canfield	" "	3
The Waines and Root Gas Co., Ltd., Dunnville	" S. Cayuga, Dunn, Caribou, Rainham, and Walpole Tps.	102
Selkirk Gas and Oil Co., Ltd., Selkirk	" Rainham Tp.	10
The Aldrich Gas and Oil Co., Ltd., Selkirk	" "	12
The North Shore Gas Co., Ltd., Selkirk	" "	15
D. Kindy & Sons, Selkirk	" "	7
Fisherville Gas Co., Ltd., Fisherville	" "	2
The Producers Natural Gas Co., Ltd., Hamilton	" " and Walpole Tps.	98
The Holmes Gas Co., Ltd., Selkirk	" " "	32
David E. Hoover, Selkirk	" " "	5
D. E., A. E. and Menno Hoover, Selkirk	" " "	
Jas. E. Hoover, Selkirk	" "	6
Lalor and Voakes, Dunnville	" Walpole Tp.	11
The Nanticoke Natural Gas Co., Ltd., Nanticoke	" "	2
Regah Gas Co., Hagersville	" "	4
The Cheapside Gas Co., Cheapside	" "	3
Alfred Lamb, Selkirk	" "	8
Walter B. Lamb, Nanticoke	" "	11
The National (Utor) Gas Co., Ltd., Rainham Centre	" Rainham and Seneca Tps.	38
F. L. Snively, Dunnville	" " Cayuga Tps.	18
Ralston and Bennett, Dunnville	"	2
		512

1912

Operator and address.	Location of wells.	No. producing wells, Dec. 31,
Ontario—Concluded.		
Port Colborne-Welland Natural Gas Co., Ltd., Port Colborne	Haldimand Co., Oneida and Seneca Tps.	24
Jas. Marshall, Hamilton, Lime Works	" Seneca Tp.	18
The Home Natural Gas Co., Ltd., Hamilton, 372 Queen St.	" Oneida Tp.	4
The Natural Gas Co. of Ontario, Ltd., Oil City, Pa.	"	2
Enterprise Gas Co., Delhi	Norfolk Co.	7
Norfolk Gas Co., Port Dover	"	11
The Port Rowan Natural Gas Co., Buffalo, Marine Bk. Building	"	11
North Western Gas Co., Ltd., Erie, Pa., 15 Scott Block	" and Brant counties	5
Standard Natural Gas Co., Ltd., Dunnville	Brant, Onondaga Tp.	28
The Onondaga Oil and Gas Co., Ltd., Brantford, 54½ Market	" "	6
Telephone City Oil and Gas Co., Ltd., Brantford	" "	4
Commonwealth Oil and Gas Co., Ltd., Hamilton, 240 King E.	" "	3
Crystal Oil and Gas Co., Paris, River St.	" "	3
Grand River Oil and Gas Co., Brantford, 116 Dalhousie	" "	5
D. Danskin, Cainsville	" "	1
A. W. VanSickle, Onondaga	" "	3
Wentworth Natural Gas Co., Ltd., Hamilton, 18 Leeming	" "	2
Thos. Walker, Tuscarora	" Tuscarora Tp.	1
Oxford Oil and Gas Co., Ltd., Brantford	Oxford, East Zorra Tp.	2
The Medina Natural Gas Co., Ltd., Chatham	Elgin Co., Bayham Tp.	14
The Union Natural Gas Co. of Canada, Ltd., Niagara Falls	Kent, Raleigh, Tilbury E., Ramsay Tps.	69
The Canadian Gas Co., Ltd., Detroit, 1317 Ford Bldg.	"	17
Beaver Oil and Gas Co., Ltd., Brantford, 66½ Market	" Romney Tp.	7
The Maple City Oil and Gas Co., Chatham	" " and Tilbury Tps.	3
Brandons Oil and Gas Co., Ltd., Milton	Halton Co.	2
Total, Ontario		1,478
Alberta.		
City of Medicine Hat Gas Commission, Medicine Hat	Medicine Hat	8
Canadian Pacific railway, Medicine Hat	" and Carlstadt	2
Medicine Hat Brick and Fire Proofing Co., Medicine Hat	" Section 28	1
Alberta Rolling Mills Co., Ltd., Medicine Hat	"	1
The Canadian Western Natural Gas, Light, Heat and Power Co., Ltd., Calgary	Dunmore Junction and Brooks.	2
Redcliff Brick and Coal Co., Ltd., Redcliff	Redcliff	2
The Redcliff Realty Co. "	"	4
Redcliff Rolling Mill and Bolt Co., Redcliff	"	1
The Canadian Western Natural Gas, Light, Heat and Power Co., Ltd., Calgary	Bow Island	14
City of Wetaskiwin, Wetaskiwin	Wetaskiwin	1
Total, Alberta		35

PEAT.

During 1912 operations for the production of peat fuel were carried on at three different bogs, and consisted chiefly in experimental and development work.

The operating firms and bogs were:—

Peat Industries, Ltd., operating a bog at Ste. Brigide, near Farnham, Que.

J. M. Shuttleworth, operating a bog at Alfred, Ont.

The Dorchester Peat Fuel Co., operating a bog at Dorchester, near London, Ont.

The total shipments of peat fuel were reported as 700 tons, valued at $2,900, as compared with shipments in 1911 of 1,463 tons, valued at $3,817, and 841 tons valued at $2,604, in 1910.

The annual production of peat during the past thirteen years is shown below:—

Annual Production of Peat.

Calendar Year.	Tons.	Value.	Calendar Year.	Tons.	Value.
1900	400	$1,200	1907	50	200
1901	220	600	1908	60	180
1902	475	1,663	1909	60	240
1903	1,100	3,300	1910	841	2,604
1904	800	2,400	1911	1,463	3,817
1905	80	260	1912	700	2,900
1906	474	1,422			

[1] Results of the testing of this peat are shown in the 'Report on the Utilization of Peat Fuel for the Production of Power' by B. F. Haanel, B. Sc., Mines Branch publication, No. 154.

A number of publications on peat issued by the Mines Branch are out of print, but the following are still available:—

Report No. 30.—Investigation of the Peat Bogs and Peat Fuel Industry of Canada, 1908. Bulletin No. 1, by Erik Nystrom and A. Anrep, Peat Expert.

Report No. 89.—Reprint of Presidential address delivered before the American Peat Society, of Ottawa, July 25, 1910, by Dr. Haanel.

Report No. 151.—Investigation of the Peat Bogs and Peat Industry of Canada, 1910-1911. Bulletin No. 8, by A. Anrep.

Report No. 154.—The Utilization of Peat Fuel for the Production of Power, being a record of experiments conducted at the Fuel Testing Station, Ottawa, 1910-1911. Report on, by B. F. Haanel, B. Sc.

NATURAL GAS PRODUCERS 1913

	Miles Pipe	Quantity	Value	Wells Operat	Drilled Dry	Drilled Prod
WELLAND B.						
Bertie N.G.Co	6	21,500	6450	10	1	-
Coleman J.A.	9	10215	2043	4	—	1
Empire Limestone Canada	12	8000	960	17	—	1
Humberstone Mutual	2	3555	1066	2	-	-
Industrial N.G.Co.	23	50000	10830	32	—	-
Ind. Mayer & Ross	-	4558	456	2	—	1
Ind. Niagara N G Co	-	12762	1276	3	—	2
Provincial N.G.Co	279	672358	228023	212	15	23
Sterling Gas Co	40	59343	17803	45	—	4
Canlement Mellanby Co Lime Works UNITED GAS COS	-	75177	8566	32	—	1
		917462	277473	359	16	33
HALDIMAND						
man. Aldrich Gas Co	3	47803	5954	10	-	-
United Beck & Aikens	5	88376	11600	21	-	-
Canfield N.G.Co.	2	3338	834	3		
Cheapside G&O Co	2	2400	360	3	-	-
W+R. Chippewa O&G Co	7	59558	7046	25	1	4
Dominion N.G.Co.	450	1560390	614117	406	16	80
Dunn N.G.Co.	5	158829	40978	16	-	-
Hagersville L&F.Co. ——		236	59	2	-	-
Holmes Gas Co	8	35554	3555	30		
Home N.G.Co.		6416	762	4		
Hoover J.E. DE. AE. & Menno	1	48217	6268	16		
Kindy Gas Co	4	34854	3659	12	-	2
Kohler & Aikens	8	74189	14838	17	-	2
Lalor F.R.	4	9141	1200	5	-	-
Lalor Aikens & Smith	5	74688	11950	16	2	+
Lamb. Alfred	2	39940	5193	14	-	-
Lamb Holter & R.M.	2	52348	6795	11	-	-
Lint & Emerson	2	4000	449	4	-	1
Marshall James	27	15000	4500	24	1	5
Martin Ed		10683	1590	4	1	4
Midfield N.G.Co.	9	6562	1407	7	-	-
Moote. Melick & Lymburner		47922	9249	10	-	-
Nanticoke N.G.Co.	1	2966	524	2	-	-
National Gas Co + Utor	15	161829	18611	72	-	24
North Shore Gas Co	1	46063	5988	14	-	-
Port Colborne - Welland Gas	24	56058	14014	23	1	1
Reidrick M		24473	3178	16	-	-
Producers N.G.Co	26	142048	17830	80	-	-
Rolston & Bennett	2	2151	430	2	-	-
Snively F.L.	-	128019	16617	27	2	7
Springvale G&O Co. & Moulton	5	2500	625	2	-	1
United Gas Co Wainfleet	73	2000	780	39		
Waines & Root Gas Co		345162	86290		7	5
		3263703	917246	927	31	136
ONONDAGA - Onondaga O&G	1	1860	186	6	-	-
Commonwealth O&G	1	239	238	2	-	-
Crystal City Gas Co		144	14	4	-	-
Danskin J.D		1879	188	1		
Northwestern Gas Co		9001	900	4	-	-
Standard N.G.Co.	12	55738	11148	30	-	2
Telephone City O&G		2411	242	4	-	-
Van Sickle A.W.	1	8598	860	3	-	-
		79870	13776	54		2
NORFOLK		25956	6810	9	1	2
Enterprise Gas Co Retail sales						
Port Rowan N G Co {32411	9	21101	9257	10	-	-
Norfolk Gas Co {71869		58388	13254	11	-	-
		105445	29321	30	1	2
OXFORD						
Oxford O & G Co	2	1391	348	3	-	-
ELGIN						
Medina N.G.Co	33	169147	33011	18	—	4
KENT Maple City Gas Co		163132	9269	14	—	-
Beaver O & G Co	75	401925	80385	14	-	7
Canadian Gas Co	11	2629067	396803	20	-	3
Union Gas Co	1260	4740262	580769	88	-	19
Standard Oil Co Can.	25	104751	19703	9	—	8
		7876005	1077660	131	-	37
GRAND TOTAL		12413033	2348835	1522	47	214
Buffalo & Dunnville O&G Co		1073				

NATURAL GAS PRODUCERS 1914

		Miles Pipe	Quantity	Value	Wells Oper	Drilled In	Drilled Prod
WELLAND							
	Bertie Nat Gas	4	19.200	5760	9	-	1
	Coleman J.A.	9	11.254	2476	4	-	-
	Wellandport Mutual		4148	414			
	Empire Limestone	3	5000	600	5	-	-
Ind.	Meyer & Ross Miner & Mehlenbacher Humberstone Twp		4434	443	2	1	-
	Provincial Nat Gas Co		712766	247995	217	5	12
Can. Cement	Welland Co Lime Works		65410	7537	30	-	-
Ind	Niagara Nat Gas Fuel		11713	1171	5	-	2
	Sterling Gas Co + Humberst Mutual	60	73890	22166	62	-	6
HALDIMAND	Industrial Nat Gas		21574	7186	37	-	2
		3	929389	365748	371	6	23
Mfg.	Aldrich Gas Co	3	17356	2030	10	-	-
United	Beck & Aikens	7	52962	7546	16	-	-
	Canfield Nat Gas Co	2	2260	452	3	-	-
W+R	Chippewa O+G Co	9	13740	1649	29	-	-
	Dominion N.G.Co.	445	1,333,191	607885	348	-	19
	Dunn Nat Gas Co	5	26064	12041	16	-	-
	Eastside Gas Co	2	84006	8400	7	-	-
Dunn	Fisherville Gas Co		1571	235	1	-	-
	Hendee N.G.Co.		2468	321	4	-	4
Dom.	Holmes Gas Co	7	23012	2886	22	-	-
Mfg.	Home N G Co	3	2644	264	4	-	-
Mfg.	Hoover DE, AE & M. + JE	1	13711	1782	14	-	-
Dom.	Hyde & Snively	2	62286	8718	8	1	-
Dunn	Jones Jos. S.	½	50113	5511	3	-	-
Dom	Kindy Gas Co		24808	2729	7	1	3
do	D. Kindy & Son		17124	2055	7	-	-
United	Kohler & Aikens	8	50681	10136	17	-	1
Mfg	Lalor F.R.	4	5000	1200	5	-	-
Dom	Lamb Alf	1½	38534	4600	13	-	-
do	Lamb Walter	1	12221	1561	11	-	-
	Lint & Emerson	2	2779	556	5	-	-
	Marshall Jas	27	13600	4080	17	-	-
W+R	Martin Ed. 1 well	1	16378	1829	4	-	-
	Midfield N.G.Co.	9	6236	1478	7	-	-
W+R	Moote Mehck & Lymburner	4	25284	3034	10	-	-
	Nanticoke N.G.Co.	2	1677	337	2	-	-
Mfg.	North Shore Gas Co	-	25836	3369	14	-	-
do	National Gas Co	30	20596	2060	74	-	4
	P Colborne Welland	30	47731	15381	25	-	-
Mfg.	Producers N G Co	25	77312	13051	70	-	-
	Rolston & Bennell	2	2594	519	3	-	1
Dom	Snively F.L.	6	79595	10410	22	-	2
	United Gas Co's	290	10000	1250	39	-	-
Dom	Haines & Root	50	226355	40517	79	2	9
Nant.	Medrick M.		19617	2550	5	-	-
Mfg	Lalor & Vokes FM Hyde 41145		57482				
No Return	Buffalo Dunnville		11205				
Dom	Berry R N		32655				
			2510675		921	6	43
ONONDAGA	Wentworth Nat Gas Co Ltd						
	Standard N.G.Co.	12	40948	8190	30	-	-
	Daskin D		1428	175	1	-	-
	Hagar Ham		5878	588	1	-	-
	Northwestern Gas Co		7284	728	4	-	-
	Onondaga O & G Co		2844	284	6	-	-
	Van Sickle Commonwealth City J. Deagle H Howell A Hamilton Telephone		7157	716	8	-	-
			65539		50	-	-
NORFOLK							
	Port Rowan N.G.Co + 16334	9	22248	10898	9	-	-
	Enterprise Gas	8	40931	10700	10	1	1
	Norfolk Gas Co	10	54862	17565	11	-	-
			118041		30	1	1
ELGIN							
	Medina N.G.Co.	25	199080	46109	25	1	7
KENT							
	Union N.G.Co.		5185052	650151	114	9	26
	Standard Oil of Canada	30	574000	25491	9	-	-
	Glenwood N G Co (Maple Gr)		736147	66870	31	-	1
	Canadian Gas Co	12	2983765	433692	24	-	5
			9478864		192	9	32
LAMBTON							
	Fairbank J.H		141249	14124	2	-	2
	GRAND TOTAL		13,431806		1577	23	108

Ottawa Aug. 1914

NATURAL GAS—*Continued.*

Operator.	Address	Location of Wells.	No. of Producing Wells Dec. 31, 1913.	Representative or Manager.
Kindy Gas Company	Rainham	Haldimand Co., Ont., Rainham Tp.	3	Josiah Kindy.
North Shore Gas Co., Ltd	Hamilton, Bk. Ham. Bldg	" " "	14	S. C. Macdonald, Secy-Treas.
Fisherville Gas Co	Fisherville	" " "	2	Chris. Held.
National Gas Co., Ltd	Rainham Centre	" " " and Senaca Tps	72	R. F. Miller, Gen. Mgr.
The Producers Nat. Gas Co., Ltd.	Buffalo, 842 Marine Bk. Bldg.	" " " and Walpole Tps	80	Art. J. Devlin, Agent.
The Holmes Gas Co., Ltd	Selkirk	" " " "	30	W. C. Holmes, Secy.
Port Colborne-Welland Nat. Gas Co.	Port Colborne	" " Seneca Tp	25	Geo. H. Smith, Secy-Treas.
		Brant Co., " Onondaga Tp		
Lime & Cement Works	Hamilton	Haldimand Co., " Senaca Tp	24	Jas. Marshall.
J. E. Hoover	Selkirk, Box 18	" " Walpole Tp	6	
Lalor & Vokes	Dunnville	" " "	11	H. E. Arderlay, Secy
Nanticoke Nat. Gas Co., Ltd	Nanticoke	" " "	2	S. A. Thompson.
M. Wederick	"	" " "	1	
Regah Natural Gas Co	Hagersville	" " "	4	Howard Hager.
Cheapside Nat. Gas Co., Ltd	Cheapside	" " "	3	Geo. E. Pond.
Alfred Lamb	Selkirk	" " "	14	
Walter B. Lamb	Nanticoke	" " "	11	
Enterprise Gas Co., Ltd	Buffalo, 842 Marine Bk. Bldg.	Norfolk Co., " Middleton Tp. (Delhi)	9	Art. J. Devlin, Agent.
The Norfolk Gas Co., Ltd	" ..	" " Woodhouse Tp. (Pt. Dover)	11	Art. J. Devlin, Secy-Treas.
Port Rowan Nat. Gas Co	" ..	" " Walsingham Tp. (Pt. Rowan)	10	
North Western Gas Co., Ltd	Erie, Pa., 611 Masonic Temple.	Brant Co., "	4	J. S. Owen, Secy-Treas.
Standard Nat. Gas Co., Ltd	Dunnville	" " Onondaga Tp	30	W. J. Aikens.
The Onondaga Oil & Gas Co	Brantford	" " "	12	Jas. C. Spence, Secy-Treas.
Telephone City Oil & Gas Co., Ltd.	"	" " "	4	B. Forsayerth, Secy-Treas.
Commonwealth Oil & Gas Co	Hamilton, 165 Bay N	" " "	2	Geo. Schuabel, Pres.
The Crystal Oil & Gas Co., Ltd	Paris, River St	" " "	4	Jas. R. Inksater.
*Grand River Oil & Gas Co., Ltd	Brantford, 116 Dalhousie	" " "	5	Alf. J. Wilkes, Secy.
D. Danskin	Cainsville	" " "	1	
A. W. VanSickle	Onondaga	" " "	3	
*Wentworth Nat Gas Co., Ltd	Hamilton	" " "	2	M. Westcott.
Thomas Walker	Caledonia, R. R. No. 2	" " Tuscarora Tp	1	
Oxford Oil & Gas Co., Ltd	Brantford, 17 Albion	Oxford Co., " East Zorra Tp	3	J. J. Howey.
The Medina Nat. Gas Co., Ltd	Chatham, 40 Fifth St	Elgin Co., " Bayham Tp	18	W. C. Ryan, Mgr.
The Union Nat. Gas Co. of Canada Ltd.	Niagara Falls	Kent Co., " Romney, Raleigh and Tilbury E. Tps	88	D. A. Coste, Secy.
The Canadian Gas Co., Ltd	Detroit, Mich., 1426 Dime Bk. Bldg.	" and Essex " " Mersea, and Gosfield S. Tps	20	W. H. Beamer, Pres.
The Beaver Oil & Gas Co., Ltd	Brantford, 66½ Market	" " "	14	O. M. Hall.
The Maple City Oil & Gas Co., Ltd.	Buffalo, 842 Marine Bk. Bldg.	" " " and Tilbury Tps	3	F. M. Lowry, Gen. Mgr.
*Glenwood Nat. Gas Co., Ltd.	Buffalo, 842 Marine Bk. Bldg.	Kent Co., Ont., Raleigh Tp. (Ouvry)		F. M. Lowry, Gen. Mgr.
*Oil Springs Oil & Gas Co., Ltd	Oil Springs	Lambton Co., " Euphemia Tp	2	A. W. Parks, Pres.
*William Hawkin	Warwick	" " Warwick Tp	(Drilling)	
*The Tiffin Oil & Gas Co., Ltd.	Havelock	Hastings Co., "		F. C. McMaster.
*Brandons Oil & Gas Co., Ltd	Milton	Halton Co., "		
*The New Ontario Oil & Gas Co.	Scheguindah	Manitoulin Id., "		
Saskatoon Gas & Oil Co., Ltd	Saskatoon, Sask	Saskatoon, Sask	(Drilling)	Chas. G. Locke, Secy-Treas.
City of Swift Current	Swift Current, Sask	Swift Current "	"	Geo. D. Arnott, Secy
Corporation City of Medicine Hat	Medicine Hat, Alberta	Medicine Hat, Alberta	11	J. W. Craft, Supt., Box 265.
Canadian Pacific Railway	" "	" " (2), Carlstadt, (1) Suffield, (1)	4	R. S. Winter, Gas Inspector.
Medicine Hat Brick Co., Ltd.	" "	" "	1	A. P. Pashouse, Secy
*Southern Alberta Land Co., Ltd.	" "			
The Alberta Rolling Mills Co., Ltd.	" "		1	J. L. Pollock, Pres.
Redcliff Brick & Coal Co., Ltd	Redcliff	Redcliff, Alberta	2	E. R. Sellhorn.
The Redcliff Light & Power Co., Ltd.	"	" "	4	H. O. Wheeler, Secy
Dominion Glass Co., Ltd	"	" "	1	Geo. Lydiatt
Redcliff Rolling Mills & Bolt Co., Ltd.	"	" "	1	Robt. McClury, Supt.
Canada Cement Co	Montreal, Herald Bldg.	Daultness, Alberta	(Drilling)	H. L. Doble, Comptroller.
Dunmore Dev. Co., Ltd.	Medicine Hat	Dunmore, Alberta	1	W. T. Black
The Canadian Western Nat. Gas L. H. & Power Co., Ltd.	Calgary	Bow Id., Alberta., Brooks, Alberta., (2) Dunmore, (1)	19	Eug. Coste, Pres. and Gen. Mgr.
Town of Bow Island	Bow Island	Bow Island, Alberta	(Drilling)	W. A. Bateman, Secy
Irvine Light & Power Co	Irvine	Irvine, "	"	S. W. Arbuckle.

MINERAL WATER—*Concluded.*

Operator.	Address.	Brand of Water and Location of Wells.	Local Office.	Representative or Manager.
Becker & Frank	Southampton	Saugeen—Bruce Co., Ont	Southampton, Ont.	
Thos. L. Boyd	Carlsbad Springs	Carlsbad—Carleton Co. " Gloucester Tp., VII, 3		
*Dominion Springs Mineral Water	Pakenham	Dominion—Lanark Co. " Fitzroy Tp., II, 10		W. J. Gillen.
Sanitaris Limited	Arnprior	Sanitaris " "	Pakenham, Ont.	L. McNamara.
Arthur Bélanger	Papineauville, Que	St. George—Plantagenet Co., Ont		
Robert Allan	Montreal, 86 Dorchester	Caledonia—Prescott Co. "	Caledonia, Ont.	
Gurd & Co	Montreal, 74 Bleury	Gurds Caledonia " "	"	
Lyall, Trenholme & Macdonell	Montreal West, Box 73	Beaver " "	"	D. Gauthier.
Caledonia Springs Co., Ltd	Montreal, 591 St. Catherine W.	Maji " "	"	
" " "	" " "	Adanac—Russell Co. "	Bourget	
*Canada Mineral Waters, Ltd	Toronto, 65 Bellwood Ave	Russell Lythia " "	" 20, Ont.	
Stanley Mineral Springs Co., Ltd	Winnipeg, 410 Builders Ex.	Stanley—Thunder Bay Dist., Ont	Stanley, Ont.	Jas. Mason.
*St. Davids Mountain Spring Water Co., Ltd.	Niagara Falls, Ont	Welland Co "	St. Davids, Ont.	
Halcyon Bottling Co	Halcyon, B.C.	Halcyon Lythia—W. Kootenay, B.C., Arrow Lake	Halcyon	Wm. McCombie.
*M. Grady	St. Leon Hot Springs, B.C.	St. Leon " " "	St. Leon Hot Spr.	
*F. F. Siemens	Rosthern, Sask	" " "	Renata	

NATURAL GAS.

Operator.	Address	Location of Wells.	No. of Producing Wells Dec. 31, 1913.	Representative or Manager.
Maritime Oil Fields, Ltd	Moncton, Box 196	Albert Co., N.B , Stony Ck. Dist	31	A. Crichton.
The Canadian Nat. Gas. Co.	St. Hyacinthe, Que	Que	(Drilling)	
Myer & Rose				
The Provincial Nat. Gas & Fuel Co., Ltd	Niagara Falls	Welland Co., Ont	212	D. A. Coste, Supt.
Bertie Natural Gas Co., Ltd	Ridgeway	" " Bertie Tp	11	A. H. Kilman, Secy
Empire Limestone Co	Buffalo, 4th and Virginia.	" " Humberstone Tp	17	J. N. Morris, Asst. Treas.
Wellandport Mutual				
Niagara Nat. Gas & Fuel Co., Ltd.	Sherkston	" " " II 4, 5	3	B. F. Mathews, Pres
Humberstone Mutual Nat. Gas & Fuel Co.	Humberstone	" " "	2	L. R. Snyder, Secy-Treas.
Miner & Mekelenbacker	"	" " "	1	O. P. Miner.
Industrial Natural Gas Co	Port Robinson	" " " and Crowland Tps	43	Thos. Coulter, Mgr.
The United Gas Companies, Ltd	St. Catharines, 45 King	" " Wainfleet Tp	(39)	P. I. Price.
J. A. Coleman	Wellandport	" "	4	
Welland County Lime Works, Ltd.	Port Colborne	" " Wainfleet and Humberstone Tps	32	D. Alair, Secy.
Sterling Gas Co., Ltd	"	" " " " "	45	C. E. Steele, Mgr
		Haldimand Co., Ont.		
The Dominion Nat. Gas Co	Buffalo, 842 Marine Bk. Bldg.	Haldimand, Norfolk, Elgin, Lincoln and Wentworth (counties)	406	Art. J. Devlin.
Berry RN no wells?				
F. R. Lalor	Dunnville	Haldimand Co., Ont., Moulton Tp	5	H. E. Arderlay, Sec.
J. J. Lawson	Stromness	" " "	3	
Buffalo & Dunnville Oil & Gas Co.	Dunnville	" " "	5	Jesse Killenger, Pres.
Canboro Nat. Gas Co., Ltd	Canboro	" " Canboro Tp	1	N. R. Teeft, Secy-Treas.
Hendee Gas Co. 2 wells				
Hyde & Snively 8 wells				
Chippewa Oil & Gas Co	Tavistock	" " "	2	A. E. Ratz, Secy.
Moote, Melick & Lymburner	Canboro	" " "	10	Robt. J. Melick.
Aikens & Kohler	Dunnville	" " "	17	W. J. Aikens.
Lint & Emmerson	Attercliffe Sta	" " "	4	Jno. W. Lint
Melvin G. Hart & Co	"	" " "	2	
Aikens, Beck & Lalor	Dunnville	" " Cayuga South Tp	21	W. J. Aikens.
F. L. Snively	" Box 232	" " " and RainhamTps	27	
The Waines & Root Gas Co., Ltd	"	" " " " Dunn Tps.	71	
Beck & Aikens 16 wells		" " Canboro, Walpole Tps		
The Midfield Nat. Gas Co	Hamilton, 32 Stinson.	" " Cayuga North Tp	7	Walter Anderson, Gen. Mgr.
Canfield Nat. Gas Co., Ltd	Canfield	" " "	3	W. M. Thompson, Secy.
Azoff Gas Co., Ltd	"	" " "	1	Wm. Thompson.
Sundy Gas Well Co.	Dunnville	" "	2	Jas. Ralston, & Bennett.
Port Maitland Nat. Gas Co	Port Maitland	" " Dunn Tp	1	Ed. Martin.
The Dunn Nat. Gas Co., Ltd.	Dunnville	" " "	16	W. J. Aikens.
The Eastside Gas Co	Port Maitland	" " "		
Jas S. Jones	"	" " "	4	
Lalor, Aikens & Smith	Dunnville	" " " and Sherbrooke Tps	16	W. J. Aikens.
The Home Nat. Gas Co., Ltd	Hamilton, 18 College Ave.	" " Oneida Tp	4	Robt. H. Foster.
The Aldrich Gas & Oil Co., Ltd	Hamilton	" " Rainham Tp	10	W. Aldrich, Mgr.
David E. Hoover,	Selkirk	" " "	8	J. A. Norrington.
D. E., A. E., & M. Hoover	Rainham Centre	" " "	7	
D. Kindy & Sons	Selkirk	" " "	7	
Martin Ed 2 wells				
Ralston & Bennet				

Ottawa Aug. 1915

NATURAL GAS—*Continued.*

Operator.	Address.	Location of Wells.	No. of Producing Wells Dec. 31, 1914.	Representative or Manager.
Enterprise Gas Co., Ltd	Buffalo, 842 Marine Bk. Bldg.	Norfolk Co., Ont. Middleton Tp. (Delhi)	10	Art. J. Devlin, Agent.
The Norfolk Gas Co., Ltd	" "	" " Woodhouse Tp. (Pt. Dover)	11	"
Port Rowan Nat. Gas Co	" "	" " Walsingham Tp. (Pt. Rowan)	9	"
North Western Gas Co., Ltd	Erie, Pa., 611 Masonic Bldg.	Brant Co., " Indian Reserve	4	J. S. Owen, Treas.
Standard Nat. Gas Co., Ltd	Dunnville	" " Onondaga Tp	30	W. J. Aikens.
The Onondaga Oil & Gas Co., Ltd.	Brantford, 54½ Market.	" " "	6	Jas. C. Spence, Sec. Treas.
Telephone City Oil & Gas Co., Ltd.	"	" "	4	B. Forsayerth, Secy-Treas.
CommonwealthOil&GasCo.,Ltd.	Hamilton, 165 Bay N	" " "	2	Geo. Schuabel, Pres.
Alex. Hamilton	Cainsville, R.R. No. 2	" " "	1	
D. Danskin	"	" " "	1	
A. W. VanSickle	Onondaga	" " "	3	
H. Howell	"	" " "		
The Medina Nat. Gas Co., Ltd.	Chatham, 40 Fifth St.	Elgin Co., " Bayham Tp	25	{F.W. Elward, Sec. {W. G. Ryan, Mgr.
The Union Nat. Gas Co. of Can. Ltd.	Niagara Falls, Box 66	Kent Co., Ont. Romney, Raleigh and Tilbury E. Tps.	111	D. A. Coste, Secy.
Standard Oil Co. of Canada Ltd.	Tilbury	" " " " "	9	G. S. Blake, Mgr.
The Canadian Gas Co., Ltd	Detroit, Mich., 1426 Dime Bk. Bldg.	" " " " "	24	{W. H. Beamer, Pres. {C. H. Smith, Secy.
Levi McKim	Merlin	" " "	1	
The Beaver Oil & Gas Co., Ltd.	Buffalo, 842 Marine Bk. Bldg.	" " Romney, Raleigh and Tilbury E. Tps.	14	Art. J. Devlin.
The Maple City Oil & Gas Co., Ltd.	" "	" " " and Tilbury Tps	3	J. A. Ritchie, Secy.
*Glenwood Nat. Gas Co., Ltd	" "	" " Raleigh Tp. (Ouvry)	17	" "
*Oil Springs Oil & Gas Co., Ltd.	Oil Springs	Lambton Co., " Oil Springs (II 18, 19)	5	A. Wilson, Secy.-Treas.
*William Hawkin	Warwick	" " Warwick Tp	(Drilling)	
J. H. Fairbank Estate	Petrolia	" " Oil Springs	1	A. M. McQueen.
*Hyde, Schier & Snively	Dunnville, Box 232	" " "	1	F. L. Snively.
Union Nat. Gas Co. of Can., Ltd.	Niagara Falls, Box 66	" " Dawn Tp	3	D. A. Coste, Secy.
The United Dev. Co., Ltd	Chatham	" " Euphemia Tp	2	R. L. Patterson.
*Preston Oil & Gas Co., Ltd	Preston, c/o W. E. Wildfong.			
*The New Ontario Oil & Gas Co.	Montreal, 103 St. Francis Xavier.	Manitoulin Id., " Green Bay (Scheguindah)	3	A. E. Robitaille, Gen. Mgr.
*Saskatoon Gas & Oil Co., Ltd.	Saskatoon, Sask	Saskatoon, Sask		Chas. G. Locke, Secy-Treas.
Hanley Dev. Co., Ltd	Hanley, Sask	Hanley, Sask	(Drilling.)	Jno. L. Gessen, Pres.
Corporation City of Medicine Hat	Medicine Hat, Alberta	Medicine Hat, Alberta	12	R. S. Winter, Gas Supt.
Canadian Pacific Railway Co.	" "	" " (2), Carlstadt (1), Suffield (1)	4	H. W. Cox, Gas Foreman.
Gas City Brick Co. (Medicine Hat Brick Co., Ltd.)	" "	" "	1	
*Southern Alberta Gas Co	" "	Suffield	1	D. M. Hays.
Redcliff Brick & Coal Co., Ltd.	Redcliff	Redcliff, Alberta. (5; 13-6-4)	2	E. R. Sellhorn.
The Redcliff Light & Power Co., Ltd.	"	" 11/12-6-4	5	H. O. Wheeler, Sec-Treas.
Dominion Glass Co., Ltd	"	"	1	Geo. Lydiatt.
Redcliff Rolling Mills & Bolt Co., Ltd.	"	"	1	Jno. Husband, Mgr
*Canada Cement Co., Ltd	Montreal, Herald Bldg.	Daultness, Alberta	5	H. L. Doble, Secy.
Dunmore Dev. Co., Ltd	Medicine Hat	Dunmore, "	1	W. T. Black
Calgary Gas Co., Ltd	Calgary, 215 Sixth Ave.	Bow Island, " (16), Brooks (2), Dunmore	20	Eug. Coste, Pres. Man. Dir.
Town of Bow Island	Bow Island	" "	1	W. A. Bateman, Secy.
*H. C. Yuhill	Medicine Hat	Irvine, "		
Town of Bassano	Bassano	Bassano, "	(Drilling)	Geo. P. Bond, Secy.
*Western Union Oil Co., Ltd	Spokane, Box 2201	30 miles from Milk River		
High River Oil & Gas Ltd	Calgary, Box 18	High River, Alberta	1	R. E. Chamberlain
Calgary Petroleum Products Co. Ltd.	Calgary	" ; 20-2-5 (36 miles south Calgary)	1	{A. W. Dingman. {C. Naramore, Mgr.
*Lacombe Brick & Tile Co	Lacombe	Lacombe, "		
Municipality of Wetaskiwin	Wetaskiwin	Wetaskiwin, "	2	Jas. S. Watson, Supt
Municipality of Castor	Castor	Castor, "	1	L. B. Browne, Secy.
*Municipality of Tofield	Tofield	Tofield, "	(Drilling)	J. W. McMullen, Secy.
*Municipality of Vegreville	Vegreville	Vegreville, " N.E. ¼ 19; 52-14-4	1	H. R. Pozer, Secy.
City of Edmonton	Edmonton	Viking, " 24; 48-13-4		C. E. Cox, Secy.
Burdett Oils Limited	Spokane, 227 Hutton Bldg.	Burdett, "		M. M. Dickson.
*The B. C. Oil Fields, Ltd	Vancouver, 317 Loo Bldg.	Graham Id., B.C. (west coast)	(Drilling)	E. H. Lea.
*Northern Oil Co	" 305 Main	"		F. C. Porter, Mg. Dir.

NATURAL GAS.

Operator.	Address.	Location of Wells.	No. of Producing Wells Dec. 31, 1914.	Representative or Manager.
Maritime Oil Fields, Ltd	Edinborough, Scotland 46 Charlotte Sq.	Albert Co., N.B., Stony Ck. Dist.	23	A. Crichton, Moncton, Box 196
*The Canadian Nat. Gas Co.	St. Hyacinthe, Que.	St. Hyacinthe Co., Que., St. Barnabé	2	Nap. Turcot, Pres.
*National Gas Co. of Canada Ltd.	Ottawa, 206 Booth Bldg.	" "	(drilling)	W. Bradley, Secy.
The Provincial Nat. Gas & Fuel Co., of Ontario, Ltd.	Niagara Falls	Welland Co., Ont.	217	D. A. Coste, Supt.
Bertie Natural Gas. Co., Ltd.	Ridgeway	" " Bertie Tp.	9	A. H. Kilman, Sec.
Empire Limestone Co	Buffalo, Hudson & 4th	" " Humberstone Tp.	5	D. Hyman, V.P.
Niagara Nat. Gas & Fuel Co., Ltd.	Sherkston	" " " II 4, 5; III 9, 11	5	B. F. Mathews, Pres.
Mayer & Ross	Buffalo, Mutual Life Bg.	" " "	2	C. J. Mayer, Mgr.
Miner & Mekelenbacker	Humberstone	" " "	1	O. P. Miner.
Industrial Natural Gas Co., Ltd.	Port Robinson	" " " and Crowland Tps.	37	Thos. Coulter, Mgr.
Pilkington Bros., Ltd	Thorold	" " Crowland Tp.	4	R. F. Taylor, Mgr.
The United Gas Companies, Ltd.	St. Catherines, 45 King.	" " Wainfleet Tp.	39	P. I. Price.
J. A. Coleman	Wellandport	" " "	4	
*Wellandport Nat. Gas Co	"	" " Gainsboro Tp.	3	W. J. Stewart, Mgr.
Welland County Lime Works Co. Ltd.	Port Colborne	" " Wainfleet and Humberstone Tps.	30	D. Alair, Secy.
Sterling Gas Co., Ltd	"	" " " " "	60	C. E. Steele, Mgr.
The Dominion Nat. Gas Co., Ltd.	Buffalo, 842 Marine Bk. Bldg.	Haldimand Co., Ont., Moulton and Sherbrooke Tps. Haldimand, Norfolk, Elgin, and Wentworth (counties)	348	Art. J. Devlin.
F. R. Lalor	Dunnville	Haldimand Co., Ont., Moulton Tp (Dilts Road)	5	H. E. Arderlay, Sec.
J. J. Lawson	Stromness	" " "	3	
Buffalo & Dunnville Oil & Gas Co.	Dunnville	" " "	5	Jesse Kittinger, Pres Buffalo, N.Y.
Moulton Gas Co	Lowbanks, R.R. No. 1	" " "	3	E. F. Henderson, Secy.
Chippewa Oil & Gas Co	Tavistock	" " Canboro Tp.	29	A. E. Ratz, Secy.
Moote, Melick & Lymburner	Canboro	" " "	10	Robt. J. Melick.
Aikens & Kohler	Dunnville	" " "	18	W. J. Aikens.
Sundy Gas Well Co	"	" " "	3	Ralston & Bennett
Carl Van Kuren	" R.R. No. 1	" "		
Lint & Emmerson	Attercliffe Sta	" " Canboro Tp.	5	Jno. W. Lint.
Melvin G. Hart & Co	"	" " "	2	M. G. Hart.
Aikens, Beck & Lalor	Dunnville	" " Cayuga South Tp.	16	W. J. Aikens.
The Hendee Natural Gas Co.	Cayuga	" " "	4	J. N. Fradenburgh.
Hyde & Snively	Dunnville, Box 232	" " "	8	F. L. Snively.
F. L. Snively	" "	" " " and Rainham Tps.	22	
Waines & Root Gas Co., Ltd.	Buffalo, 842 Marine Bk. Bldg.	" " " " Dunn Tps. " " Canboro, Walpole Tps.	79	A. J. Devlin.
The Midfield Nat. Gas Co., Ltd	Hamilton, 32 Stinson	" " Cayuga North Tp.	7	Walter Anderson, Gen. Mgr.
Canfield Nat. Gas Co., Ltd	Canfield	" " "	3	W. M. Thompson, Secy.
Azoff Nat. Gas Co., Ltd	"	" " "	1	Wm. Thompson.
Edward Martin	Port Maitland	" " Dunn Tp.	4	
The Eastside Gas Co	"	" "	7	Arch. McDonald, Secy.
Jas. S. Jones	"	" " "	3	
The Dunn Nat. Gas Co., Ltd.	Dunnville	" " "	16	W. J. Aikens.
*Lalor, Aikens & Smith (Independent Nat. Gas Co.)	"	" " " and Sherbrooke Tps.	16	"
Western Ontario Nat. Gas. Co., Ltd.	"			c/o W. J. Aikens.
The Home Nat. Gas Co., Ltd.	Hamilton, 18 Cottage Ave.	" " Oneida Tp.	4	Robt. H. Foster, Secy.
The Aldrich Gas & Oil Co., Ltd.	Selkirk	" " Rainham Tp.	10	A. Aldrich, Mgr.
David E. Hoover	Rainham Centre	" " "	1	J. A. Norrington.
D. E., A. E. & M. Hoover	"	" " "	8	"
D. Kindy & Sons	Selkirk	" " " I 8, 9	7	O. Kindy.
Kindy Gas Company	Rainham	Haldimand Co., Ont., Rainham Tp.	3	Josiah Kindy.
North Shore Gas Co., Ltd. (c/o Mercantile Trust Co.)	Hamilton, Bk. Hamilton Bldg.	" " " I 4, 5	14	J.L.Counsell, Pres.
Fisherville Gas Co	Fisherville	" " "	2	Chris. Held.
National Gas Co., Ltd	Hamilton, 503 Bk. of Ham. Bldg.	" " " and Seneca Tps.	74	R. F. Miller, Gen. Mgr.
The Producers Nat. Gas Co., Ltd.	Buffalo, 842 Marine Bk. Bldg.	" " " and Walpole Tps.	70	Art. J. Devlin, Agent.
The Holmes Gas Co., Ltd	Selkirk	" " " "	22	W. C. Holmes, Sec.
Port Colborne-Welland Nat. Gas Co., Ltd.	Port Colborne	" " Seneca and Oneida Tps.	25	Geo. H. Smith, Secy-Treas.
Lime & Cement Works	Hamilton	Brant Co., " Onondaga Tp. Haldimand Co., " Seneca Tp (14); Wentworth Co., Glanford Tp.	17	Jas. Marshall.
R. N. Berry	Caledonia	Haldimand Co. " Wentworth Co., Binbrook Tp.	7	
*Hamilton Gas & Oil Ltd	Hamilton	"	5	J. H. Brinkler, Sec.
The Alabastne (Paris) Co., Ltd.	Caledonia	" Seneca Tp.	5	R. E. Haire, Secy.
Matthew Richardson & Son	"	" " "	7	
Messrs. Deagle & Brown	" R.R. No. 2	" "	1	
J. E. Hoover	Selkirk, Box 18	Haldimand Co., Ont., Walpole Tp.	4	J. E. Hoover, Mgr.
Lalor & Vokes	Dunnville	" " " (Near Nanticoke)	11	H. E. Arderlay, Sec.
Nanticoke Nat. Gas Co., Ltd.	Nanticoke	" " "	2	S. A. Thompson.
M. Wedrick	"	" " " II 5	1	
Walter B. Lamb	"	" " "	11	
The Gas & Oil Co. of Springvale	Springvale	" " " XIII 9, XIV 6	2	S. W. Winger.
Regah Natural Gas Co.	Hagersville	" " "	3	Howard Hager
Cheapside Nat. Gas Co., Ltd.	Cheapside	" " "	1	Thos. Japson, Pres. Hagersville.
Alfred Lamb	Selkirk	" " "	13	
James Fenton	Ryckman's Corners	Wentworth Co., " Barton Tp., VII 2	1	
Thomas Evans	Binbrook	" "	1	
H. McKee	Hannon	" " Barton Tp.	1	
J. I. Fletcher	"	" "	1	

NATURAL GAS PRODUCED 1915

		Quantity	Value	Wells Operated	Drilled Dry	Drilled Prod.
HALDIMAND	Sterling Gas Co.	82 211	27800	60	—	1
	Helland Co. Lime Works	51,321	6228	30	-	-
	Stevensville N.G. Co	15 137	1256	3	-	-
	Relief Gas Co	4 000	1 000	25	-	25
	Provincial N.G. & Fuel	660 577	245 745	225	6	13
Ind.	Niagara Nat Gas & Fuel	10 063	1 006	7	-	2
Ind	Liesinger-Lembke Co Myers & Ross 2 Miner & Mechlenbacher 1	150	15	2	-	-
	Bertie N.G. Co	18 513	5554	10	-	-
	Empire Limestone	4 000	480	4	-	-
	Industrial Nat Gas	18 655	6 808	37	-	-
	J.A. Coleman	7 303	1567	4	-	-
	Chippewa Developement	6 769	2 030	8	-	2
		878 699	299.499	415	6	43
	Dominion N.G. Co.	1 456 590	632 640	347	2	3
	Hart & Harrington	3 000	600	1		
	Hyde & Smively	33 554	4 130	9	-	1
	Haines & Root Gas Co	182 170	36 780	77	-	-
	Producers Nat Gas	129 674	15 894	68	-	-
	Hendee Gas Co	29 632	3 852	5	-	1
	Chippewa O & G Co	4 973	995	3	-	-
	Hyde R.M.	1 502	276	1	-	-
	Holmes Gas Co	26 458	3442	25	-	-
	Fisherville Gas Co.	2 011	415	2	-	1
	Emerson Laidlaw & Troughton	2 270	454	4	-	-
	Eastside Gas Co.	48 395	4800	7	-	-
	Duxbury Nellington	1 615	210	1	-	-
	Dunn Nat Gas (Lalor Smith Aikens)	22 978	4 396	15	-	-
	Hoover J.E. D.E. A.E. M.	6 896	897	8	-	-
	Buffalo & Dunnville	11 656	1 339	5	-	-
	Aldrich G & O Co	12 091	1571	9	-	-
	Canfield N.G. Co.	3 100	620	3	-	-
	Beck & Aikens	50 040	7005	18	-	4
	Berry R.N.	86 468	13 835	14	-	1
	Jones Nelson J.S.	36 231	4378	2	-	-
	Kindy Gas Co	25 909	2850	3	-	1
	Kohler & Aikens	17 898	2 147	7	-	-
	Lalor & Vokes	39 705	7941	12	-	-
	Lalor F.R.	47 427	6636	11	-	-
	Lamb Alfred	5 006	1 200	5	-	-
	Lamb Walter B	7 865	1 022	13	-	-
	Marshall James	9 221	1 129	11	-	-
	Martin Ed.	13 500	3 800	15	-	-
	Midfield Nat Gas.	5 630	628	4	-	-
	Mickel & McKechnie	5 866	1506	7	-	-
	Moote Melick & Lymburner	5 737	688	4	-	4
	Nanticoke Nat Gas	17 122	2055	10	-	-
	National Gas Co	1 395	298	2	-	-
	North Shore Gas Co.	203 803	36 353	74	-	-
	Port Colborne-Helland	21 095	2 742	10	-	-
	Robinson Road Gas Co	39 120	11 739	25	2	-
	Rose & Patterson	12 000	1 440	4	1	4
	Springvale Gas Co	95 846	13165	14	1	5
	F.L. Smively	5 346	1325	2	-	-
	Standard Nat Gas Co	59 577	8 140	22	-	-
	Sundy Gas Well Co	36 414	7 283	35	1	10
	United Gas Co's	2 455	491	3	-	-
	Wedrick M	12 000	6 000	49	2	10
	Andrew Sparham & Lints Emerson	7 446	853	5	-	-
		4 334	870			
ONONDAGA		2854 662	862.786	1007	9	51
	Commonwealth Crystal City, D. Danskin Von Sickle	6 320	618	5	-	-
	John Deagle, W.A. Douglas, A. Hamilton	1 153	203	3	-	-
	Ham Hagar: Northwestern Onondaga Telephone Co.	12 608	1261	15	-	-
		20.081	2,082	23	-	-
NORFOLK	ENTERPRISE GAS Co	27 115	7468	11	-	1
	Norfolk Gas Co used 81,258	45811	18 192	11	-	-
	Pr Rowan Nat Gas Co used 34487	18 989	9532	8	-	-
		91.905	35.192	30	-	1
ELGIN	Medina Nat. Gas Co	151016	40.346	26	-	1
KENT	Maple City O & G Co	147564	8277	14	-	-
	Glenwood Nat Gas Co	1337246	106.980	37	-	5
	Standard Oil Co Can	473 717	21 186	9	-	-
	Beaver O & G Co	699 082	107 401	22	-	8
	UNION Nat Gas Co	5 426 701	678 502	117	-	3
	Canadian Gas Co	3 056 914	446 833	31	-	7
	Jasperson Bon	200	30	2	-	-
	Barnard Argue Roth & Stearns	5125	693	1	-	-
LAMBTON		11.096549	1369.902	233	-	23
	J.H. Fairbank	13000	1560	1	-	-
	Oil Springs O & G Co	60 000	14 638	5	-	-
		73 000	16.198	6	-	-
		15 165 912	2 626001	1740	15	110

Dominion Co prod. Wiseana field 246073 2 667 465

Haines & Root and Producers taken into the Dominion

Kent

NATURAL GAS PRODUCED 1916

		Quantity	Value	Wells Operated	Drilled Dry	Drilled Prod.
WELLAND	Bertie N G Co	17246	5174	8	–	–
	Chippewa Development	7431	2229	8	–	–
	J A Coleman	6972	7307	4	–	4
	Industrial Nat Gas	41451	8296	38	–	–
	Leisinger & Lembke	1487	149	1	–	–
	Niagara Nat Gas Co	12786	1278	4	–	–
	Provincial Nat Gas	673338	253741	22½	9	5
	Sterling Gas Co	81150	32460	6½	2	1
	Stevensville Gas	12076	1016	3	–	–
	Welland Co Lime Works	23926	3455	30	–	–
		2500	308	4	–	–
HALDIMAND	Empire Limestone	886395		384	11	10
	Alabastine Co	1264	378	4	–	–
	Azoff N G Co	9977	2570	18	–	–
	Beck & Aikens	31321	4676	18	–	–
	Canfield N G Co	2931	624	3	–	–
	Chippewa D E G Co	90379	14391	37	–	3
	Darling Rd Co Op.	4498	607	6	–	3
	Dunn Natural Gas	12486	5588	18	–	–
	Dominion Nat Gas	2150369	555655	663	–	–
Dom.	Holmes Gas Co	26416	3566	43	–	–
	United Gas Co	25703	12270	50	8	8
July Dom	Kohler & Aikens	29271	5854	21	–	–
Dom	Lamb Walter	8867	1201	11	–	–
	Eastside Gas Co	13533	1955	7	–	–
	Emerson Troughton & Laidlaw	1108	210	4	–	–
	Fletcher J.J.	500	100	1	–	–
	Fisherville Gas	1976	395	2	–	–
	Hendee Gas Co	24512	3186	6	–	–
	Hoover D E & E M	19832	2625	9	–	–
	Jones J.S.	27215	3266	3	–	–
	Jones Nelson	923	134	2	–	–
	Kindy	38049	4206	14	–	–
	Buffalo & Dunnville (Kittinger)	8640	1066	5	–	–
	Lalor & Vokes	45150	6321	11	–	–
	Lalor F.R.	5000	750	5	–	–
	Lamb Alfred	12863	1737	13	–	–
	Marshall Jas	11664	4174	15	–	–
	Midfield	6321	1784	11	–	–
	Martin Ed.	5200	572	3	–	–
	Mickle & McKechnie	18177	2181	4	–	–
	Nanticoke N G Co	860	103	2	–	–
	National Gas Co	176217	34400	75	–	–
	Patterson F.H.	61655	8580	17	–	2
	Pr Colborne-Welland	32622	9787	24	–	–
	Robinson Rd Gas Co	12660	1520	4	–	–
	Sundy Gas Well	2147	453	3	–	–
	Wainfleet Moulton	2230	446	3	–	–
	Widerick M.	7070	1103	3	–	–
	Other small operators	5000	1000	6	–	–
		2923216		1097	8	18
ONONDAGA	Commonwealth Danskin J Deagle	2220	270	4	–	–
	Onondaga, Northwest Telephone	3750	455	14	–	–
	Crystal City Van Sickle	6652	1000	5	–	–
	Standard Nat Gas	50798	12500	33	–	–
		72420		86	–	–
ELGIN	Medina Nat Gas	140179	37046	23	–	–
	Vacuum Gas & Oil	3750	450	2	–	2
	Dominion Nat Gas Co	143929		31		
				56		2
KENT	Barnard Arque etc	1580	468	1	–	–
	Canadian Gas Co	3579004	524660	37	–	6
	Beaver O & G Co	674816	111986	25	–	1
	Glenwood Nat Gas Co	3054747	234102	60	2	19
	Union Nat Gas Co	6439419	808351	125	–	8
		13749546		246	2	34
LAMBTON	Oil Springs Oil & Gas Co	42939	9158	6	–	–
	J.H. Fairbank	12346	1481			
		55285				
	Thus has not been totalled approx	17953400	2400500	1802	39	135

Dom Nat Gas Co report having purchased 140 wells from Haines & Roots Producers Nat Gas Co Enterprise Gas Co, Norfolk Gas Co & Pr Rowan Gas Co.

PRODUCTION

ONT BUR. MINES 1916 — ONT BUR MINES 1916 Statistics of 1915

Welland - Haldimand - Norfolk field.

(1) From 1906 to 1915 both inclusive the production has been 36,906,000 M cu ft

From 1892 to 1906 from the values reported by the Bureau of Mines checked against figures of the Provincial Natural Gas & Oil Co it is estimated that there was 16,000,000 M cu ft

making a total of 54,000,000 M cu ft

(2) The Kent Gas Field was a producer first in 1907 and up to end of 1915 produced 52,049

(3) The Elgin field developed in 1911 has at end of 1915 produced 1,913,700 M cu ft

(4) The Lambton Oil Springs has now produced 570 800 M cu ft and is nearly exhausted.

(5) The Essex field calculated against a value basis has been estimated at 22,500,000 M cu ft

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ONT BUR MINES 1917 Statistics of 1916 NATURAL GAS.

In 1916 there were 173 new wells drilled 38 dry 135 producers

Company	Drilled Dry	Drilled Prod.	Total Wells	Miles Pipeline
Do Dach Nat Gas Co	19	67	714	641
Provincial			222	284
Union Nat Gas			125	137
National Gas Co			72	58
Sterling			61	150
Glenwood			60	54
United Gas Co			50	79

Dominion Nat Gas Co Wells Township	No of Wells
Walpole	165
Hatpole	165
Cainsboro	94
Rainham	92
South Cayuga	81
Woodhouse	48
Seneca	45
Binbrook	42

In Selkirk field Ave R.P. 154 psi

In Moulton Twp R.P. 46 psi Woodhouse 280

The Vienna field is on Bayham and Houghton twp Bayham R.P. 298 psi and production O.F. 115 M cu ft In Houghton twp R.P. is 500 psi and production O.F. 93,000 M cu ft

Dominion Nat Gas Co bought out 140 wells owned by Wainer Root Producers Nat Gas Co. Enterprise Gas Co Norfolk Gas Co and Port Rowan Gas Co.

Total O.F. Dom Co wells 8,176,000 cu ft, Of 140 Purchased wells, (above) 1,166,399,000 cu ft

The Natural Limit to the Rate of Production for a Gas Field

In determining the annual output which should be allowed from any field, apart altogether from a consideration of the quantity which it is rational to permit, there is a maximum limit imposed by nature due to the physical conditions of the field, there being salt water in the rock underlying the gas, and this salt water is only kept back by the pressure of the gas and prevented from entering the wells and ultimately cutting off the supply of the gas. Experience in the past has shown that where the production from a field has been accelerated too much, thereby reducing the pressure at each producing well, salt water comes in and finally may shut off the output of the well entirely. There is no way of calculating exactly what this rate should be, but it can be approximated from experience, and it would appear that a reduction of the pressure by one atmosphere per year is a natural limit. A loss of one atmosphere of pressure means that the production is exactly equal to the total volume of all the incalculable number of pores which constitute the field tank, and consequently involves great motion. When it is considered that the gas is stored in countless millions of minute pores, and must find its way slowly owing to the great friction through vast numbers of the smallest openings, it can be seen that time is required to equalize the pressures throughout the field and not allow a very low pressure at the well which would permit the entrance of water. With a purely domestic consumption it would be possible to give the wells a rest in the summer months when the consumption is for cooking only and the output consequently very small—only from 4 to 5 per cent. altogether of the total annual domestic consumption being used in the months of July and August.

The history of the Essex gas field, which is only 20 miles from the Kent field, the gas being exactly the same in composition and therefore almost certainly having come from the same source, is instructive in this respect and should be sufficient warning. The Essex field was discovered in 1889, the depth of the gas being about 1,000 feet and the rock pressure 500 lbs. In the Kent field the depth of the wells is about 1,300 feet and original pressure 590 lbs. In 1900 the pressure was reduced to between 325 and 350 lbs.[1], or a maximum drop of about 12 atmospheres in 11 years. In 1901 about three-quarters of the wells were full of salt water.[2] The production in 1902 was much smaller than in 1901.[3] The export was shut off towards the end of 1901 and the field was practically abandoned in 1903.[4] The records of production are unfortunately very incomplete, but about 22,500 million cubic feet from this field appear to have been utilized,[5] and as there was an enormous waste in the early days of the field, probably not less than 30,000 million cubic feet came from this area. Of this all but about 3,000 million feet were produced before 1901, or a production of not less than 27,000 million was accompanied by a drop of 12 atmospheres pressure or 2,250 million feet

[1] Ont. Bur. of Mines Rep., Vol. X, p. 19.

[2] Ont. Bur. of Mines Rep., Vol. XI, p. 43.
[3] Ont. Bur. of Mines Rep., Vol. XII, p. 38.

[4] Ont. Bur. of Mines Rep., Vol. XI, p. 22.

[5] Ont. Bur. of Mines Rep., Vol. XXV, p. 39.

50 lbs. pressure or a further reduction of 287 lbs. or 20 atmospheres, it should have produced 45,000 million feet after 1900, instead of about 3,000 million. It has been shown already that in the Kent field a production of 4,610 million feet correspond to a loss of 1 atmosphere in pressure. This will be as nearly as can be determined the purely domestic consumption assuming the order of the Ontario Railway and Municipal Board is carried out. It was shown above that the total output up to June, 1918, was about 86,000 million, and if the field can be operated down to 50 lbs. pressure (the Welland field is being operated below 50 lbs.) the same amount must be left as has been produced up to that time. It would be a great calamity if the same thing happened in the Kent as in the Essex field. There is ample warning of the trouble threatening now in the fact that already some wells have been drowned out and many others must be pumped energetically. This condition is becoming more acute. Human knowledge and experience ought to be worth something and the same mistake should not be repeated. It is certain that nothing but the most drastic action can save a very large proportion of the gas remaining in the field from destruction. The estimated consumption for the first half only of 1918 is 5,880 million cubic feet, the restriction as to industrial use not coming generally into force till 1st of July. The distribution of the consumption for 1917 was 9,400 million cubic feet for industrial users and 5,829 million for all other consumers. Under the order of the Board referred to above there should ultimately be an estimated saving among the non-industrial consumers of 1,457 million cubic feet per year, making the actual domestic consumption 4,372 million feet, to which must be added an estimated industrial consumption for the special purposes mentioned in the order of about 300 million feet, or a total in all of 4,672 million cubic feet. In tabular form the consumption based on the results for 1917 is as shown below:—

	Million cubic feet.
Estimated total industrial consumption, 1917	9,400
All other consumers (non-industrial)	5,829
Total	15,229
Estimated industrial consumption, January-July, 1918	2,260
Estimated non-industrial consumption, January-July, 1918	3,620
Total consumption, 6 months	5,880

This represents a saving over the same period last year of 2,440 million cubic feet.

The estimated consumption when the Board's order is completely in operation is as follows:—

	Million cubic feet.
Estimated saving by abolition of flat rate	100
Estimated saving by limitation of free users, etc.	47
Estimated saving by cutting off public buildings, offices, etc	1,310
Total	1,457
Non-industrial consumption, 1917	5,829
Deduct estimated saving	1,457
Estimated domestic consumption	4,372
Add estimated industrial consumption for special purposes	300
Total	4,672

NATURAL GAS PRODUCERS 1917

	Quantity	Value	Wells Operated	Drilled Dry	Drilled Prod.
WELLAND	941 769 M				
Canadian Steel Foundaries	9 390	939	8	-	-
Bertie Nat Gas Co	13 996	4 529	8	-	-
Chippewa Development	9 704	2 811	7	-	-
Colleman J.A.	2 894	1 149	4	-	-
Empire Limestone	2 500	300	4	-	-
Industrial Nat Gas Co	43 409	9 847	18	-	1
Niagara Nat Gas Co	5 537	554	4	-	-
Pilkington Bros	5 500	1 375	5	-	-
Provincial Nat Gas & Fuel	666 147	262 594	213	9	4
Relief Gas Co	47 282	19 073	14	2	-
Sterling Gas Co	98 790	39 517	66	-	6
Stevensville Gas Fuel Co	10 854	868	3	-	-
Welland Co Lime Works	24 764	2 476	29	-	-
			384	11	11
HALDIMAND	3 608	541	1	-	-
Aikens W.J.	20 125	2 717	10	-	-
Aldrich G&O Co	1 374	344	1	-	-
Azoff Nat Gas Co	3 040	608	3	-	-
Canfield Nat Gas	47 854	7 917	42	1	1
Chippewa O&G Co	22 187	2 866	6	-	-
Darling Rd Coop	150	30	1	-	1
Deimel Gas & Mfg Co	2 583 962	726 533	742	19	48
Dominion Nat Gas Co	46 209	14 787	53	4	5
United Gas Co	65 063	13 633	27	-	-
Dunn Nat Gas Co	31 777	3 972	7	-	-
Eastside Gas Co	1 978	395	4	-	-
Emerson Laidlaw & Troughton	2 781	556	2	-	-
Fisherville Gas Co	4 000	1 000	2	2	-
Gas & Oil Co of Springvale	300	40	2	-	-
Grand River O&G Co	21 000	3 000	3	-	2
Hamilton Gas & Oil Co	30 480	4 115	6	-	-
Hendee Nat Gas Co	1 314	171	1	-	-
Hoover D E	21 556	2 587	3	-	-
Jones J.S.	1 383	277	2	-	-
Jones Nelson	11 326	1 529	7	-	-
Kindy & Sons	13 211	1 717	6	-	-
Kindy Gas Co	8 385	1 090	5	-	-
Kittinger Gas Co	52 120	7 116	12	-	9
Kohler May & Hoover	3 033	869	5	-	-
Lalor F R	26 350	3 689	10	-	-
Lalor & Vokes	9 153	1 236	9	-	-
Lamb Alf.	1 914	191	1	-	-
Leisinger & Lemke	8811	2 058	5	-	4
Marshall Jas	-	-	4	-	-
McKillop Sons, Kohler, May & Hoover	12 541	1 505	5	-	-
Michle & McKechnie	5 672	1 668	7	-	-
Midfield Nat Gas Co	141 621	26 013	81	1	9
National Gas Co	18 516	2 500	14	-	-
North Shore Gas Co	2 048	284	4	-	-
Ontario Gypsum Co	32 348	9 870	25	-	-
Port Colborne-Welland Nat Gas Co	9895	1 187	4	-	-
Robinson Ra Gas Co	16 569	2 454	6	-	1
Sparham Mf.	2 044	552	3	-	-
Sundy Gas Well Co	2 652	530	3	-	-
Swift Mainfleet Moulton Gas Co	3 520	572	3	-	-
Wedrick M	11 257	1 520	4	-	-
Weylie & Benjamin	3 282 501 M		1151	29	79
ONONDAGA					
Commenwealth O&G Co	750	75	2	-	-
Standard Nat Gas Co	36 963	8 315	45	-	-
Hagar Ham	2 432	243	1	-	-
Martin Ed.	9 180	1 102	3	-	-
Onandaga Oil & Gas Co	1 725	113	6	-	-
Telephone City O&G Co	7 000	700	3	-	-
Van Sickle A.W.	57 350		2	-	-
			62	-	-
NORFOLK					
Dominion Nat Gas Co			2	-	2
Vacuum Oil & Gas Co					
ELGIN Medina Nat Gas Co	61 201	37 481	22	2	-
Richmond Gas & Oil Co	177 347	19 538	4	1	3
	238 548		26	3	3
KENT	1 000	200	1	-	-
Bernard Argue Roth & Sterns	3 787 764	174 707	43	-	6
Canadian Gas Co	768 900	126 102	24	-	1
Beaver Oil & Gas Co	3 851 526	303 989	80	3	9
Glenwood Nat Gas Co	7 319	439	1	-	1
Lake Erie Development Synd (Joyce Bros)	704 2 180	1 336 280	124	6	11
Union Nat Gas Co			1	2	1
Tripplehorn Bros	15,451,698		1	-	-
Mutual O & G Co					
			275	11	29
LAMBTON					
J H Fairbank	2380	286	1		
Oil Springs Oil & Gas Co	42 163	10 435	6		

OIL WELLS TILBURY FIELD

			Dry Holes		
Tripplehorn Bros.	2d				
Barnard Argue Roth & Sterns	13	1. S.W. ½ lot 2 Con IV	Raleigh	20 025 699	3 220 133	190	52	121
Beaver Oil & Gas Co		1. S.E ¼ lot 1. Con IV	do					
Glenwood O&G Co	8	1. S.W ¼ lot 1. M.R.N	Tilb E					
Joyce Bros.	1	1. N.W ¼ lot 4 XII	Raleigh					
Buker Oil Co (Boston)	8	4 lot 5 Con III	Zone					
A North & Co	10	2 lot 6 Con III	Zone					
S.H.E. Oil Co	38							
Total Oper	51							
Unoperated	38							
Abandened	19							
Dry Holes	10							

Beaver O&G Co drilling at Arner

NATURAL GAS PRODUCERS 1918

Producer	911 591 Production 908 944	Value	Wells Operated 39	Drilled Dry	Drilled Prod.
WELLAND					
Bottle Nat Gas Co	28 003	4 760	8	1	5
Bertie Nat Gas Co	12 335	4 935	8	—	—
Canadian Steel Foundries	9 360	936	8	—	—
Chippewa Developement	6 578	1 973	8	—	—
Coleman J.A.	3 707	1 148	4	—	—
Empire Limestone	2 000	240	4	—	—
Industrial Nat Gas Co	42 841	9 358	29	—	1
Niagara Nat Gas Co	2 101	210	3	—	—
Pilkington Bros	6 000	1 500	4	—	2
Provincial Nat Gas & Fuel	560 403	224 917	215	—	2
Sterling Gas Co	127 000	50 800	68	1	2
Stevensville Nat Gas Fuel Co	9 136	545	3	—	—
Welland Co Lime Works	2 480	651	29	—	—
			341	2	12
HALDIMAND Dominion Nat Gas Co	2 129 862	604 178	776	14	33
Aldrich Gas & Oil Co	15 711	2 121	7	—	—
Aikens M.J.	5 682	762	1	—	—
Azoff Nat Gas Co	1 116	279	1	—	—
Canfield Nat Gas Co	2 739	548	3	—	—
Chippewa Oil & Gas Co	42 309	6 762	40	1	8
Darling Road Coop	16 115	2 181	6	—	—
United Gas Co	51 472	27 244	44	—	—
Dunn Nat Gas Co	45 785	12 092	19	1	1
Eastside Gas Co	24 498	2 902	6	—	—
Emerson Lapalaw & Troughton	1 863	466	4	—	—
Fisherville Gas Co	2 634	527	2	—	—
Fletcher J.T.	365	55	1	—	—
Gas & Oil Co of Springvale	3 400	1 020	2	—	—
Hart & Harrington	1 000	250	2	—	—
Hendee Nat Gas Co	16 607	2 210	6	—	—
Hoover Dr.	855	118	1	—	—
Hamilton Gas & Oil Co	20 000	2 800	6	—	—
Jones J.S.	12 371	1856	2	—	—
Jones Nelson	800	160	2	—	—
Kindy & Son	7 050	952	5	—	—
Kindy Gas Co	8 710	1 132	6	—	—
Kohler May & Hoover	53 781	7 801	14	—	—
Lalor F.R.	900	270	5	—	—
Lalor & Vokes	20 946	2 890	10	—	—
Lamb Alfred	3 010	465	4	—	—
Leisinger & Lembke	2 557	256	1	—	—
May A.G.	13 799	1 781	3	—	—
Marshall Jas	3 198	831	17	—	—
Midfield Nat Gas Co	5 622	1 474	7	—	1
McKillop Kohler May Hoover	10 500	1 417	4	—	—
Mickle & McKechnie	733	88	5	—	—
National Gas Co	115 780	23 156	72	—	—
North Shore Gas Co (Seneca)	17 158	2 136	8	—	—
Ontario Gypsum Co 1st 10 – 1st M Ham Pt Dover Rd	2 261	678	4	—	2
Port Colborne Welland	30 584	9 175	27	—	2
Robinson Rd Gas Co	5 972	706	4	—	—
Sparham A.F.	12 564	1 657	6	—	—
Sunday Gas Well	1 954	586	3	—	—
Mainfleet & Moulton	2 349	470	4	—	—
Meyley & Benjamin (15 20 17 13)	8 416	1 136	4	—	—
Medrick M. (2733 073)	3 000	608	2	—	—
ONONDAGA Martin Ed	5 000	680	2	—	—
			1144	16	21
Hagar Hagar	2 328	689	1	—	—
Beagle John	200	20	1	—	—
Van Sickle A.W.	3 474	347	2	—	—
	6 002		4		
NORFOLK					
Dominion Nat Gas Co					
Vacuum Gas Co	14 226	1 665	2	—	—
ELGIN Dominion Nat Gas Co					
Medina Nat Gas Co	58 756	25 000	24	—	—
Richmond Gas & Oil Co	91 823	10 640	4	—	—
	150 579		28		
KENT					
Canadian Gas Co	2 108 283	129 437	43	1	—
Bearer Oil & Gas Co	643 508	106 693	23	1	1
Glenwood Oil & Gas Co	2 312 552	191 248	78	6	4
Dunegan Gas & Oil Co	6 699	554	1	—	—
Union Nat Gas Co	4 252 198	993 128	125	4	4
	9 303 240		270	12	9
LAMBTON Fairbank J.H.	312	37	1		
Oil Springs Oil & Gas Co	30 390	7870	6	—	—
Producers Fuel & Light Co	6 195	620	1	—	—

OIL WELLS

		Wells					
			13 075 742	2 498 770	1849	31	66
Tilbury	Bernard Argue Rath Spearns	16					
	Glenwood Nat Gas Co	5					
	Arthur Neath	10					
	Tripplehorn DR & JK		GLENCOE	Brown A.E. ? ?	15	Longwoods Rd	
	Union Nat Gas Co	7		Carlyle M.J.	4		
				Fairbank-Elliott	2		
Dutton				Illinois Refining Co	4		
	Beaver Oil & Gas Co	93		Johnson E Hyett	1		
	Elginfield OSG Dev. Co.	84		Ontario Petroleum Co	12		
				Silbey & Co	3		
ONONDAGA				Wilson & Symmes	1		
	Cockshutt Plow Co	2					
	Geo H. Fair	1					
	Standard Nat Gas Co	5					
	Toronto Power Co	6					

J M Richardson lot 41 Seneca

NATURAL GAS PRODUCERS 1919

		Production	Value	Prod. Wells	Drilled Dry	Drilled Prod
WELLAND	Battle Nat Gas Co	18 000	3060		–	–
	Bertie Nat Gas Co	10764	4 350	8	–	–
	Can Steel Foundries	5760	576	17	–	–
	Chippewa Development	4980	1494	7	1	–
	Coleman J.A.	4810	1788	7	–	1
	Empire Limestone	2 000	240	4	–	4
	Industrial Nat Gas Co	29 853	7743	32	1	6
	Leisinger & Lembke	1825	182	1	–	–
	Pilkington Bros	4500	1125	6	–	–
	Provincial Nat Gas Co	476 161	205 571	209	2	–
	Sterling Nat Gas Co	137 227	54 890	68	–	–
	Stevensville Gas & Fuel Co	6026	482	3	–	–
		701 808		362	4	11
HALDIMAND	Aldrich Gas & Oil Co	11 410	1574	8	–	–
	Canby B F	536	140	2	–	2
	Canfield Nat Gas Co	2845	715	3		
	Chippewa O & G Co	68 373	11 281	40	4	4
	Darling Ra Co Op	10969	1481	6	–	–
	Dominion Nat Gas Co	2 035 759	594 238	796	7	38
	United Gas Co	49 896	28 690	45	–	–
	Duxbury M Y	2707	677	1	–	–
	Quirm Nat Gas	18 416	4773	15	–	–
	Eastside	14 988	1870	6	–	5
	Emerson Laidlaw & Trouth	1820	455	4	–	–
	Fisherville Gas Co	2410	482	2	–	–
36 V	Gas & Oil Co Springvale	1317	461	1	–	–
	Hamilton G & O Co	14 631	2050	5	–	–
	Hendee Gas Co	12 481	1685	6	–	–
	Jones Nelson	600	150	1	–	–
	Kindy	10 088	1327	4	–	–
	Canadian Gas & Oil Co Ltd	63 000	8820	25	–	–
	Lalor & Vokes	18 157	2542	10	–	–
	Lamb A H	2300	311	5	–	–
	May A G	27 200	3672	3		
	Midfield Nat Gas	3654	1108	7		2
	McKillop Kohler May & Hoover	5555	750	4		4
	National Gas Co	36 727	6890	74		
	North Shore Gas Co	10 091	1362	10	–	–
	Ontario Gypsum Co	1000	300	4	–	–
	Pt Colborne Welland	43075	12 922	24	–	3
	Robinson Rd Gas Co	3056	413	4	–	1
	Sparham A.F.	8000	1060	9		
	Sundy Gas Well	1850	555	3		
	Wainfleet Moulton	2000	360	3		
	Wylie & Bingham	3550	480	4		
		2498 464		1134	11	58
ONONDAGA	Van Sickle A W.	4380	439	2		
NORFOLK	Vacuum Nat Gas Co	15 774	1800	2		
ELGIN	Medina Nat Gas Co	63170	27 952	24		
	Richmond Nat Gas Co	53 383	14 413	4		
		116 553		18		
KENT	Canadian Gas Co TILBURY	441 782	29 688	43	–	–
	Beaver Oil & Gas do	451 064	90 934	26	1	4
	Glenwood Oil & Gas Co do	1 859 244	152 086	75	5	5
	Dunegan Oil & Gas Co do	5 483	329	1	–	–
	Union Gas Co + Dover	4 967 728	1 297 766	128	–	7
	Petrol O & G Co Dover	7 766	621	1	–	1
		1 733 067		274	6	17
LAMBTON.	Oil Springs O & G Co	14 114	6,421	6	1	–
		11 139 202	2,590,606	1836	22	86

NATURAL GAS PRODUCERS 1920

	PRODUCER	Production	Value	Wells Operated	Wells Dry	Drilled Prod	Aband
WELLAND							
	Bertie Nat Gas Co	9 038	3 794	8	–	–	–
	Chippewa Developement Co	3 383	1 353	8	–	–	–
	Coleman J A	3 468	1 734	7	–	–	–
	Empire Limestone Co	2 000		4	–	–	
	Industrial Nat Gas Co	65 437	20 609	44	–	–	–
	Leisinger & Lembke	545	54		–	–	1
	Pilkington Bros	6 000	1 500	7	–	–	–
	Provincial Nat Gas Co	395 367	205 591	207	4	3	4
	Sterling Nat Gas Co	124 640	60 545	68	1	1	1
	Stevensville Nat. Gas Co	3 835	307	3	–	–	–
		613 703		356	5	4	
HALDIMAND							
	Aikens N.J. Onondaga	1 540	231	1	–	–	
	Aldrich Gas & Oil Co	13 222	1 957	6	–	–	
	Azoff Natural Gas Co	2 000	700	7	1	4	
	Beer Geo	702	246	1			
	Battle Nat Gas Co	22 510	3 827	8	–	–	–
	Binbrook Gas Co.	2 052	513	2	–	–	–
	Canby B.E.	550	200	2	–	–	–
	Canfield Nat Gas Co	2 149	860	4	–	1	–
	Chippewa Nat Gas Co	3 383	1 353	30	–	–	6
	Darling Road Co Op.	1 346	1 539	6	–	–	–
	Dennis H R Onondaga	120	180	1	–	–	–
	Dominion Nat Gas Co	1 785 185	622 315	702	7	32	13
	Duxbury Jas H & Wellington Deiner Eugene	2 362	631	2			
	Eastside Gas Co	7 369	921	6	–	–	–
	Emerson Laidlaw & Troughton	1 548	455	4	–	–	–
	Fishervale Gas Co	2 387	477	2	–	2	–
	Gas & Oil Co of Springvale	1 145	401	2	–	–	–
	Hamilton Gas & Oil Co	12 650	2 036	5	–	–	–
	Hendee Gas Co	6 312	962	6	–	–	–
	Hoover D.E.	774	–	1			
	Kindy Gas Co	217	28	13	–	–	2
	Kindy D & Sons	–	–	2	–	–	3
	Lalor F.R.	14 448	2 296	5	–	2	2
	Lalor & Vokes	1,664	247	7	–	–	3
	Lamb Alfred 2,000	545	54	4	–	–	–
	Maple Leaf Oil & Gas Co	–	–	6	–	5	–
	Marshall Jas.	2,950	299	10	–	–	–
	May A.G.	13 559	1 830	3	–	–	–
	Mickle & McKechnie	2 593		5	–	–	–
	Midfield Nat Gas Co	6 786	2 034	12	–	5	2
	National Gas Co	42 847	9 231	68	–	–	8
	North Shore Gas Co	12 458	1 888	6	–	–	–
	Ontario Gypsum Co	150	52	4	–	–	–
	Port Colbourne Welland	39 600	11 879	25	–	2	–
	Sparham A.F.	13 060	1 946	9	–	1	
	Sundy Gas Well	1 310	458	3	–	–	–
	Van Sickle A W	532	53	3			
	Wainfleet Moulton Gas Co	700	140	3			
NORFOLK	United Gas Co 2,131,858	109 843	69 138	69 1059	1	5	5
	Medina Natural Gas Co	36 122	25 000	21	–	–	–
	Richmond Oil & Gas Co	54 425	9 796	5	1	1	–
	Vacuum Nat Gas Co	10 276	1 522	1	–	–	
KENT	Dominion Nat Gas Co			112			
	Beaver Oil & Gas Co	651 640	150 529	25	–	–	1
	Dunneagen Oil & Gas Co	–	1 784	1			
	Glenwood Nat Gas Co	1 641 840	205 230	80	6	5	1
	Jasperson Bon			3	–	1	–
	Union Nat Gas Co	5 129 234	1 481 496	166	–	–	8
				275	6	6	9
	Petrol Oil & Gas Co	174 263	14 641	2	1	1	
LAMBTON	Castle Oil & Gas Co	5 941		1			
LAMBTON	Oil Springs Oil & Gas Co	19 240	8 658	1	–	–	–
MIDDLESEX	Progressive Oil & Gas Co			2	2	2	2
BRUCE	Northern Gas & Gasoline Co	1 411	705	2			
		10 545 000	3 163 500	1823			
				1805 D.B.S. Total			

YEAR	MILLOUGHBY						STAMFORD						THOROLD					
	Wells end of Year	Aband	DRILLED				Wells end of Year	Aband	DRILLED				Wells end of Year	Aband	DRILLED			
			Dry	Prod	RP	OF			Dry	Prod	RP	OF			Dry	Prod	RP	OF
1920	55																	
21	51	4	1															
22	44	7																
23	41	3																
24	39	2																
25	39																	
26	36	3																
27	39																	
28	39																	
29	37	2																
30	38				1													
31	39				1													
32	39																	
33	43			2	4													
34	42	3	2	2														
35	43			2	1													
36	43																	
37	42	1			1													
38	45			3	3													
39	51			4	6													
40	54	2	3	5														
41	52	1	3	1														
42	54		1															
43	54																	
44	53	1																
45	51	2																

	WILLOUGHBY						STAMFORD						THOROLD					
	Wells end of year	Aband	DRILLED				Wells end of year	Aband	DRILLED				Wells end of year	Aband	DRILLED			
			Dry	Prod	RP	OF			Dry	Prod	RP	OF			Dry	Prod	RP	OF
45	51	2																
46	54	1	2	4			5			5			4	1		4		
47	59	1	3	6			5						11	1		7		
48	62	2	5	5			5						20	2		9		
49																		
50																		
51	82	4	-	3		221	5	-	-	-		-	30	-	3	1		30
52																		
53																		
54																		
55																		

YEAR	CROMLAND						HUMBERSTONE						BERTIE						WAINFLEET						CAISTOR						GAINSBOROUGH					
	Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled			
			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Pro	R.P.	O.F			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.
20	47						120						95												63						5					
21	50			3			118	5					97	6		8			52	4					50	13					2	1				
22	49	1	1				107	11	7				87	14	2	4			49	3	1				49	1					2					
23	49		1				104	3					88	1	2	2			51			2			48	1					2					
24	50		1	1			95	10	1	1			91		1	3			45	8	2	2			46	2					3		1			
25	50						96	2	1	3			91						43	4	1	2			41	5					6		3			
26	49	3		2			94	2					89	3		1			41	2					36	6		1			5	1	2			
27	51			2			90	4					88	1					39	2					36						5					
28	48	5		2			90	2		2			85	3					41			2			36						3					
29	47	1	3				81	9					84	1					40	1					40	1	1	5			4	1				
30	47	1		1			81						89	3		8			36	4					53	2	2	15			5					
31	48			1			71	10					92	3	4	6			33	3					62	1	2	10			4					
32	48						66	5					90	8		6			29	7		3			62						5		1			
33	36	12					62	4					96			6			27	3		1			61	1					5					
34	29	7					60	2					99	1		4			27						61		2				15		5	10		
35	26	3					57	3					99	1	1	1			28	1	1	2			64	1		4			15	1		1		
36	26						57						101		1	2			27	4	3	3			64	2		2			13	5	1	3		
37	26	2		2			56	1					102	5	3	6			31			4			62	3		1			13					
38	26						56						108	3	1	9			32	2	1	3			63	3		4			15			2		
39	27			1			57			1			133		7	25			29	3	1				62	1					15					
40	28			1			69		2	12			141	5	1	13			30			1			65	3	1	6			14	1				
41	28						79	3	4	13			145	8	1	12			28	4	2	2			65	2	2	2			15			1		
42	27	1					83	3		7			151	2		8			33	1	6	6			71	1	1	7			15					
43	27						80	5		2			157	2		8			36	1	6	3			74	5	1	8			12	3				
44	27	1		1			81	2	1	3			164	1	1	8			39	5	8	9			77	4		7			11	1				
45	32			5			75	6					179	2	5	17			41	1	3	3			84	1		4			13					
															73	30	157																			

YEAR	CROWLAND						HUMBERSTONE						BERTIE						MAINFLEET						CAISTOR						GAINSBORO					
	Wells end of year	Aband	Drilled				Wells end of year	Aband	Drilled				Wells end of year	Aband	Drilled				Wells end of year	Aband	Drilled				Wells end of year	Aband	Drilled				Wells end of year	Aband	Drilled			
			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF
45	32			5			75	6					179	2	5	17			41	1	3	3			84	1		4			13					
46	35	1		3			83	2		10			183	4	6	8			41		2	4			91	2	1	9			13					
47	39			4			96	3	2	16			191	-		8			41	1	4	1			92	9	4	10			12	2		1		
48	39	1	3	11			106	2	3	12			196	4	5	9			41	1	3	1			96	4	1	8			10	2				
49																																				
50																																				
51	48	1	-	2		40	131	8	3	12		416	250	6	9	23		466	37	6	1	5		329	99	2	1	5		232	8	2	-	-		-
52																																				
53																																				
54																																				

YEAR	BINBROOK						GLANFORD						Tusc & Onondaga						ONEIDA						SENECA						CANBORO						YEAR
	Wells at end of Year	Aband.	Drilled				Wells at end of Year	Aband.	DRILLED				Wells at end of Year	Aband.	Drilled				Wells at end of Year	Aband.	Drilled				Wells at end of Year	Aband.	Drilled				Wells at end of Year	Aband.	Drilled			
			Dry	Prod	RP	OF			Dry	Prod	RP	OF			Dry	Prod	RP	OF			Dry	Prod	R.P.	O F			Dry	Prod	R.P.	O F			Dry	Prod	R.P.	OF	
1920																									140						15						1920
21	71	2	3	6			28	3	1	1			53	4					23						161	7	3	28			158	6		4			21
22	70	1					27	1					51	3		1			30	1	3	8			162	14	9	15			164	-	2	6			22
23	68	2					25	2					50	1					34	2		6			175	3	5	16			167	3		6			23
24	63	5					25						46	5	2	1			34	1	1	1			167	16	3	8			158	9					24
25	49	14					23	2					42	6		2			28	6	1				136	31					142	16					25
26	46	3					21	2					40	4	2	2			25	3					129	7					135	7	1				26
27	46						20	1					38	2					23	2					130	5	1	6			126	12		3			27
28	43	3					14	6	4				44	1		7			23						128	8	3	6			125	1					28
29	43						11	3					51	2	1	9			28						151	1	14	24			128			3			29
30	42	1					11						80		1	29			23	3	3	3			166	2	11	17			126	3		1			1930
31	51			9			11						103	1	13	24			40		5	17			171	6	3	11			138	3		15			31
32	54		1	3			11						99	6	2	2			52		2	12			180	5	2	14			168	4	3	34			32
33	53	1					11						106		2	7			54	2	2	4			173	12	6	5			173	4	2	9			33
34	53	1		1			11						117	10	2	21			61	1	4	8			176	14	2	17			186	3	1	16			34
35	53						13			2			123	5	4	11			74	2	12	15			186	3	8	13			199			13			35
36	52	1					13	1					129	10	3	16			75	2	1	3			180	6					189	13		3			36
37	52						13						122	13		6			75	3		3			178	3	1	1			183	11	1	5			37
38	51	1					13						120	9		7			67	8					169	9					173	10					38
39	51						13						117	12		9			66	3		2			166	6		3			168	6		1			39
40	50	1					13						115	15	1	13			72	2	4	8			165	5	7	4			165	4		1			1940
41	50						13						113	9	4	7			84	3	8	15			171	3	1	9			156	14	1	5			41
42	54		3	4			13						110	4	5	1			90	4	8	10			168	4	2	1			157	1		2			42
43	54						12						100	13	3	3			116	6	13	32			166	2					152	6		1			43
44	44	10					10	2					96	4	4				124	4	18	12			158	13	3				146	7		1			44
45	44						10						92	4					122	4	5	1			155	2	4	4			149	7	1	10			1945

YEAR	BINBROOK						GLANFORD						TUSCARORA & ONONDAGA						ONEIDA						SENECA						CANBORO						YEAR
	Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled			
			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF	
1945	44						10						92	4	-				122	4	5	1			155	2	4	4			149	7	1	10			1945
46	46	2		4			10						77	16	-	1			119	11	8	8			152	5	4	2			156	2	8	9			46
47	46						10						68	10	-	1			124	14	14	19			145	10	5	3			160	3	3	7			47
48	45	1					10						60	10	-	2			136	4	9	16			143	16	1	4			169		4	9			48
49																																				49
50																																				50
51	29	1	-	-		-	8	-	-	-		-	32	6	2	-		-	118	2	2	4		218	111	8	1	1		15	148	6	1	1		27	51
52																																				52
53																																				53
54																																				54
55																																				55

YEAR	CAYUGA NORTH						CAYUGA SOUTH						MOULTON						SHERBROOK						DUNN						RAINHAM					
	Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled				Wells at end of Year	Aband	Drilled			
			Dry	Prod	R.P	O.F			Dry	Prod	R.P	O.F			Dry	Prod	R.P	O.F			Dry	Prod	R.P	O.F			Dry	Prod	R.P	O.F			Dry	Prod	R.P	O.F
1920							63												13																	
21	47		3	4			62	1					91	2		7			14	1	1	2			20	1		1			122					
22	52	1	1	6			59	3					107	3	2	19			12	2	1				18	2					116					
23	54	2	1	9			58	1					117	3	2	13			12	1		1			17	1					114					
24	57	7	2	5			58						124	3	1	10			13			1			14	3					105					
25	67	4	2	14			58	4	1	4			121	7	3	4			13						14	3	2	3			98					
26	78	6	3	17			58	6		6			115	6					13						20	1	3	7			110					
27	87	7	7	16			60	2	2	4			125	13		3			12	1					28		2	8			130					
28	103	1	8	17			60	3	2	3			95	10					12						28	1	5	1			152					
29	120	2	7	19			58	2					95						12						29		8	1			181					
30	128	11	14	19			56	2					88	8		1			13	1	2	2			30		1	1			199					
31	140	2	9	14			56						107	4	6	23			17		2	4			31			1			218					
32	153		2	10			55	1					119	4	1	16			18		2	1			31						249					
33	160	5	2	12			53	2					122	11	3	14			18						50	1	7	21			272					
34	178		4	18			54		1	1			132	3	1	13			18						52	5	1	7			280					
35	197	2	6	21			55		2	1			127	9	8	4			17	1					51	1		2			291					
36	209	1	13	13			60		3	5			134	4	3	11			17						51	2		2			294					
37	206	11	6	8			58	2					122	14	2	2			16	1					51						297					
38	200	7	1	1			57	1					120	2					16						49	2	1				312					
39	201	2	1	3			57						116	7		3			15	1					51		5	2			324					
40	198	5	1	2			56	1					112	4					15						50	1					327					
41	199	7	3	8			56		1				104	9		1			15						50						326					
42	192	9	1	2			56	1	2	1			99	9		4			18	1	2	4			51	1		2			328					
43	202	11	5	21			69	1	6	14			106			7			19		1	1			44	7	2				327					
44	207	12	9	17			89	1	12	21			104	6	2	4			17	4	1	2			48	1		5			324					
45	221	5	6	19			90	1	4	2			104	2	4	2			17						55	1	1	8			319					

	CAYUGA NORTH						CAYUGA SOUTH						MOULTON						SHERBROOKE						DUNN						RAINHAM					
	Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled			
			Dry	Pro	RD	OF			Dry	Pro	RP	OF			Dry	Pro	RP	O.F.			Dry	Pro	R.P.	OF			Dry	Pro	R.P.	O.F.			Dry	Pro	R.P.	Q.F.
1945	221	5	6	19			90	1	4	2			104	2	4	2			17						53	1	1	8			319	13	1	6		
46	240	7	14	26			94		1	4			102	2					16	1					66	7	8	18			316	14		11		
47	247	4	12	11			98	4	2	8			104	-	3	2			16						94		5	28			303	13	2			
48	244	10	7	7			103	6	12	11			109	1	1	6			16						103	1	7	7			278	31	2	6		
49																																				
50																																				
51	216	16	1	1		35	123	3	-	3		95	122	13	-	11		708	20	-	2	1		40	165	-	5	29		1482	249	30	-	1		15

	WALPOLE						HOODHOUSE						CHARLOTTEVILLE						TOWNSEND						WINDHAM						MALSINGHAM SOUTH					
	Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled				Wells at end of Year	Abandoned	Drilled			
			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF
1920	169						64						15																		14					
21	157	16	2	4			63	4		3			14	1											5						15		1			
22	162	7	2	12			65	1		3			16			2									5						14	1				
23	164	11	3	13			63	6	1	4			16												4						12	2				
24	156	19	1	11			60	5	2	2			16												4						11	1				
25	146	16	3	6			53	7	1				16						1			1			4						13		2			
26	154	1	1	9			50	4	2	1			16						1		1				4						15		2			
27	165	2	7	13			49	1	1				16						1						8						15					
28	182	1	11	18			55		2	6			16		3				1						8						15					
29	198	1	8	17			56	1		2			16						1						8						14	1				
30	215		13	17			53	3					15	1					1						8						13	1				
31	219	2	8	6			56	1	2	4			15						1		3				8						13					
32	226	4		11			56						13	2					1						8						13		1			
33	274	2	14	50			55	1	1				13						1						8						14			1		
34	327	2	29	55			59		1	4			13						2			1			10						16			2		
35	375	2	11	50			64		2	5			13						2						10						17	1	1	2		
36	419	1	23	45			68	2	2	6			15		1				2						10						17					
37	428	7	12	16			68	4	2	4			15						2						10						17					
38	434	7	6	13			72		1	4			13	2					2						10						17					
39	438	8	6	12			71	1	3				13						2						9						19					
40	441	12	9	15			77			6			13						3			1			11						19					
41	473	9	26	41			81	1	4	5			13		1				4			1			22						19					
42	511	9	34	47			84		4	3			13		2				11	1	3	8			25						19					
43	505	23	13	17			90		6	6			15		3				20		14	9			24						19					
44	530	3	7	28			95			5			15		1				38		14	18			24						19					
45	565	7	17	42			99		3	4			15						61		17	23			24						19					

YEAR	HALPOLE						HOODHOUSE						CHARLOTTEVILLE						TOWNSEND						WINDHAM						WALSINGHAM SOUTH					
	Wells at end of year	Aband	Drilled				Wells at end of year	Aband	Drilled				Wells at end of year	Aband	Drilled				Wells at end of year	Aband	Drilled				Wells at end of year	Aband	Drilled				Wells at end of year	Aband	Drilled			
			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.
1945	565	7	17	42			99		3	4			15						61		17	23			24						19					
46	571	18	18	24			103	1	6	5			15		3				64		11	3			24		1				19		1			
47	555	21	6	5			109	3	3	9			15						63	1					24						20		1	1		
48	522	38	5	5			124		9	15			15						61	2					22	2					22			2		
49																																				
50																																				
51	504	16	3	4		91	144	3	14	9		934	19	-	3	-		-	61	1	1	-		-	32	-	3	6		610	24	-	2	2		153
52																																				
53																																				
54																																				
55																																				
56																																				

YEAR	WALSINGHAM NORTH						MIDDLETON						HOUGHTON						BAYHAM						MALAHIDE						BROWNSVILLE					
	Wells end of Year	Abond	Drilled				Wells end of Year	Abond	Drilled				Wells end of Year	Abond	Drilled				Wells end of Year	Abond	Drilled				Wells end of Year	Abond	Drilled				Wells end of Year	Abond	Drilled			
			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.
920	4						15						5						56																	
21	6			2			17			2			3	2					56	1					1		2	1								
22	6						19			2			3						55	1					2			1								
23	6						17	3		1			3						56	1					2	1	1	1								
24	6						19			2			3						52	4					2											
25	6						26	1	3	8			3						43	9					2											
26	5	1	1				28	3	4	5			3		1				42	1					2											
27	8			3			26	2	2				3						41	1					2											
28	9			1			25	1					3						41						2											
29	9						25						3						40	1					2											
30	9						25	1		1			3						39	1					1	1										30
31	9						35		2	10			7		2	4			38	1					1											
32	9		1				37			1	2		7						35	3					1							1				
33	10			1			39	2	4	4			7						35						1											
34	10						46		2	7			5						39		2	4			1											
35	9	1					48		1	2			4						47	1		9			1						2		2			35
36	9						55			7			4		1				52	5	4	10			1						14		4	12		
37	9						55	1	2	1			4						51	5	5	4			1						53		6	39		
38	9						55						4						54		1	3			1						77		3	24		
39	9						52	3	1				4						55			1			26		8	25			78	10	3	11		
40	8	1					54	1	1	3			4						55		6				53	1	6	28			72	9	2	3		40
41	8		1				52	3	7	1			4						51	4					90		5	17			37	37				
42	8						51	1	1				4						51		1				71	5	19	6			34	1	3			
43	8		2				49	5		3			4						44	7					52	19	5				28	6	1			
44	8						38	12	3	1			4						30	14					22	30	4				21	7				
45	8	1		1			39			2	1		4						31						22	1	1				19	2				

YEAR	MALSINGHAM North						MIDDLETON						HOUGHTON						BAYHAM						MALAHIDE						DEREHAM BAYHAM BROWNSVILLE					
	Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled			
			Dry	Prod	R.P.	O.F.			Dry	Pro	RP	O.F.			Dry	Pro	RP	O.F.			Dry	Pro	RP	O.F.			Dry	Pro	RP	O.F.			Dry	Pro	RP	OF
1945	8	1		1			39		2	1			4						31						22	1	1	1			19	2				
46	14		4	6			39						4						40	1					15	12	1	5			11	8				
47	22		2	8			39						4						39	1	1				16		2	1			14		1			
48	25		5	3			33	9	1	3			7		2	3			34	7	1	2			16		-	-			14	3		3		
49																																				
50																																				
51	37	-	5	5		655	37	-	1	2		125	7	-	-	-		-	32	-	-	-		-	16	-	-	-		-	11	4	1	-		-
52																																				

YEAR	YARMOUTH						DUNMICH						ALDBOROUGH						RALEIGH (TILBURY)						TILBURY EAST						ROMNEY (TILBURY)					
	Wells end of Year	Abnd	Drilled				Wells end of Year	Abnd	Drilled				Wells end of Year	Abnd	Drilled				Wells end of Year	Abnd	Drilled				Wells end of Year	Abnd	Drilled				Wells end of Year	Abnd	Drilled			
			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.
1920													1																							
21													–	1											147	13	1	12								
22																									136	15		4								
23																									137	4		5								
24																									139	3	2	5								
25																									135	9		5								
26																									135	2		2								
27																									130	8		3								
28																									138	4		12								
29																									138	1		1								
30																									137	3		2								
31																									142			3								
32																									144			2								
33																									150	1	1	7								
34																									153			3								
35																									154		1	1								
36																									154	1		1								
37																									152	4	2	2								
38			1						2																145	8	1	1								
39			1																						137	10	2	2								
40			1																						133	4										
41			2						2																135		1	2								
42																									128	7	1									
43			2																						130		2	2								
44																									124	6										
45																									119	5										

YEAR	YARMOUTH						DUNWICH						ALDBOROUGH						RALEIGH (Less DeCluta)						TILBURY EAST						ROMNEY (Less Dover)					
	Wells end of Year	Abandd	Drilled				Wells at end Year	Abandd	Drilled				Wells at end Year	Abandd	Drilled				Wells end of Year	Abandd	Drilled				Wells end of Year	Abandd	Drilled				Wells end of Year	Abandd	Drilled			
			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.
45	-	-	-	-			-																													
46	1	-	1	1			-																		119	5										
47	5	-	2	4			-																		117	2	1									
48	5	-	-	-			7	-	2	7			7	-	4	7									115	2										
49																									110	5										
50																																				
51	5	-	-	-		-	6	-	-	-		-	15	-	-	-		-	19	-	-	-		-	106	-	-	-		-						
52																																				
53																																				
54																																				

YEAR	MERSEA						GOSFIELD SOUTH						MALDEN						DOVER						CHATHAM AND GORE						CAMDEN AND GORE					
	Wells end of Year	Abandoned	Drilled				Wells end of Year	Abandoned	Drilled				Wells end of Year	Abandoned	Drilled				Wells end of Year	Abandoned	Drilled				Wells end of Year	Abandoned	Drilled				Wells end of Year	Abandoned	Drilled			
			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.			Dry	Prod	R.P.	O.F.
1921	4			1			1			1									8	1		1														
22	4		2				1												9			1														
23	4						4	1	1	4									9																	
24	4						7			3									8	1																
25	3	1					10			3									6	2																
26	3						14			4									7			1														
27	3						19			5									7																	
28	3						20			1									9	1		3														
29	3						20												8	2		1														
30	3						20												9			1														
31	3						21			1									9																	
32	3						21		2										8	1																
33	3						22			1									9			1						1								
34	3						23		1	1									12			3														
35	3						26			3									22			10						1								
36	3						27			2									23			1			1		4	1								
37	4			1			28		1	1									23						8		4	7								
38	5			1			28									1			23	1		1			8											
39	5						26	3		1									22	1	2				9		2	1					3			
40	5		1				25	2		1			2			4			22	1		1			12		5	3					1			
41	5						26			1			2						22		1				20	1	12	9			1		3	1		
42	5		1				27			1			1	1	7				22						20	1	14	1			1		6			
43	5						27						1						21	1					21		1	1			2			1		
44	5						27						1						20	1					25		3	4			3		3	1		
45	5						27									2			16	4					25		1				3		4			
							27																													

Year	MERSEA						GOSFIELD SOUTH						MALDEN					
	Wells end of Year	Abond	Drilled				Wells end of Year	Abond	Drilled				Wells end of Year	Abond	Drilled			
			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF
45	5						27							1	2			
46	5						27						2		3	2		
47	5						27						3		5	1		
49	3	2					27						5		1	2		
49																		
50																		
51	3	-	-	-		-	22	5	-	-		-	5	-	2	-		-

Year	DOVER						CHATHAM ⅓ GORE						CAMDEN ⅓ GORE					
	Wells end of Year	Abond	Drilled				Wells end of Year	Abond	Drilled				Wells end of Year	Abond	Drilled			
			Dry	Pro	RP	OF			Dry	Prod	RP	OF			Dry	Prod	RP	OF
45	16	4					25		1				3		4			
46	14	2					27		4	2			14		1	11		
47	13	1					26	1					15		7	1		
49	14		4	1			23	3	1				16		3	1		
49																		
50																		
51	12	2	-	-		-	26	-	4	1		750	17	-	1	-		-

Year	ZONE						SOMBRA						MOORE						DAMN						ENNISKILLEN						SARNIA					
	Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled				Wells end of Year	Aband	Drilled			
			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF
20																									4											
21																			1	1		1			4						14	3		1		
22																			5		3	4			3	1					16		1	2		
23															1				5		2				3						17	1	1	2		
24																			5						3						17					
25																			5						3						17					
26																			6		2	1			3						17					
27																			10		3	4			3						14	3				
28																			14		4	4			3	1		1			14					
29																			14						3						14					
30																			18		5	4			3						14					
31																			19		5	1			4			1			13	1				
32									1										19						4						13					
33																			22		1	3			4						13					
34									3										23		4	1			4						13					
35																			23						4						13					
36									1										29		5	6			4						13					
37																			29		4				6			2			13					
38																			29		3				6						13					
39																			29		2				6			1			13					
40																			29						4	2					13					
41																			28		1				4		1				13					
42																			34	1		6			4						13					
43	4		5	4					2										35	2	2	3			4						-	13				
44	18		7	14															32	4	2	1			3	1					-					
45	34		6	16															31	1					4											

YEAR	ZONE						SOMBRA						MOORE						DAWN						ENNISKILLEN						SARNIA					
	Wells end of year	Abnd	Drilled				Wells end of year	Abnd	Drilled				Wells end of year	Abnd	Drilled				Wells end of year	Abnd	Drilled				Wells end of year	Abnd	Drilled				Wells end of year	Abnd	Drilled			
			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF			Dry	Pro	RP	OF
45	34		6	16															31	1					4						1					
46	41	1	3	8			6			6					1				31						4		2				1					
47	42	1	1	2			8	2	6	4			3		5	3			31	3		3			4		1				1		1			
48	44		2	2			6	3	6	1			8		6	5			26	5	2				4		3				1			1		
49																																				
50																																				
51	49	-	-	-		-	13	-	17	4		7485	22	-	16	5		25985	24	3	7	1		590	3	1	-	-		-	1	-	-	-		-
52																																				
53																																				
54																																				
55																																				

Table VII Gas Wells and their Production 1951

Township	No wells Produc. Dec 31st 1951	No wells abandoned 1951	Wells Drilled Dry	Wells Drilled Prod	Open Flow	Meter Production	Rock Pressure
Gosfield South	22	5	–	–	–		150
Malden	5	–	2	–	–		395
Mersea	3	–	–	–	–	11 866	300
Tilbury West	3	–	–	–	–		445
Camden Gore	17	–	1	–	–	69 430	530
Chatham	24	–	–	–	–	157 023	415
Chatham Gore	2	–	4	1	750	–	745
Dover	12	2	–	–	–	225 037	150
Orford	–	–	1	–	–		
Raleigh (DeClute)	32	6	–	–	–	268 281	250
Raleigh	19	–	–	–	–		218
Romney	125	3	–	–	–		147
Tilbury East	106	–	–	–	–		140
Zone	49	–	–	–	–		400
Dawn	24	3	7	1	590	942	340
Enniskillen	3	1	–	–	–		225
Moore	22	–	16	5	25 985	2 396 834	937
Plympton	–	–	1	–	–		
Scarbro	13	–	17	4	7485	36 859	795
Moss	9	–	–	–			690
Aldborough	15	–	–	–		184 810	650
Dunwich	6	–	–	–			715
Bayham	32	–	–	–			210
Malahide Yarmouth	21	–	–	–	–	25 585	520
Bayham (Blenheim)	5	–	–	–			335
Dereham (Brownsville)	6	4	1	–	–	50 119	340
South Norwich	6	–	–	4	184		520
Charlotteville	19	–	3	–	–		247
Houghton	7	–	–	–	–		240
Middleton	37	–	1	2	125		204
North Walsingham	37		5	5	655	400 383	315
South Walsingham	24		2	2	159		308
Townsend	61	1	1	1	–		220
Windham	32	–	3	6	610		233
Woodhouse	144	3	14	9	934		185
Brantford	0	2	–	–	–		–
Onondago	7	4	–	–	–	22 047	55
Tuscarora	25	2	2	–	–		80
Burbrook	29	1	–	–	–		55
Glanford	8	–	–	–	–		37
Canboro	148	6	1	1	27		84
Dunn	165	–	5	29	1482		165
Moulton	122	13	–	11	708		143
North Cayuga	216	16	1	1	35		134
Oneida	118	2	2	4	218		93
Rainham	249	30	–	1	15	1 682 314	130
Seneca	111	8	1	1	15		63
Sherbrooke	20	–	2	1	40		165
South Cayuga	123	3	–	3	95		158
Walpole	504	16	3	4	91		163
Caistor	99	2	1	5	232		69
Gainsborough	8	2	–	–	–		52
Bertie	250	6	9	23	466		105
Crowland	48	1	–	2	40		25
Humberstone	131	8	3	12	416		51
Pelham	–	–	2	–	–	549 399	–
Stamford	5	–	–	–	–		50
Thorold	30	–	3	1	30		120
Wainfleet	37	6	1	5	329		60
Willoughby	82	4	–	3	221		70
Surface Wells	55		2			6 500	
Private Wells	419					120 000	
	3951	160	117	146	41 937	8442842	

NATURAL GAS PRODUCTION ONTARIO

Year	Welland	Haldimand	Norfolk	Elgin	Onondaga	Leamington	Tilbury	Dover	Lambton	Misc	Total	Value	
1890	460,000	5996 34 / 23 676879				8,500 000 / 100,000	waste				560,000	56,000	1890
1891	2,129,686 / 1,102,502	GSC. Vol. X 140S Exported			Exported GSC Vol X 140S	100,000					1 202 502	120,250	1
1892	1 295 490 / 1,795,916	(e) estimated 3,000			Export [illegible] 1891	267 584					2,066,490	150 000	2
1893	1 314 824 / 2,011,516	3,000			[illegible]	970 484					2 985 000	366,233	3
1894	1 067 850 / 1,880,000	3,000			10,800	433,500	Pencil figures no. of wells				2,316,500	313,754	4
1895	1 052 800 / 1,793,594	3 000			785,990	2,236,406					2,033,000	423 032	5
1896	696 928 / 1,411,175	3 000			966 800	2,500 000		Chalmers in GSC Vol XI 1901			3,914,175	276 307	6
1897	650 000 (e) / 1,328,118	3,000			972 480 / (1/12) 810,400	1,476,870		p. 163A says "from Feb 1895 to July			2,807,988	325 873	7
1898	600 000 (e) / 949,310	3,000				2,000,000		1901, there was exported to Detroit			2,952,310	322 123	8
1899	575 000 (e) / 981,086	3,000				2,379,467		9,639,355 M cuft of gas these he			3,363,553	387 271	9
1900	563,957 / 887,547	22 835			1,500,000 Bur Mines Rept	3,100,000		says are minimum figures not included			4,010,382	417 094	1900
1	991,094	26 000			1,373,341	2,615,983		ing Toledo.		4,000	3,637,077	339,476	1
2	954,031	32 000			Export stopped	1,110,000				18,000	2,114,031	195,992	2
3	992,952	90 000				200 000				10,000	1,292,207	202,210	3
4	1,796,207	294 662				200 000				5,388	2,292,207	328,376	4
5	1,671,277	996 801				100,000				3,199	2 771 277	397,566	5
6	1,498,709	1 488 474			12 000	28 290 294	2,000,000	waste		1,526	2,998,709	533,446	6
Export stopped 7	1,328 711	1,565,439	11,849		15 000	Mickle says	415,600			3,311	3,335,900	756,174	7
8	1,188,546	2 525 882	57,253		20 000	22,500,000 M without waste	848,000			2,661	4,632,342	988,616	8
9	952,108	2,442,457	61,835		25 000		3 401 000 / 3,041,000			600	6 520 000	1,188,179	9
1910	934,782	2,581,903	93,053	59 600	25,650		3,841,200			48,685	7 416 588	1,491,236	1910
11	900,327	2,976,833	112,506	126 000	96,675		5,649,000				9,861,341	2,186,762	11
12	931,774	3,246,031	113,364	456,400	67,367		7,752,500	Kent			12,567,436	2,268,022	12
13	860,380	3,097,406	130,236	466,800	57 365		7,975,800	183	19,413		12,619,400	2,362,021	13
14	844,304	2,266,206	156,490	465,600	61,575		10,121,600		169 600		14,085,375	2,346,687	14

Mickle says (Vol. 25. Pt I p 39) the Welland Haldimand Norfolk Brant field produced from 1906 to 1915 incl. 36,906,000 M cuft. From 1892 to 1905 incl. 16,000,000 M cuft. Total 52,906,000 M cuft

Mickle says Elgin produced from 1911 to 1915 → 1,913,700 M cuft Vol XXV Pt I p 39

Mickle says Kent field produced 52,049 M cuft to end of 1915.

Mickle says Lambton Co produced end of 1915 - 570 800 M cuft

This must be from Bruce County

Total for Canada.

30,445,946 / 17,149,999 M

YEAR	WELLAND	HALDIMAND	NORFOLK	ELGIN	BRANT	TILBURY	DECLUTE	DOVER	DAWN	OTHER LAMBTON	MISC	TOTAL	VALUE	INDUSTRIAL
1915	805.042	2,831.583	264.160	399.100	50.915	10,819.100			60.000	60,000		15.229.900	2.622838	
16	817.227	2.573.712	346.981	351.100	68.681	13.752.500				40.092	15.108	17,966.301	2.404.499	
17	871.521	2.546.721	431.228	210.637	46 805	15.284875		165.525		44.090	510	19.601.912	3.220.123	9.124.752
18	755.476	2.305.477	433.445	260.284	35 000	8.847.802		468.798		30.197	6.807	13.120.286	2.498.769	2.744.866
19	653.253	2.340.454	412.709	260.165	20.000	7.412.732		478.572		21 941	10.059	11.601.485	2.583.324	1.584.479
1920	529.151	1.788.978	428 650	134.352	15.000	6.800.264		1.009.342		25181	1.411	10.729 329	3.163.500	1.423.825
21	494.752	1.686.906	377460	97.596	11.426	5.386 159		435.946	6304	25185	1.500	8.523.234	4.018. 190	857 741
22	463.675	1.741.584	382.203	84.770	11.873	5.484. 618		322 984	36 786	19.509	6 024	8.568.301	4.024.767	538.790
23	518.523	1.753.324	390.956	72.099	12.353	5.069. 215		187.342	79 995	12.679	18.575	8.128.443	4.006.214	662.080
24	456.960	1.261.253	402.818	79.041	12.111	4 757.847		199.770	61 704	11.873	127 535	7.370.912	4. 076. 014	549.063
1925	294.843	1.226.264	393.044	65.271	12 979	4.966.207		126.607	37.821	13092	133.066	7.257 274	4.083.341	535.088
26	276.259	1.358.709	424.241	36.794	12.275	5.365.423		159.136	308	14.629	128.722	7.776.496	4.415.918	780.438
27	278.967	1.324.483	343.765	40.698	13.224	4.994.071		189.438	296	12.370	114.002	7.311.214	4.331.780	542.276
28	301.847	1.430.184	316.710	44.154	13.804	5.228.451		178.273	5.901	10.303	103.113	7.632.740	4.535.312	900.946
29	298.688	1.588.449	277.687	46.272	31.558	5.780.061		366.224	85.279	8.748	100.221	8.583.187	4.968.133	1.039.778
1930	408.475	1.479.032	277.971	48.018	58.637	4.840.014	159.264	459.112	124.411	7.238	81.246	7.943.416	5.061.588	683.946
31	377.566	1.590.452	312.535	43.536	170.521	3.959.557	416 627	338.422	124.392	5.806	80.120	7.419.534	4. 635.497	1.092.777
32	351. 616	1.453.864	365.638	45.708	140.612	4.231.013	274.246	275.958	161.760	8.911	76.015	7.386.154	4.719.297	1.296.067
33	333.619	1.524.251	346.621	45.698	121.578	3.989.152	212.552	252 694	256.802	8.259	75.163	7.166 659	4.523.084	1.373.481
34	318 409	1.801.160	354.274	51.483	109.486	3 905 028	188.158	363.344	508.596	8.413	74.500	7.682.851	4.741.368	1.503.896
1935	290 119	1.568.473	472.993	116.118	120.461	3.270.921	890.100	935.446	403644	8.300	74.400	8.158.825	4.938.084	1.608.382
36	286 345	1.735. 171	462 653	207 914	130 747	3 531 870	1298363	842.362	1436 819	BROWNSVILLE	74 400	10 006 743	6 054 294	1 812 500
37	298.493	1.784. 257	441.375	260.974	112 482	3.245 333	1512 300	636532	1.890 874	486.931	76 763	10.746 334	6 588 798	2.080 413
38	253085	1.912 882	437 867	113.651	135 348	3.265. 726	1.797. 789	509.677	1 885 003	556 922	75 129	10.952.806	6 460 763	2.131.656
39	279 696	2 109 935	362 780	59 554	108.640	3.097. 557	2.182.437	433.496	2.129. 825	1.109.640	74 374	11. 966.581	7. 261. 927	2.503.954
1940	43458.552	68 394 437	10.201.016	4.716.890	1.945.348	188 930.193	8.931.836	9.390.275	9.246.247	2.153.493	1.577.421	363.196.677	128.680.045	37.559.444

YEAR	WELLAND	HALDI MAND	NORFOLK	OXFORD	BAYHAM	MALA HIDE	MOSA	OAMN	DOVER	DECLUTE	TILBURY	BRANT	MISC	TOTAL	VALUE	INDUSTRIA
	43 458 552	68 394 487	10 201 016	2 153 443 Brownsville	4 716 890			9 246 247	9 390 275	8 931 836	188 939 193	4 945 348	1 577 421	363 186 677	128 680 895	37 559 44
1940	267 567	2 101 759	432 510	1 036 260	81 356	608 860	21 444 Grimsby	2 276 346	381 837	2 717 192	2 902 079	151 193	75 000	13 053 403	7 745 867	2 792 556
41	274 039	1 962 524	421 717	220 077	71 692	2 497 447	165 010	669 749	341 516	1 482 186	2 466 386	182 360	74 000	11 882 703	7 115 473	2 329 849
42	288 663	2 124 122	431 926	77 911	118 257	868 299	1 127 281	1 526 149	310 261	824 325	2 395 438	145 134	74 000	10 476 770	6 669 819	2 235 350
43	296 016	2 470 967	240 399	55 448	7 082	87 091	311 029	1 102 072	220 133	475 567	2 445 565	98 105	74 000	7 914 408	6 354 045	2 065 550
44	311 417	2 267 075	242 806	38 456	22 374	39 652	336 852	685 845	181 211	362 310	2 161 422	81 169	74 000	7 082 509	4 694 097	1 877 126
45	331 955	2 016 669	463 243	30 026	23 888	25 445	297 978	421 320	162 286	461 428	2 152 398	72 662	74 000	7 199 970	4 837 585	1 589 247
46	340 639	2 022 637	450 316	22 999	13 661	45 437	296 757	337 298	134 814	439 245	2 123 669	65 188	66 500	7 051 309	4 656 528	1 512 991
47	372 974	1 970 961	414 397	15 825	24 640	43 459	466 162	517 561	129 184	427 309	1 877 048	73 821	66 500	7 785 921	5 334 991	1 616 482
48	471 488	1 772 101	413 970	25 816	48 526	10 866	636 226	350 988	134 780	528 384	1 700 638	51 691	66 500	8 590 429	6 958 247	1 534 766
49	455 461	1 684 216	372 165	66 849	23 892		435 474	112 863	100 431	355 370	1 913 376	49 615	86 500	8 024 213	8 826 634	
1950	548 806	1 584 476	384 580	43 542	64 184	ZONE	262 913	2 370 661	139 121	231 950	1 761 648	46 849	126 500	8 009 488	8 890 532	
51	549 399	1 682 314	400 383	24 651	25 583	261 070	226 453	2 435 693 942	180 231	268 281	1 986 211	22 047	126 500	8 442 842	9 962 553	
52									122 269	289 395	1 640 464					
53	474 754	90 371 944	14 469 015		5 215 452	4 215 680	2 562 108						2 134 921			
54				3 786 702		4 226 556		15 224 217		17 495 383	214 816 611					
55									11 806 080						200 663 917	
56						ZONE	5 498 426									
57						SUMBRA MOORE	5 081 099									
58																
59																
1960																

	43 458 552	68 394 437	10 201 016	1 945 348	2 153 493		4 716 890				188 930 193							1 577 421	363 186 677
	WELLAND	HALDIMAND	NORFOLK	BRANT	BROWNS VILLE	SOUTH NORWICH	WALAHOUSE BAYHAM	MOSA ALDBORO	ZONE	CAMDEN CHATHAM	DOVER	DECLUTE	TILBURY	DAWN	MOORE	SOMBRA	MISC	VALUE TOTAL
40	267 567	2 101 759	432 501	151 193	1 036 260		608 660 81 356 2 497 447	21 444			381 837	2 717 192	2 902 079	2 276 346			75 000	7 745 067 13 053 403
41	274 039	1 962 524	421 717	182 360	220 077		71 692 668 299			165 010	341 516	1 482 186	2 466 386	1 663 749			74 000	7 115 273 11 482 703
42	288 663	2 124 122	431 926	145 134	77 911		118 257 87 091			1 127 281	310 261	824 325	2 395 438	1 526 149			74 000	6 665 819 10 476 770
43	296 016	2 470 967	240 399	98 105	55 448		7 082 89 652		2 202	311 029	220 133	475 567	2 485 565	1 020 728			74 000	6 354 045 7 914 408
44	311 417	2 267 075	242 806	81 169	38 456		22 374 25 445		277 920	336 852	181 211	362 310	2 161 422	685 845			74 000	4 694 097 7 082 509
45	331 955	2 016 669	463 243	72 662	30 026		23 888 45 437		665 568	297 978	162 286	461 428	2 152 398	421 320			74 000	4 837 585 7 199 970
46	340 639	2 022 637	450 316	65 188	22 999		13 661 43 459		692 149	296 757	134 814	439 245	2 123 669	331 298			66 500	4 658 528 7 051 309
47	372 974	1 970 961	414 397	73 821	15 825		24 640 10 866		1 251 338	466 162	129 184	427 309	1 877 048	517 561		134 742	66 500	5 334 991 7 785 921
48	471 488	1 772 101	413 970	51 691	25 816	47 358	48 526 22 389	1 172	1 488 010	636 226	134 780	528 304	1 700 638	350 988	339 838	550 595	66 500	6 938 247 8 530 429
49	455 461	1 684 216	372 165	49 615	66 849		23 092 27 782	1 533	681 940	435 474	100 431	355 370	1 913 376	112 863	1 402 106 2 205 661	283 995 165 000	86 500	8 826 634 8 074 213 8 890 532
1950	548 806	1 584 476	384 580	46 849	43 542		64 184	36 422	439 299	262 913 69 430	139 121	231 950	1 761 648	4 959	2 390 661		126 500	8 009 488 8 962 553
51	549 399	1 682 314	400 383	22 047	24 651	25 468	25 583	184 810	261 070	157 023 85 200	225 037	268 281	1 986 211	942	2 396 834	36 959	126 500	8 442 842
52	686 528	1 594 783	546 282	21 519	21 661	34 554	20 429	298 246	1 185 100	2 337	122 269	289 395	1 640 464	744	2 651 432	44 707	126 500	8 382 190 11 694 595
53	596 771	1 313 761	517 872	18 801	19 676	34 032	16 929	585 371	99 165	97 790	79 643	232 262	1 745 755	712	4 247 472	102 948	126 500	9 835 469
54	509 384	1,131,389	616 747	9 460	17 616	35 065	10 929	547 673	140 268	56 582 57 605	95 668	226 884	1 131 389	Erie 323 1227	4 384 558	292 674	Norwich 2 515	
55	431 757	1 342 640	730 013	15 130	15 815	32 683	16 083	357 092	132 570	39 935 80 495	81 720	133 933	2 058 574	3722	4 841 792	Howard 444 631	16 218 55 745	Essex 52240 10 852 857
56	430 231	1 488 800	1 000 745	13 326	16 819	30 541	17 159 16 879	333 584	142 796	117 900	76 140	100 621	2 246 837	62 954	5 405 593	Harwich Howard 623 426	33 968 1 447 654 286	Essex Halton 12 811 618
57		1 200 000					4 226 [illegible]				9 505 929							
58	403 611	948 643	1 479 310	→	8 700	24 539	18 630 15 265	1 468 231	6 116 548	4 816 361	2 128 920	1 812 766	220 449 127	13 316 749	18 649 306	1 923 426		16 147 986
	49 680 465	95 457 609 99 753 774 8 979	16 734 318	3 038 828	3 870 719	124 595		2 345 [illegible] 4 351										

50.

UNION GAS Co POTENTIAL FOR WINTER 1948 - 49

CAMDEN GORE

	O.F.	RP	No Wells	PEAK DAY
1946	3.763	768	11	?
1947	2.218	544	15	?
1948	1738	522	16	847 / 500

Production from Camden is restricted by reason of Chatham field interference

CHATHAM II

	No Wells	O.F.	RP	PEAK DAY
1946	23	4369	569	1.98 m²
1947	23	3415	556	1.70 m²
1948	23	2505	478	1.10 m²

Chatham production is also restricted by the Camden interference

DAWN

	No Wells	OF	RP	PEAK DAY
1946	29	3140	344	
1947	28	2646	339	
1948	26	2378	326	0.50

Does not include storage wells.

D'CLUTE

	No Wells	OF	RP	PEAK DAY
1946	26	4408	314	2.17 m² June July
1947	26	3458	266	1.90 m² 1.080
1948	26	2858	256	0.90 m²

DOVER

	No Wells	OF	RP	PEAK DAY
46	6&1	594	188	1.77
47	6&1	580	174	1.90
48	6&1	544	162	0.2+0.5

#13 is not on this OF but is used for peaks in winter months

TILBURY

	No Wells	OF	RP	PEAK DAY
46	149	12933	147	5.8 m²
47	149	13040	145	4.8 m²
48	143	10770 / 11250	143	3.5

PROPANE

600 000 gals in storage

Daily peak 6 m²

ZONE

	No Wells	OF	RP	PEAK
46	40	20733	620	8.22
47	42	15572	521	7.9
48	42	12403	421	4.00

STILL GAS

Daily average through the summer has been 5 m² winter peak to be 6 m²

IMPERIAL BECHER

6 wells O.F. 4,100 m. - R.P. west 585 East 840. Three have fluid and two to be plugged. Syphons will show an increase in Opra Flow.

Max daily potential prob. 1.88 m² but for safety 0.8 m² peak day

KIMBALL

7 wells O.F. 6.885 m. RP. 800 Peak Day 3.00 m² limited flow

2 more wells now drilling. Gas must go into Sarnia line when

OTHER PURCHASE

American Eagle and West Petroleum Peak Day 0.3 m²

STORAGE

In storage Nov. 1948, 1,250 m² - Compressor capacity 18 m² withdrawal

= 69½ days at max. Normal withdrawal placed at 15 m²

SUMMARY

	m²	Manufactured Gas		Storage	
Camden Gore	0.5	Oil & Propane	3.5	Union Fields	10.7 + 0.5
Chatham	1.1	Still gas	6.0	Manufact	9.5
Down	0.5	Purchased Gas		Purchased	4.1
D'Clute	0.9	Becher	0.8	Total	39.3 + 3.5
Dover	0.2+0.5	Kimball	3.0		
Tilbury	3.5	Other	0.3	Peak day	42.8
Zone	4.0+0.5				

91 cu ft of gas per gal of propane 730 M cu ft gas per car

Propane – Brantford

Car holds 8000 gals = 730 mcu ft gas
Brantford uses 600 000 gals – month 75 cars
and 2 000 000 gals per year

Shell has 19 cars and borrowed 10 in USA.
Requires 50 cars to deliver 600 000 gals month to
Brantford. Shell need 21 cars.

Shell produce 80–100 M gals month buy remainder in USA.

Brantford uses propane in November

With 400 M gals storage = 36 000 M cu ft gas
Send out from Brantford station was 60 000 M cu ft in Jany

Brantford minim requirements (with full storage on Dec 31st)
is 33 cars in Jany and 75 cars in Feb.
Requires in all 756 cars 50 cars in storage

Provided a monthly delivery of 45 cars can be maintained

	Deficiency Mcu ft gas in month	Equivalent Cars Propane	Withdrawn from storage Cars	Remain in Storage Cars	Delivering Cars
October	771	1	–	50	45
Nov	6 893	10	–	50	
Dec	12 296	17	–	50	
Jany	43 282	57	12	38	
Feb	68 806	90	45	-7	
March	27 480	38	–	0	
April est	30 700	39	–	6	
	190 232	252			

Dominion expect to build an Oil Gas plant at Pt Stanley by Oct 1st 1947. to cost $ 1,700,000
Propose that present overriding rate of 17 cents shall cease on that date and a permanent new rate of 18 cents hcuft will take effect on that date. to cover the cost of building the plant a 6000 hcuft per day
It is estimated that 500000 hcuft will be required to supplement the Natural Gas produced. This gas is to made of either oil or propane and at no profit.
If oil can be laid down at Pt Stanley @ 13 cents/gal it is expected that the no profit rate for this gas will be 24 cents hcuft

The rates now authorized for imported natural gas will be suspended and reconsidered when it is certain that gas can be imported.

DOMINION NATURAL GAS CO

GAS RATION STUDY

Proposed Gas Ballance - Winter 1947-1948

	November	December	January	February	March	April	May
Gas delivered winter 1946-47	297 000	307 000	346 000	354 000	289 000	304 000	266 000
Propane do	12 000	51 900	52 640	72 900	72 900	36 000	9 200
Total gas used 1946-47	309 000	358 900	398 640	426 900	361 900	340 000	9 200
Natural Gas Estimated available 1947-48	297 000	325 000	335 000	331 000	290 000	302 000	270 000
Gas from Propane	14 500	29 100 18 100	37 300 20 000	34 500 20 000	35 500 20 800	38 000 15 400	10 900
Total Gas 1947-48	311 500	354 100 343 100	372 300 355 000	365 500 351 000	325 500 310 800	332 000 317 000	280 900
Actual Shortage		4 800 15 800	26 340 43 640	61 400 84 900	36 400 50 100	15 000 22 600	
Proposed Alotment							
36 500 Residential @ 3 M	109 500	109 500	109 500	109 500	100 000	109 500	109 500
8 200 House heating @ 3 M	24 600	24 600	24 600	24 600	22 000	24 600	24 600
2 570 Comm. @ 4·4	11 300	11 300	11 300	11 300	10 200	11 300	11 300
234 Industries	23 000	19 000	17 000	18 000	16 000	16 000	17 000
310 Public Auth.	2 000	4 000	4 000	5 000	5 000	4 000	3 000
5 Wholesale Distributors	10 000	10 000	10 000	10 000	9 000	10 000	10 000
263 Free Gas	2 500	4 000	6 000	6 500	5 500	5 500	4 000
Company Use	3 000	5 500	8 000	7 500	7 000	8 500	3 000
Leakage	24 600	24 600	24 600	24 600	24 600	24 600	24 600
Total	210 500	212 500	217 000	199 300	199 300	214 000	207 000
AVAILABLE FOR RATION	101 000	130 600	140 000	134 000	111 000	103 000	73 900

DOMINION NATURAL GAS Co
PEAK DAY DEMAND

	January			April		
Year	Natural	Propane	Total	Natural	Propane	Total
1941	15200	4658	19858	13400	1800	15200
1943	15400	450	15850	13300	500	13800
1944	13600	1,585	15185	11800	2200	14000
1945	13900	2,200	16100	10715	1200	11911
21st 1946	13949	1,355	15304	10088	1,959	12047
23rd 1947	11124	4,602	15726	9872	2,610	12482

DOMINION NATURAL GAS Co
Relation of Gas Used to Wind & Temperature

	Degree Days	Propane	Natural Gas	Total
Sept 44 to May 45	8534	115146	2,753,062	2868208
" 45 " 46	8581	258920	2850227	3109147
" 46 " 47	9448	318244	2,672282	2990.526

41 41 - ~~42~~ 3.799 000
42 - ~~43~~ 3464 000
43 - ~~44~~ 3277 000
41 3149 000
3190 000
3157

DOMINION NATURAL GAS CO.

GAS RATION STUDY

Aug. 1st 1947

PROPOSED GAS BALLANCE WINTER 1947-1948

	November	December	January	February	March	April	May
Gas delivered winter 1946-47	297 000	307 000	346 000	354 000	289 000	304 000	266 000
Propane do	12 000	40 000	58 000	65 000	73 000	50 000	19 000
Total Gas used 1946-47	309 000	347 000	404 000	419 000	362 000	354 000	285 000
Estimated for winter 1947-48							
Natural Gas	297 000	325 000	335 000	331 000	290 000	302 000	270 000
Propane	14 500	29 000	38 000	35 000	36 000	30 000	10 900
do Imperial Union	–	45 000	45 000	45 000	45 000	–	–
Total Gas 1947-48	311 500	399 000	418 000	411 000	371 000	332 000	280 900
SHORTAGE		[illegible]	31 000	8 000		2 000	5 000
Proposed Allotment		37	31	53 000	36 000		
36500 Res. Customers @ 3 M.	109 500	109 500	109 500	109 500	100 000	109 500	109 500
8200 House Heat Cust @ 3 M	24 600	24 600	24 600	24 600	22 000	24 600	24 600
2570 Commercial @ 4.4	11 300	11 300	11 300	11 300	10 200	11 300	11 300
234 Industries	23 000	19 000	17 000	18 000	16 000	16 000	17 000
310 Public Authority	2 000	4 000	4 000	5 000	5 000	4 000	3 000
5 Wholesale	10 000	10 000	10 000	10 000	9 000	10 000	10 000
263 Free	2 500	4 000	6 000	6 500	5 500	5 500	4 000
Company Use	3 000	5 500	8 000	7 500	7 000	8 500	3 000
Leakage Lost etc	24 600	24 600	24 600	24 600	24 600	24 600	24 600
Total	210 500	212 500	215 000	217 000	199 300	214 000	207 000
Available for Ration	101 000	186 500	203 000	194 000	171 700	118 000	73 900

Toronto Aug. 6th 47.

Kingsville	Conklin W.D. (Long)
St Thomas	West T.C.
St Catharines	Smith Herb. H.
Simcoe	McGregor Howard R.
Woodstock	Lewis John A ✓
Galt	Foster Dr E.E.
Leamington	Selkirk W.E.
Halpde Twp	Catherwood A.E.
Dunnville	Griffith W.J.
Hagersville Rainham Twp	Fulsom C.P.
Port Colborne	Green James. P. Chirman
Brantford	Dowden Walter J Sect.

Meeting

Aug 6th 47

Wed. Sept 10th 47

SUMMARY OF ALL GAS USED IN ONTARIO FOR TEN YEARS 1937 – 1946

YEAR	NUMBER PAY CONSUMERS	GAS DISTRIBUTED: NATURAL GAS	PROPANE	IMPORTED GAS	MANUFACTURED GAS mm	TOTAL GAS	PRODUCING WELLS: TOTAL WELLS	DRILLED IN YEAR	OPEN FLOW
1937	123 527	10 746 334		113 452	Still Gas 0.1 Gas	10,859,786	3 252	135	181,364
38	127 861	10 952 806		125 807		11,078 613	3 273	114	111,402
39	131 598	11 966 581		107 946		12,074,527	3 322	132	63,907
1940	136 698	13 053 403		129 934		13,182 337	3 382	147	66,736
41	141 520	11 828 703		172 482	26669	12,027 854	3,429	177	47,915
42	134 562	10 476 770		192 993	696 572	11,366,335	3,503	150	17,264
43	141 253	7 914 408	72 700	327 116	2 323 795	10,638,019	3,511	150	11,201
44	142 015	7 082 509	129 759	266 030	2 746 532	10,224,830	3,500	186	24,720
45	146 186	7 199 970	170 103	347 097	2 886 470	10,603,640	3,612	177	27,055
46	150 947	7 051 309	288 522	363,673	2 784 536	10,488,040	3,696	207	24,442
47	150 133	7 785 921	316 863	428 657	2 837 031	11,368,472	3,793	207	*40,571
48									

* 18530 marts of this was
698 – Welland storage
19 228 Dawn Storage wells

OIL GAS

1. gal. No. 1, No 2. Kerosene or Straight run gasolene 170 000 B.T.U.
8. 6 to 9 gals make one Mcuft 1000 B.T.U. gas.

9 gals oil @ 13¢ = $1.17
Steam labour etc 12
$1.39
Credit 1 gal tar 06
$1.23

Capital charges @ 1 billion cuft per year = 20 ¢ Mcuft
Total 1.23 + 20 ¢ = $1.43

Propane from Calgary -
Freight $ 2.33 ¢ cwt.
gal of propane weighs . 5.1 pounds
" " butane " 5.75 "

$\frac{100}{5.1}$ = 19 gals per cwt. $\frac{2.33}{19}$ = 12.2 cents/gal freight. C.N.R.

1 gal propane = 110,160 B.T.U./gal
" butane = 122,880 " "
Commercial gas from propane has 1240 B.T.U./cuft
∴ 1 M cuft 1240 B.T.U. gas requires 11 gals propane
which costs 11 (12 + 4¼ cents) = $1.80 + 10 labour steam = 1.90
There is no capital cost figured in the above.
1200 B.T.U. at 75 cents = 1000 B.T.U. @ 62 cents.

Tarr Contractor - Sunder Dwyer of Well

Cockett Farm #3 Dry hole

Bridge at 930 ft turned 6"

First plug 935 wood 3 ft - 6" diam

Filled up to 910 with earth sand

Wood plug 910 8" tapered in casing seat

filled with earth & sand to 100 ft

turned wood plug 8" - 3'6" at 110 ft

filled with earth to surface.

No gas in Clinton

Sulfur gas at 120 ft

TUSCARORA PRODUCTION

Year	Petrol		AJAX		Total
1925					
26		933 975 (11 666)			1 447 895 (88 966)
27				514 920 (7 585)	
28	3	428			428
29	9	18 583			18 583
30	32	26 071		14 683	40 754
31	41	78 635	30	75 873	154,508
32	29	69 702	25	55 038	124,740
33	33	57,832	31	41 371	99,203
34	37	48,768	37	29,104	77,872
35	38	57 123	38	36 693	93,816
36	42	67 701	42	37 012	104,713
37	40	63 174	38	25 140	88,314
38	38	56 275	40	22 241	78 516
39	44	58 218	31	26 272	84,490
40	40	88 296	32	44 886	132,182
41	42	88 802	34	41 094	129,896
42	39	89 121	34	38 847	127,968
43	37	65 246	33	26 666	91,912
44					

Production of Richmond Gas Co
in West boundary of Bayham Gas field

1918	14 226 m
19	51 306 m
1920	54 225 m
21	28 956 m
22	2 583 m

DOMINION NAT. GAS CO. RESERVES

Haldimand - Norfolk Field (Including Onondaga)

Production up to and including 1946 100,000,000 M

From Dominion Natural Gas Co	1181 wells	12 billion
From do Syndicate	1100 "	8 "
		20 "
From undrilled acreage	2088 wells	30 "
		50 "

7 wells 12 / 7 / 7680 / 1097

UNION GAS CO. RESERVES Aug 1st 47

By Ralph Davis

By Union Co	Million Cu Ft	Reserve	PRODUCTION Annual Average	1946	Tot. 1947	Total Produced
Camden Gore	510	445			246	
Chatham	3 030	2030	275	112	220	
Dawn	2 600	1737	500	338	367	
De Clute	1 100	667	420	420	376	
Dover	650	414	100	95	91	
Tilbury	10 000	7 639	1200	1200	1.027	
Zone	5 200	6 237	800	1030	1251	
	23 090	19169			3.719	
Imperial Sombra	10 000	Storage 850				
	33,080					

PEAK DEMAND

Winter of	Peak day	Open Flow	Per Cent
1943-44	30 291	74 100	41
44 45	31 212	72 700	43
45-46	30 843	61.800	49.9
46-47	34 373	64.000	53.6
47-48 est	36 000	80 000	45.0

UNION CO. PRODUCTION BY FISCAL YEARS

YEARS ENDING	TILBURY	DAWN	DOVER	DECLUTE	CHATHAM	ZONE	MALAHIDE
March 31st Prior to 1934 March 31st	131,004,826	1 709 631	3,390,964	734 313			
1935	2.394.618	226 755	43.186	266 999			
1936	2.199.365	743445	75.433	815.571			
1937	2.176.632	1.742.135	80.898	864.793	835		
1938	2.028.740	1,947,884	11.355	1,074,263	1,757		
1939	1,837.151	1,969,628	62.625	1,283,740	473		
1940	1.827.156	2.319.956	39.073	1,809 321	3.205		
1941	1.833.734	1.812.792	48.893	1,520.026	82.307		1.333.857
1942	1.639.573	1.610.734	43.687	856,619	623,038		1.593.693
1943	1.408,869	1,375 769	39,225	527.992	729.398		364.161
1944	1,459,104	1,005,099	31,791	360,252	308.303	64,060	66,296
1945	1.168,264	540,126	21,920	286,466	299,214	507,200	22,287 4,918 Comdex 60174
46	1 188. 426	314 414	70 961	370 586	233 683	686357	
47	1027 395	506 599	91 200	375. 749	220 158	1 251 338	246 004
48							
49							
50							
	153,193,853	17874.963	4 051,211	11.150,630	2.502,361	2,508,955	306,178

UNION CO RESERVES Aug 1947 M.M.cu.ft.

						Total
7.639	1,737	414	414	Comdex 445 2,030	6.237	19.169

GAS EXPORTED TO BUFFALO AND DETROIT.

(Ltr. to Dr. Evans, Sept.14/45)

Apparently none of this gas was measured and just how the totals are arrived at is difficult to state at this date. I note that the gas sold to the Buffalo Water Works is estimated on a test made of the pounds of steam raised per 1000 cu. ft. of natural gas. My recollection is that certain pitot tube tests were made and these were used as a basis. The figures given are in dollars, being the value of the gas at 5¢ and 5½¢ per M. cu. ft. Converting these into M. cu. ft. I have the following figures:

WELLAND FIELD - Export began on January 12, 1891.

Year		M. cu. ft.		VALUE U.S.G.S.	U.S. Commerce and NAVIGATION
1891	-	2,129,686	1		
1892	-	1,295,490	2	74737	69082
1893	-	1,314,824	3	90653	92199
1894	-	1,067,850	4	62523	66528
1895	-	1,052,800	5	89419 87446	79087 91007
1896	-	840,000	6	464778	397903
1897	-	X 800,000	7		
1898	-	X 700,000	8		
1899	-	X 600,000	9	X Estimated	
1900	-	563,957	1900		

Exports continued until 1907 when it was stopped by Act of Parliament on the demands of Canadian customers. I would presume that the exports between the year 1900 and 1907 would run about 500,000 M. cu. ft.

ESSEX FIELD - The figures for the export of gas from this field are even more obscure than the Welland field. They are as under:

Year		M. cu. ft.
1894	-	10,800
1895	-	785,990
1896	-	966,800

(over)

ESSEX FIELD (Cont'd)

Year		M. cu. ft.
1897	-	972,480
1900	-	1,500,000
1901	-	1,373,341.

Exports ceased December 10th, 1901.

It would appear that the quantity of gas exported to Toledo is not included in these figures. There was a separate pipe line to Toledo-laid in the 90's, I would say about 1894-1895, The export to Toledo stopped in July, 1900. The figure for the year 1900, of 1,500,000, definitely does not include Toledo. I note than an Order-in-Council dated Aug.1, 1898, states that the export of gas is limited to three billion cubic feet annually. From this, it would seem that our figures are very low for exports, and I do not feel like hazarding a guess as to what the exports actually were. It would, therefore, seem that the exports for the years 1898 and 1899 might run in the vicinity of three billion cubic feet.

Authority Annual returns to Mines Branch Ottawa

	MAPLE CITY GAS Co (ABOVE COS SOLD TO SOUTHERN ONTARIO GAS CO)			BEAVER GAS & OIL CO			GLENWOOD NAT GAS CO			TOTAL	
	WELLS NEW	WELLS Total	PRODUCTION ANNUAL	WELLS NEW	WELLS Total	PRODUCTION ANNUAL	WELLS NEW	WELLS Total	PRODUCTION ANNUAL	WELLS NEW	WELLS Total	PRODUCTION ANNUAL
1907		4	Est 36 630	5	16	Est 55 620				5	20	92 250
8		4	Est. 78 100	3	15	Est 160 000				3	19	238 100
9		3	100 000	3	12	192 410				3	15	292 410
10		3	115 000	2	12	289 225				2	15	404 225
	1	4	116 465		4	325 000				1	8	441 465
12		3	118 078	3	7	369 290				3	10	487 368
13		3	Est 118 078	7	14	410 000				7	17	529 003
14		14	163 132		14	495 664	1	17	720 000	1	45	1 376 811
15		14	147 564			no report Est 550 000	5	22	1 337 246	13	64	2 153 992
1916				1	23	674 816	19	60	3 054 747	19	83	3 729 563

DOMINION NATURAL GAS CO

SALES OF NATURAL GAS IN HAMILTON (This will include gas purchased from Southern Ont. Co)

SALES & EARNINGS

YEAR	UNITED GAS & FUEL CO	MANUF'G GAS CO	DOM'N NAT. GAS	DOM'N GLASS CO	TOTAL	SALES	RATE ¢	REVENUE	DIVIDEND
1905	16770				16670	134113	29	30860	
1906	290807	50340			341147	656077	22	157081	
1907	498933	200000			698933	1,231,921	24	297699	65340
1908	556680	450000			1,006,680	1,350,833	25½	344256	10890
1909	714094	600000			1,314,094	1,564,160	26	410758	108900
1910	690957	650000			1,340,957	1,656,906	26	433,740	130,680
1911	752898	700000			1,452,898	1,838,502	26	473,717	130,680
1912	881,242	717174			1,598,416	2,322,075	25	579,732	65340
1913	953628	639456			1,593,084	2,413,242	25½	613,596	
1914	995950	725794			1,721,674	2,341,830	26	607,293	
1915	1,136,559	1,372185			2,508,744	2,467,329	26	642,920	
1916	1,277,232	2,118327			3,395,559	3,013,783	26	790850	1,025,000
1917	1,222,021	1,946394			3,168,415	3,299,074	27	905,842	300000
1918	1,041,238	478309			1,519,547	3,057,309	29	989,425	300000
1919	886464	111813			998277	2,903,588	30	870,910	275000
1920	585503	64918			650,421	2,101,592	37	772,595	200000
1921	664,764	40200	16815	274,960	996721	1,833,486	49	925,775	200000
1922	672,365	33179	16731	634,963	1,357,238	1,884,707	47½	888,721	500000
1923	706,388	29695	12128	340050	1,085,261	1,945,142	48	942,260	200000
1924	219,755	36242	15834	108,253	380084				
1925	30309	43258	15505	164,300	253372				
1926		46021	17713	330068	393802				
1927		49882	26960	373364	450,206				
1928		51088	65701	416818	533607				
1929									
1930									
1931									
1932									
1933									
1934		45,938			921,731	2602778			
1935									
1936									
1937									
1938									
1939									
1940									
1941									
1942									
1943									
1944									
1945									
1946									

	Southern Ontario Natural Gas Co.									Southern Production Purchased									
	New Wells					Active Wells End of Year			Production	New Wells					Active Wells End of Year			Production		
	Total					Total				Total					Total					
Year	No	R.P.	O.F.	Dry	Aband	No.	R.P.	O.F.	Annual / Cumulative	No	R.P.	O.F.	Dry	Aband	No.	R.P.	Open Flow	Annual	Cumulative	Grand Total
1914	Some annual Open Flow previous to 1927 taken by min/pres. and are too low.					53			2487 151											
15						67 / 16			2 558 397											
16	17					87	28647	58783	3.536.655											
17	14	2815	8375			100	29418	34535	3.992.248											
18	6	2582	2219		1	104	26775	34351	2.473.167											
19	7	2475	1.990			105	26666	26.175	2.301.308											
1920	4	1500	225		2	105	24859	17480	2.006.959											
21	8	2145	1.317		7	97	23925	4.996	1.910.964	1		60			3			168 245		
22	6	2101	1.751	0	16	92	22313	6.312	1.631.963						3			110 100		
23	10	3052	3423	2	9	96	25175	5.776	1.570.218						6			74.019		
24	6	3336	1.612	2	7	100	27781	8.657	1.497.181	3		120			9			61.290		
1925	2	530	413	0	12	89	25170	4.148	1.486.810						10			67.928		
26	6	2330	1.394	0	5	87	23450	15.212	1.934.491	4		254			14			2.475		
27	5	1247	1.604	2	3	93	23332	15.046	1.734.798	5		300			19			28.406		
28	6	1295	4.467	0	1	96	25445	17.032	1.723.728	5		416			20			40 659		
29	1		148		1	99		16.788	1.661.251	1		60			21			25.097		
1930	4		605		1	101		14.816	1.476 242	1		151			22			30 387		
31	3 / 2		2.752 / 1.261			3 / 102		2.752 / 12.000	1.441.279	5		43070			27			38,705		
32	-	-	-			3 / 101		1.311 / 10.571	1.386.361	4		893			28			98.294		
33	2		45			3 / 103		1.483 / 11.055	1.244.676									151.176		
34					2	3 / 101		1.250	1.057.909									219.216		
1935	-		-			3 / 100		9.523	993.506			28361			58		32 736	726 690		
36																				
37																				
38						102		6994							28		21395			
39						97		6487							30		23445			
1940						93		5596							36		15 708			

SOUTHERN ONTARIO NATURAL GAS CO — SOUTH. ONT. NAT. GAS. CO. CONTRACTS.

Year	New Wells TOTAL No.	RP.	O.F.	DRY	Abandd.	Active Wells End of Year TOTAL No	RP.	O.F.	Production Annual	Cumulative	New Wells TOTAL No.	RP.	O.F.	Dry	Abandd.	Active Wells at End of Year TOTAL No.	R.P.	O.F.	Production Annual	Cumulative	Grand Total	Year
1940																						
41																						
42																						
43																						
44								4002										1435				
45								3875										1085				
46						105	156	3359								29	144	1095				
47																						
48																						
49																						
1950																						

DOMINION NATURAL GAS Co.

YEAR	NEW WELLS TOTAL No	NEW WELLS TOTAL R.P.	NEW WELLS TOTAL O.F.	NEW WELLS DRY	ABAND	ACTIVE WELLS END OF YEAR TOTAL No	ACTIVE WELLS END OF YEAR TOTAL R.P.	ACTIVE WELLS END OF YEAR TOTAL O.F.	PRODUCTION ANNUAL	PRODUCTION CUMULATIVE
1915						347			1.468.590	
16	3	840	32.543			564	104524	32.543	2.176.072	
17	142	26990	9.437			704	121971	29.830	2.191 890	2.191 890
18	30	8.137	2.292			737	122 307	26 953	2.181.334	4.373.224
19	36	8205	2.722			780	126701	27.389	2.085.655	6.458 879
1920	54	11237	3.804			952	129857	25 481	2.003.871	8.462.750
21	35	11181	2.596		50	902	132201	19237	1.763.473	10.226.223
22	36	5081	4.051		38	898	131966	16 957	1.691.235	11.917.458
23	52	11.266	3.505	5	38	960	123876	14 537	1.751.838	13.669 296
24	46	11874	3.989	10	48	958	131643	16 971	1.322 941	14.992.237
25	75	11.911	1.482	12	151	885	129506	14.308	1.333.169	16.325.406
26	13	13943	5.010	14	51	880	134234	16 166	1.378.975	17.704.381
27	35	15265	3.160	17	46	869	141 042	17 994	1.190.649	18.895.030
28	44		3.901		26	820		18 843	1.222.058	20.117.088
29	65		6.678		9	873		22 651	1.253.244	21.370.332
1930	59		2.462		-	935		22.493	1.287.777	22.658.109
31	55		3.339		29	1000		20.442	1.614.907	24.273.016
32	--		- -		21	979	176707	20.921	1.131.882	25.404.898
33	--		- -		18	961	173022	19.271	975 029	26.379.927
34	--	-	- -		15	946	165699	18281	1.067.812	
1935	-	-	- -		13	939	162832	17520	752.997	
36	-	-	-	-	16	906	159698	15932	734 909	
37	-	-	-	-	17	889	156377	16 004	743.112	
38	-	-	-	-	16	884	150058	16.042	1.037 988	
39	-	-	-	-	19	862	143117	25 857	1.102.629	
1940	-	-	-		7	852	139889	24727	1.063.433	

DOMINION PRODUCTION PURCHASED

YEAR	NEW WELLS TOTAL No	NEW WELLS TOTAL R.P.	NEW WELLS TOTAL O.F.	NEW WELLS DRY	ABAND	ACTIVE WELLS END OF YEAR TOTAL No	ACTIVE WELLS END OF YEAR TOTAL R.P.	ACTIVE WELLS END OF YEAR TOTAL O.F.	PRODUCTION ANNUAL	PRODUCTION CUMULATIVE	GRAND TOTAL
1915											
16											
17											
18											
19											
1920											
21	27		3211			158			138 188 ✓		
22	33		2654			161			~~207 828~~ ~~208 028~~ 141 277		
23	25		1620			171			~~289 258~~ 138 752		
24	5		1830			153			~~264 228~~		
25	22		3598			101			104 434 ✓		
26	27		2377			121			292 494 ✓		
27	27		2267			154			~~329 991~~ ~~311 287~~ 344 259		
28	30		3704			172			~~354 258~~		
29	26		2715			157			487 081 ✓		
1930	48		3352			268			550 377 ✓		
31	103		9545			168			457 006 ✓		
32	138	31465	7045			299			769 696 ?		
33	148	44257	9382	34		298	53387	8656	956 006 ?		
34	139	44336	10198	56		439	86192	10530	1 074 569 ?		
1935	174	43834	14272	68	25	588	122619	22366	1.061.749		
36	156	35991	10050	61	31	688	141252	17485	1.168.887		
37	89	17925	7190	53	60	717	139168	16455	1.162.637		
38	48	11587	2306	17	27	707	127309	14780	992151		
39	26	9235	1698	14	30	703	115345	12682	999.724		
1940	32		2077	13	34	869		9355			
	38	10755						1118326			

Ont. Bur. Mines. Vol. XXIV P.51 1915 Wickle says, The National Gas Co of Hamilton have 45 wells in Binbrook & Seneca 20 million cuft Open Flow and 28 wells in Rainham and S Cayuga OF 8 million Total 28 million cuft. They have laid 7 miles 12" 4 miles 10 inch & 4 miles 8 inch 15 miles total to Hamilton

In 1916 the Dominion N.G.Co. 140 wells and amalgimated Companies owning another 175 wells - (Casey - Mines Statistician Ottawa)

DOMINION NATURAL GAS CO

DOM. NAT. GAS CO CONTRACTS

YEAR	NEW WELLS TOTAL No	R.P.	O.F.	DRY	ABAND	ACTIVE WELLS END OF YEAR TOTAL No.	R.P.	O.F.	PRODUCTION ANNUAL	CUMULATIVE
1940	–	–	–	–	7	952	139889	20323	1,063,433	
41	7	6595	487	8	5	853	130839	13385	985,642	
42	23	13651	2153	28	9	876	136513	12907	1,139,893	
43	52	23855	3289	43	9	919	144596	12904	1,267,935	
44	89	25267	4368	45	12	996	143471	13412	1,222,898	
45	67	27342	5506	44	2	1061	171212	14559	1,302,615	
46	82	22220	4692	65	15	1128	177678	14025	1,300,777	
47	63		4895	39		1181	174825	14221		
48										
49										
1950										

YEAR	NEW WELLS TOTAL No.	R.P.	O.F.	DRY	ABAND	ACTIVE WELLS AT END OF YEAR TOTAL No.	R.P.	O.F.	PRODUCTION ANNUAL	CUMULATIVE	GRAND TOTAL
32	10755	2077	13	34		889	119326	10355 56922	1,042,837		
53	18210	4602	19	51		753	119763	10792	1,111,133		
66	14745	4577	38	24		806	121432	10,917	1,181,373		
29	9430	2100	15	57		779	122740	8.294	1,004,920		
28	12540	1285	21	69		744	109349	7,984	934,570		
36	12590	2694	13	39		774	111039	7,502	940,946		
33	11870	1768	13	32		744	108904	6,403	863,163		
38		1659	19	62		718	4	6,236			

Confidential

Reserves Haldimand-Norfolk Gas Field

The records of the Dept. Mines Ont. show that out of a total of 1972 wells drilled from 1924 to 1940 in Haldimand-Norfolk field 71% were productive and 29% dry. Drainage in the field by wells drilled on 40 to 50 acre locations is characteristically relatively slow. In many cases new gas wells drilled 1500 to 2000 feet distant from old gas wells, except in inside locations, have a rock pressure equal to or nearly equal to, the original rock pressure of the area.

A survey of drilling was made in June 1942 of the most highly developed part of the field which includes Mainfleet Tp. of Wellond Co. all ten townships of Haldimand Co and Woodhouse Tp of Norfolk Co. The area of these townships is about 1/4 of the whole field. The result of the survey are as follows:-

Reserves estimated by E.P. Hindes, Cities Service Co. New York.

Township	Total Area acres	Developed Area in Acres	Undeveloped Area in Acres	% Undeveloped Acres to Total Area.
Mainfleel (less Con. VII)	42,240	12,440	29,800	72
Sherbrooke	3,520	1,420	2,100	40
Moulton	29,440	18,540	10,900	37
Canboro	20,480	16,280	4,200	20
Dunn	9,400	6,300	3,100	33
Seneca	39,000	25,200	13,800	35
Oneida	37,120	8,000	29,120	78
Walpole (less Cons. 16, 17 & 18)	69 850	41 400	28,410	40
Woodhouse	35,200	6,840	28 360	81
Rainham	24,320	22,270	2,050	8
N. Cayuga	34560	24,660	9,900	29
S. Cayuga.	13440	8,540	4 900	36
	358,570	191, 930	166,640	46

The above determinations were made by actual count of all productive and dry wells as shown on the maps of the Dom. Nat. Gas Co. Ltd. Where well spacing is less than 50 acres/well, the developed acreage is used. In the case of isolated wells dry or producing, each well is presumed to have developed 50 acres.

In addition to the 12 twps. in the above tabulation and the area in Norfolk County (where 50,000 acres of a total of 512,000 acres have been developed.) there remains 240,000 acres in Brant, Wentworth Lincoln & Wellond Cos. which is about 50% developed.

In summary the field covers appx. 1,112,000 acres. of which it is estimated that appx. 362.000 acres or 33% has been developed & 748,000 ac, 67% undeveloped.

Confidential

Dominion Natural Gas Co Ltd.
Estimated recoverable Natural Gas. Reserves, as of Jan 1st 1945.

Company owned Gas reserve & potential reserves.

FIELD	No. Wells	Reserve from present 1004 wells. M.cu.ft.	Potential Reserves from Future drilling (2600 wells. 1945-1964) M.cu.ft.	Total Reserves M.cu.ft.
Haldimand-Norfolk	878	20,545.600 M	21,933,000 M	42,478,600 M
Tilbury	103	10,016.000 M	–	10.016,000 M
Onondaga	7	16,500 M	–	16,500 M
Humberstone	16			
Total	1004	30 578 100 M	21,933,000 M	52,511,100 M

Independent Contracts. Reserves & Potential Reserves.

FIELD	Reserves from present wells M.cu.ft.	Potential Reserves from future wells 1945-1964 M.cu.ft.	Total Reserves M.cu.ft.
Haldimand-Norfolk.	11,380 300	5,106,400	16,486,700
Tilbury	189,650		189 650
De Clute	150 000		150,000
Bon. Jasperson	168,000		168,000
Dover	200,000		200,000
Onondaga.	341,000		341,000
Total	12,428,950	5,106,400	17,535,350 M.cu.ft.
Grand Total	43,007 050 M	27,039,400 M	70,046,450 M

Tilbury Field has produced 175 m^3 and may produce another 25 m^3
DeClute Field Volume 12 m^3
Dawn-Chatham Volume 30 m^3
Dover Volume 10 m^3
Malahide Volume 5 m^3
Brownsville Volume 4 m^3

Estimate by R B H Aug. 1947

	Present wells	Future drilling	
Company owned wells	1181	846 in Haldimand	
Haldimand Norfolk field	12 billion	12	24 billion
Syndicates	718 wells		
	8 "		8 "
223000 acres in Norfolk			20
			52 billion
The Haldimand-Norfolk field has already produced 1			100 "
		Total	152 "

NATURAL GAS STATISTICS

Miles Pipe Line	Year	No. Wells Producing Dec. 31st	Abandoned	Wells Drilled: Dry	Wells Drilled: Prod.	Wells Drilled: Open Flow	Annual Production M.cu.ft.	Value $	Acres under Lease	Rental Paid $	Employees	Wages Paid $
	1890						360 000					
	1891						1 202 502	125 501 / 125 500 GSC 1897				by Clapp
150	92	73 8 Essex		13	38		2.066.490	150 000 / 376 232 GSC 1897				
117	93	107 8 Essex		8	19	O.B.M. 2,342,000	2.985.000	238 200 / 313 754 GSC 1897			59	24592
183	94	110				O.B.M. 1653500	2.316.500	204 179 / 423 032 GSC 1897			99	53130
248	95	123				O.B.M. 3.320.000	2.033.000	282 968 / 276 710 GSC 1897			92	73328
287	96	141					3.914.175	325 873 / 308 448	(b) Essex 52 GSC 97		87	47527
297	97	140 106 Welland Haldimand 34 Essex		4 8	6 6		2.807 988	325.873 / 301 599 GSC 1897	(b) Welland 75		74 84	325 873 / 42 338
315	98	142		5	14		2.952.310	322.123 / 440 904			85	31457
341	99	150		7	28		3.363.553	387.271 / 392 823			95	40.149
306	1900	175 (b)		4	7		4.010.382	417.094	(a) Essex 18		161	43.636
368	01	158 56 in Essex		14	16	Q.B.M. 2,239,324	3.637.077	342 183 / 339 476	Welland 120 Bruce 2 Haldimand 29		129	59.140
369	02	169 (a) Welland 157	(a)	13	18	(c)	2.114.031	O.B.M. 199 238 / 195.992	(c) Dunnville 11		107	55.618
312	03	210 vicinity Dunnville >3		12	20		1.292.207	O.B.M. 196 535 / 202.210			138	79945
231	04	176					2.292.207	O.B.M. 253 524 / 328.376	(d) Welland 26 Haldimand 124 Norfolk 19		98	53674
462	05	273					2.771.277	O.B.M. 316 476 / 379.561	Brant 60 Wentworth 8 Elgin 12		130	88865
550	06	332 350		16	102	Haldimand 42% Welland 42% Kent 16%	2 534 200 O.B.M. 2.998.709	533.446 / 533446			108	64968
810	07	582				Haldimand 57% Welland 31% Kent & Essex 11%	4 155 900 O.B.M. 3.335 900	746.499 / 756.174			191	110 832
850	08	656 (e) 568	(e)				4 483 000 O.B.M. 4.632 342	988.616	(e) Welland 281 Haldimand 252 Kent Essex 35		152	106786
987	09	744 660			106		5 338 000 O.B.M. 6 520.000	1.188.179 / 1.145.307			171	103672
98½	1910	828		30	145	7,263,427	7 416 588 / 8.000.000	1 491 252 / 1.271.303			186	118786
1296	11	1179 1027		38 44	(d) 268 254	12,529,463	9 861 341 / 11.644.000	2186 762 / 1.807.513			287	183663
1448	12	1244? 1478		41 67	176 247	O.B.M.	12.444.080 / 12.529.463	2 268 022 / 2.036.245			277	184351
	13	1605		49	211	O.B.M.	12.516.000 / 12.474.745	2 362 021 / 2.055.768		O.B.M.	402 336	289.480 / 237.600
	14	1665		28	120		14.063.606 / 14.044.521	2 346 687 / 2.215.808		O.B.M.	479 392	256.139 / 224492
	15	1766			134		29 900 / 15.211.523	2.622.838		O.B.M.	598 434	382401 / 261 381
2233	16	1802 1889	74	38 44	135 139	O.B.M.	17, 953, 396 / 17.966.301	2.404.499			653 581	404 039 / 299 370
2925	17	1905 1928		52	124	O.B.M.	20 025 699 / 19.601.412 / 13.075 942	3.220.123			700 536	537 946 / 374 385
	18	1891 1994		31	66		13.120.286	2.498.769		O.B.M.	872 510	756.225 / 449 545
	19	1900		18	75	20.146	11.601.485	2.583.324		O.B.M.	506 499	444 678 / 442 892
	1920	1887	45	21	73	9.203	10.729.329	3.163.500		O.B.M.	683 494	625 212 / 461.916
	21	1915	114	21	115	18.716	8.523.234	4.018.190			632	592606
	22	1907	109	40	89	10.180	8.568.301	4.024.767	261020	153643	692	539072
	23	2004	67	27	95	14460	8.128.413	4.006.214	345827	112459	603	633365
	24	2201	82	22	73	9.257	7.370.914	4.076.014	306.497	147.737	727	639167
	25	2125	176	22	75	9.690	7.257.274	4.083.341	265.161	113.572	692	625826
	26	2126	78	35	86	13.996	7.776.496	4.415.918	207 765	113.471	860	842.305
	27	2217	62	30	119	16.476	7.311.214	4.331.780	197.347	83.810	1013	1070528
	28	2272	64	57	129	16.764	7.632.740	4.535.312	325.109	142.246	1209	1497 994
	29	2349	42	76	118	24962	8.583.187	4.968.133	422.472	304.791	1323	1529367
	1930	2452	55	72	158	41.548	7.943.416	5.061588	593.085	368 600	1328	1545644
	31	2606	52	81	196	45.123	7.419.534	4.635497	1.006.814	488.976	1241	1383.286
3388	32	2707	42	32	151	8.870	7.386.154	4.719297	723.182	240.021	893	1.059.643
3235	33	2821	55	67	173	15826	7.166 659	4.523084	518 979	251 512	958	958.336

NATURAL GAS STATISTICS

YEAR	No Producing Wells	Abandoned	Wells Drilled		Annual		Acres	Rental	No Employees	Wages	Miles
			Dry	Prod.	Open Flow	Production	Value $	Under Lease	Paid		Paid	Pipe Line
1934	2977	61	77	214	56411	7,682,851	4,741,368	451,702	251 649	931	1,010,973	3,089
1935	3127	48	88	196	80 320	8,158,825	4,938,084	440,686	264,495	1273 ~~1,089~~	1,219,520 ~~1,089,909~~	
36	3218	79	90	165	69 586	10,006,743	6,054,294	555,750	270 550	1,336	1,354,611	
37	3251	105	66	134	181,354	10,746,334	6,588,798	536,797	310,289	1501	1,668,188	
38												
39												
1940												

GAS PRODUCTION WELLAND COUNTY

	INDUSTRIAL GAS CO.	PROVINCIAL NATURAL GAS CO.	ERIE CO. N.G.	CARROL BROS.	BERTIE N.G.	STERLING G.	TOTAL
1891		592 502	400 000	50 000	10 000	50 000	1,102,502
92		1 285 916	400 000	50 000	10 000	50 000	1.795 916
93		1 371 516	500 000	50 000	10 000	80 000	2.011.516
94		1 220 000	500 000	50 000	10 000	100 000	1,880,000
95		1 083 594	500 000	50 000	10 000	150 000	1,793,594
96		751 175	400 000	50 000	10 000	200 000	1,411,175
97		668 118	400 000	50 000	10 000	200 000	1,328,118
98		689 310	3100 000	50 000	10 000	200 000	949.310
99		721 086		50 000	10 000	200 000	981,086
1900		627 547		450 000	10 000	250 000	887.547
1901		731,094			10 000	250,000	991 094
02		644,031			10 000	300,000	954,031
03		682 952			10 000	300,000	992,952
04		1 416 207			10 000	370,000	1,796,207
05		1 361 277			10 000	300,000	1,671,277
06		1 188 709			10 000	300,000	1,498 709
07	30 000	1 038 711			10 000	250,000	1,328,711
08	29 342	929 204			10 000	220,000	1,188,546
09	31 910	710 108			10 000	200,000	952,018
1910	119 288	680 494			10 000	125,000	934,782
11	96 341	703 986			10 000	90,000	900,327
12	77 536	759 238			10 000	85,000	931,774
13	71 000	699 380			10 000	80,000	860,380
14	21 575	742 729			10 000	70,000	844,204
15	28 000	707 042			10 000	60,000	805,042
16	58 201	694 026			10 000	55,000	817,227
17	60 912	745 609		Chippewa Development Co.	10 000	55,000	871 521
18	57 896	637 580	Empire Limestone Co and Canada Cement Co		10 000	50,000	755,476
19	38 181	555 072			10 000	50,000	653,253
1920	71 430	644 438		3383	9037	41,574	591,835
21	63 265	375 473	4700	3142	7.662	38085	492,327
22	29 595	387 300	15 000	2 320	8,135	35,600	477 950
23	58 331	394 564	10 000	2 225	7756	37,750	510 626
24	35 516	354 909	10 000	1 650	6867	36,500	445,442
25	23 501	244 277	10 950	1245	6515	30,434	316,922
26	13 388	234 377	9 500	1231		22,000	280 496
Total		27 095 191					

DOMINION NATURAL GAS CO

OPEN FLOW OF WELLS IN HALDIMAND FIELD 1905 TO 1932

YEAR	Boyham		Malahide		Houghton		Mid. dle Ren	Mid-ton Delhi		North Malsinghan		South Malsinghan	Port Rowan	S. Malsinghan & Pt Rowan	Mindham		Charlotteville		Woodhouse		Malpole Original RP. 485 psi		Rainham	
	O.F. M cu ft.	Prod M² cu ft.	O.F.	Prod M² cu ft.	O.F.	Prod M² cu ft.	O.F.	O.F.	Prod. M² cu ft.	O.F.	Prod M² cu ft.	O.F.	O.F.	Prod. M² cu ft.	O.F.	Prod.	O.F.	Prod.	O.F.	Prod. M² cu ft.	O.F.	Prod. M² cu ft.	QF.	Prod. M² cu ft.
1905												Original Rock Pressure 665 psi							Original RP. 640 psi		5 633	134.6	Original	RP. 485 psi
1906	Original Rock Pressure 700 psi		Original Rock Pressure 650 psi		Original Rock Pressure 670 psi		Original Rock Pressure 630 psi			Original Rock Pressure 670 psi					Original Rock Pressure 665 psi		Original Rock Pressure 670 psi		886	52.8	9 942	593.0	120	7.1
1907																			2936	194.9	10 156	670.0	4 500	297.0
1908												1000	200	54.8					4632	211.5	9626	440.0	11 592	528.0
1909												1500	300	82.4					6367	292.5	13 086	598.0	9175	420.0
1910	1053											870	170	40.2			564	22.0	5561	226.6	19 101	756.0	11712	462.0
1911	8032	86.0										900	110	47.0			280	13.1	5624	262.3	17491	814.8	8995	418.7
1912	5675	304.9	78		78			1600	85.7			1625	275	111.7	50	2.7	210	11.5	6172	331.0	14 350	780.0	6677	358.0
1913	6446	310.0	207		207	0.4		800	47.0			1000	175	67.8	426	24.5	155	8.9	5214	329.0	11 562	665.0	5280	304.5
1914	4672	310.0	97		197	0.6		590	39.0			780	268	69.0	655	43.3	230	15.2	4620	305.0	8495	561.0	4305	284.0
1915	3710	276.0	87		187	0.9		440	34.4			640	160	62.7	597	46.8	155	12.1	3485	273.0	6580	515.0	3575	280.0
1916	3220	248.0	178		178	1.0		359	28.7			551	115	53.2	532	42.5	202	16.1	4158	300.0	5202	416.0	2960	234.0
1917	2257	195.0			172	1.0	443	204	51.7			416	88	40.4	307	24.6	1629	130.0	2751	220.0	4144	331.0	2485	198.0
1918	2006	180.0			139	1.0	351	183	42.6	231	18.4	391	116	40.3	153	12.2	1563	124.5	2480	197.0	3789	301.0	2147	171.0
1919	1401	126.0			114	1.0	723	262	74.0	518	38.5	324	111	32.6	289	21.7	1658	124.5	3672	276.0	3297	248.0	2004	150.2
1920	806	72.5			157	1.0	916	237	85.8	388	29.1	319	119	32.8	279	20.9	1373	103.0	3101	232.0	3052	238.0	1819	136.0
1921	637	51.4	83	3.2	15	1.0	691	155	68.2	345	27.9	224	120	27.7	150	12.1	866	70.0	2781	224.0	2870	232.0	1450	117.0
1922	487	44.0	215	12.0	15	0.9	336	105	41.9	305	28.9	150	91	19.5	81	7.7	545	51.7	2582	245.0	2711	258.0	1141	108.5
1923	500	45.0	73	5.6	15	0.8	355	90	44.4	213	21.2	292	114	32.2	92	9.2	425	42.4	1868	186.0	3013	300.0	960	95.5
1924	412	37.0	32	2.5	15	0.9	231	79	22.3	183	13.3	296	187	25.3	76	5.5	379	27.4	1619	117.0	3382	245.0	845	61.1
1925	371	33.4	29	2.3	15	0.7	884	72	67.1	156	11.0	333	160	30.6	65	4.6	325	22.9	1360	95.5	3582	252.0	2033	143.0
1926	334	25.0	26	2.1	15	0.7	836	65	76.2	133	11.2	370	135	42.8	55	4.6	275	23.2	1280	108.2	3894	329.0	2081	176.0
1927	301	25.0	24	1.9	10	0.6	771	59	61.0	429	31.6	275	115	26.8	85	6.2	235	17.3	1000	73.5	3558	262.0	4057	298.0
1928	271	25.1	22	1.7	10	0.7	539	53	45.8	391	30.3	230	100	25.5	60	4.6	285	22.0	1020	79.0	3890	301.0	5789	449.0
1929	244	24.4	20	1.6	10	0.6	427	48	33.6	267	18.9	195	85	19.8	50	3.5	210	14.9	1000	70.8	4425	313.0	8851	626.0
1930	220	24.0	18	1.4	10	0.7	347	43	31.7	205	16.7	170	75	19.9	45	3.7	170	13.8	820	66.6	4527	368.0	6887	560.0
1931	198		16		10		290	39		168		140	65		40		145		680		3500		5165	
1932	180		15		10		245	36		140		110	55		35		125		570		3000		4030	
1933																								
1934																								
1935																								

DOMINION NATURAL GAS CO.

STATISTICS OF PRODUCING WELLS 1916 TO 1924 BY TOWNSHIPS

TOWNSHIP	1916			1917			1918			1919			1920			1921			1922			1923			1924		
	No. Wells	R.P.	O.F.	No. Wells	AVE R.P.	TOTAL O.F.	No. Wells	AVE R.P.	TOTAL OF	No. Wells	AVE R.P.	TOTAL O.F.	No. Wells	AVE R.P.	TOTAL O.F.	No. Wells	AVE R.P.	TOTAL O.F.	No Wells	AVE R.P.	TOTAL O.F.	No. Wells	AVE R.P.	TOTAL O.F.	No. Wells	AVE R.P.	TOTAL O.F.
VIENNA																											
Bayham	27	302	3220	29	261	2259	31	272	2006	31	219	1401	31	209	806	31	215	637	29	215	487	27	205	500	24	205	412
Houghton	2	500	178	2	562	178	2	462	139	2	470	114	3	487	157	1	200	15	1	480	7			15	1	315	15
Middleton				1	630	443				1		102	1	350	267	1	340	171	1	465	109	1	375	123	1	340	21
Malahide																1	650	83	2	525	215	2	330	73	2	310	32
SIMCOE	29		3398	32		2880	33		2145	34		1617	35		1230	34		986	33		818	30		711	28		480
Woodhouse	44	315	3773	46	265	2462	46	287	2201	49	309	3419	52	267	2861	53	280	2650	53	280	2458	54	272	1764	54	253	1515
Charlotteville	5	344	262	11	472	1629	14	456	1563	14	448	1658	14	442	1373	14	388	866	14	395	545	14	266	425	14	299	379
Middleton							1		351	4	502	621	6	454	649	7	411	520	7	418	227	7	278	232	7	335	210
N. Walsingham							1	555	231	2	525	518	4	477	388	6	473	345	6	493	305	6	350	213	6	429	183
S. Walsingham	7	469	551	7	451	416	7	456	391	7	416	324	7	396	319	8	396	224	8	344	150	8	394	292	7	401	296
Port Rowan	6	322	90	7	301	88	7	282	116	7	279	111	7	273	119	7	264	120	6	264	91	4	336	114	4	391	187
Port Dover	9	252	287	9	230	201	9	223	215	9	199	190	9	189	177	7	196	96	7	193	105	5	215	90	4	244	79
Delhi	7	311	359	7	304	204	7	293	183	7	289	262	7	258	239	7	269	155	6	252	71	4	178	36	5	180	35
Windham	5	361	532	5	303	307	5	241	153	5	274	289	5	231	279	5	239	150	5	248	81	4	212	92	4	222	76
TOTAL	83		5794	92		5307	97		5404	104		7392	111		6404	114		5126	112		4033	106		3258	105		2960
SELKIRK																											
Romham	72	148	2257	87	135	2308	87	132	2147	87	125	2004	78	121	1819	78	129	1450	73	132	1141	70	135	960	66	144	845
Walpole	139	114	5202	146	167	4144	146	157	3789	145	151	3297	128	148	3052	137	163	2870	139	169	2711	142	192	3013	141	207	3382
Woodhouse	3		98	3	213	88	3	182	64	3	167	64	3	168	63	1	178	35	1	185	19	1	190	14	1	225	25
TOTAL	214		7557	236		6340	236		6000	235		5365	209		4934	216		4355	213		3871	213		3987	208		4252
BLACKHEATH																											
Binbrook	34	111	1586	45	107	1664	50	96	1749	61	97	2093	49	88	1566	66	95	1169	58	86	659	54	87	920	57	84	1284
Caistor	23	122	755	23	111	686	22	103	595	22	104	567	22	104	545	22	102	265	16	96	217	16	91	275	17	88	331
Glanford	16	102	1052	16	99	780	16	85	632	16	70	571	16	69	522	16	73	286	16	74	248	9	75	200	15	68	301
Oneida				4	195	352	4	131	150	6	153	783	7	140	254	17	215	1019	13	159	434	21	137	691	26	129	703
Seneca	18	144	1026	50	123	1674	53	117	1572	61	118	1878	65	113	1608	69	120	1631	72	132	1396	65	118	1762	77	121	2240
TOTAL	91		4419	138		5136	145		4698	166		5292	159		4495	190		4370	175		2954	167		3948	192		4859
Dunnville																											
Dunn	2	140	40	3	177	49	3	190	87	3	155	66	3	163	55	3	250	55	3	228	58	3	58	31	3	196	21
Canboro	48	139	3032	86	144	3958	97	134	3944	111	135	4183	118	129	3538	121	120	3180	121	112	2860	116	103	2110	110	108	1553
Caistor										1	124	82	1	172	43	1		33	1	117	22	1	105	15	1	86	13
Moulton	6	39	86	9	121	53	14	139	227	15	166	370	11	158	271	14	129	220	16	140	430	15	142	415	15	128	401
N. Cayuga	8	205	499	9	236	350	15	236	617	15	224	501	14	222	488	13	220	324	16	238	396	16	250	375	18	255	360
S. Cayuga	40	172	1342	56	176	1712	57	183	1506	57	157	1527	54	151	1295	50	142	1045	50	148	844	49	133	800	51	144	763
Seneca													4	131	337	2	103	175	2	86	12	2	83	38	2	80	97
TOTAL	104		4999	163		6122	186		6381	202		6729	205		6022	204		5050	209		4622	202		3784	198		3208
Onondaga													23		99	21	97	200	21	131	93	22	130	97	21	119	90
Grand Total	521		26,167	661		25,985	697		24,628	741		26395	742		23184	779		19907	763		16391	740		15785	752		15849

DOMINION NATURAL GAS CO

OPEN FLOW AND PRODUCTION OF WELLS IN HALDIMAND FIELD 1905 TO 1932

YEAR	N. CAYUGA		S. CAYUGA		ONEIDA		SENECA		DUNN		GLANFORD		BINBROOK		CAISTOR		CANBORO		MOULTON		ONONDAGA		TOTAL	TOTAL
	O.F. M.C.F.	PROD M²C.F.	O.F. M.C.F.	PROD M²C.F.	O.F. M.C.F.	PROD. M²C.F.	O.F. M.C.F.	PROD. M²C.F.	O.F. M.C.F.	PROD. M²C.F.	O.F. M.C.F.	PROD. M²C.F.	O.F. M.C.F.	PROD. M²C.F.	O.F. M.C.F.	PROD. M²C.F.	O.F. M.C.F.	PROD M²C.F.	O.F. M.C.F.	PROD. M²C.F.	O.F. M.C.F.	PROD. M²C.F.	OPEN FLOW M.CU.FT.	PRODUCTION M²CU.FT.
1905	Original Rock Pressure 400 psi		Original R.P. 485 psi		Original R.P. 300 psi		Original R.P. 280 psi		Original Rock Pres. 350 psi		Original R.P. 190 psi		Original R.P. 190 psi		Original R.P. 205 psi		Original R.P. 235 psi		Original R.P. 270 psi		Original R.P. 200 psi		5 663	134⁰
06																			70	4³			11 078	657'
07																	1000	66⁰	35	2³			18 627	1 229³
08			800	36³													1500	68⁵	200	9¹			29 550	1 348⁴
09			1500	70¹													1870	85⁵	270	12⁷			34 068	1 561²
1910			1345	51²													2145	82⁰	380	14⁶			42 901	1 656¹
11			1480	68⁹													2370	110³	370	17⁷			45 652	1 838⁸
12	1716	92⁰	1465	78⁵									390	20⁹	125	6⁷	2335	137⁰	340	18²			43 303	2 337⁷
13	860	49⁶	1465	84⁴			527	30³					3577	206⁴	2250	129⁶	2560	147⁶	375	18⁷			42 829	2 423⁰
14	650	43⁰	2627	173⁵			865	57¹			327	15⁰	2300	152⁰	1140	75²	2365	156⁰	260	17²			35 346	2 316¹
15	500	39¹	2292	180⁰			500	39²			1027	80³	1800	141⁰	905	70⁷	2190	171⁸	220	17²	100	12⁰	29 063	2 252²
16	499	39⁸	1972	157⁵			1026	82⁰	40	3²	1052	84⁰	1586	126⁵	755	60²	3032	242⁰	170	13⁶	100	10⁰	27 709	2 158³
17	350	28⁰	1712	137¹	352	28²	1674	134⁰	49	3⁹	760	60⁸	1664	133⁰	686	54⁹	3958	317⁰	195	12⁴	100	10⁰	26 356	2 111⁰
18	615	49⁰	1506	120⁰	130	11⁹	1572	125⁰	87	7⁰	632	50³	1749	139¹	595	47³	3944	314⁰	225	17⁹	100	10⁰	24 726	1 979⁵
19	501	37⁶	1527	114⁸	183	13⁷	1878	141⁰	66	5⁰	571	42⁸	2093	157⁰	567	42²	4183	313⁰	370	27⁸	100	10⁰	26 413	1 997⁸
1920	488	36⁶	1295	97²	254	19¹	1945	146⁰	55	4¹	522	39²	1566	117⁵	590	44⁰	3533	265⁰	270	20³	99	10⁰	23 183	1 750³
21	342	27⁶	1045	84³	1019	82⁰	1805	145⁶	55	4⁴	286	23¹	1169	94¹	300	24³	3180	256⁰	220	17⁷	100	10⁰	19 908	1 603⁵
22	396	37⁶	844	80⁰	434	41²	1410	134⁰	58	5⁵	248	23⁶	659	62⁵	240	22⁸	2860	272¹	430	40⁶	93	10⁰	16 436	1 548¹
23	375	37⁴	800	79⁶	691	69⁰	1800	179⁰	31	3¹	280	28⁰	920	91⁶	290	28⁸	2110	210⁵	415	41⁴	97	10⁰	15 819	1 560⁷
24	360	26¹	763	55²	703	50⁹	2335	169⁰	21	1⁵	301	21⁸	1284	93⁰	345	25⁰	1553	112⁴	400	28⁹	90	9³	15 891	1 150⁴
25	533	37⁵	650	45⁶	620	43⁵	1680	108⁰	45	3²	260	18²	1000	75⁸	290	19⁰	1325	93¹	370	26⁰	100	8¹	16 338	1 141¹
26	1609	136⁰	565	47⁸	550	46⁵	1350	114²	30	2⁵	225	19⁰	920	77⁸	240	20³	1125	95⁰	315	26⁷	125	9⁵	16 553	1 394⁰
27	1920	141⁰	480	35³	485	36⁶	1246	91⁵	25	1⁷	195	14³	780	57³	255	18⁷	985	72³	265	19⁵	110	8⁵	17 666	1 300³
28	1328	102⁸	400	31⁰	430	33³	1030	79⁶	25	1⁹	170	13²	660	51¹	200	15⁵	835	64⁶	225	17⁴	105	9⁰	18 068	1 404⁰
29	978	69²	340	24¹	380	26⁹	1554	110⁰	20	1⁴	150	10⁶	560	39⁶	375	26⁶	710	50³	190	13⁵	100	8¹	21 189	1 508¹
1930	1820	148⁰	290	23⁶	335	27³	1752	142⁶	20	1⁶	130	10⁶	475	38⁷	445	36²	605	49³	160	14⁶	100	9⁰	19 669	1 607⁹
31	1265		250		295		1215		20		115		405		310		515		135		100		15 081	
32	1007		215		250		970		20		100		345		255		440		115		100		12 368	
33																								
34																								
1935																								

United Gas & Fuel Co. Hamilton

Estimates for winter of 1945 – 46

Average peak day demand -		14000 Mcuft
Output By Product Coke Oven Co	10000 Mcuft	
" Cunnan Knowles	3500 " "	
~~Short~~ Shortage	500 " "	
Total	14,000 Mcuft	14,000 Mcuft

This is exclusive of Natural Gas & Propane supplied to East Hamilton

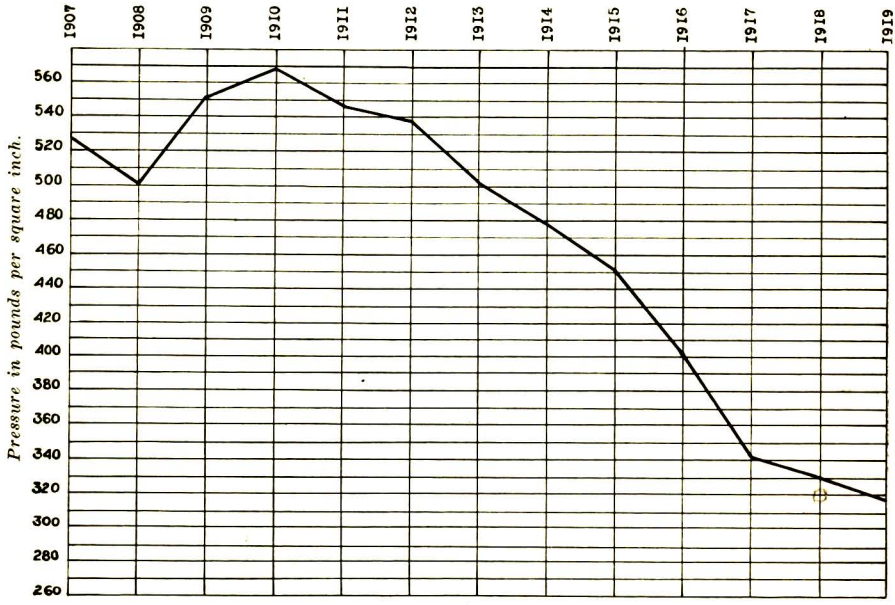
Hamilton By Product Coke plant

Dump 5000 Mcuft daily Sundays in Summer @ 6¢ under boilers

" 2700 " " week days @ 10-15¢

Purchase gas from Cunnan Knowles 3500 Mcuft day at 45¢ on winter and 32¢ in summer

Notwithstanding the fact that the natural gas supply was so materially augmented by the addition of these new wells, the production showed a decided falling off from the previous year. This, to a great extent, is due to the gradually declining rock pressures in the fields themselves as shown by the accompanying graph:—



Office of Natural Gas Commissioner, Chatham.

Rock pressures, Kent field.

TABLE II—SALES OF GAS FROM KENT AND NORFOLK-HALDIMAND FIELDS

Month	Kent field		Norfolk-Haldimand field	
	1924-25	1925-26	1924-25	1925-26
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
December	576,409	526,723	158,755	160,475
January	592,893	587,993	182,637	189,298
February	513,724	562,932	170,622	179,330
March	457,409	592,465	143,548	173,832
April	379,276	553,386	115,498	189,244
May	271,788	322,687	98,104	150,213

1919

Following is a list of the companies or individuals for whom wells were sunk during the year:—

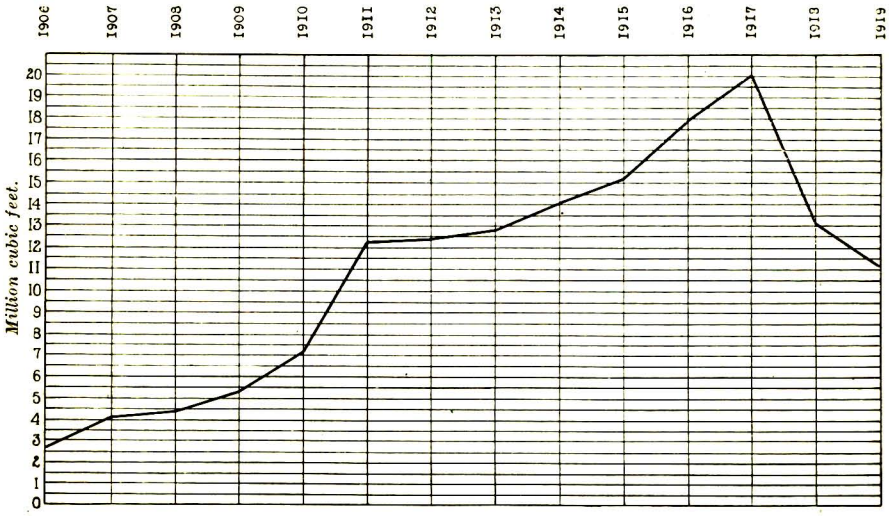
GAS WELLS DRILLED IN 1919.

Owner.	Locality.				Oil or Gas.	Production per day. (cu. ft.)	Date of completion. 1919.
	Lot.	Con.	Township.	County.			
Jasperson, B.	15	13	Tilbury.....	Kent	Gas	272 M.	Sept. 27
Glenwood Natural Gas Co.....	13	1	Mersea	Essex	"	160 M.	April 22
	20	11	Raleigh.....	Kent	"	Dry	March 12
	22	1	Harwich.....	"	"	"	Sept. 3
	185	Talbot Road	Romney	"	"	"	March 12
	15	8	Mersea	Essex	"	60 M.	May 31
	12 E½	1	"	"	"	Dry	Aug. 23
	14	1	"	"	"	125 M.	Nov. 18
	13 S.	Middle Road	Tilbury.....	Kent	"	800 M.	Nov. 3
	1	12	Raleigh.....	"	"	525 M.	March 8
Petrol Oil & Gas Co.	1	1	Dover	"	"	600 M.	Nov. 1
Canby, B.F.	25	1	Wainfleet	Welland	"	25 M.	Jan. 1
	26	1	"	"	"	25 M.	Feb. 18
Dominion Natural Gas Co.....	26	7	Binbrook	Wentworth .	"	45 M.	Aug. 30
	31	8	"	"	"	25 M.	July 28
	Broken Front	5	Woodhouse....	Norfolk.....	"	104 M.	Sept. 25
	"	4	"	"	"	157 M.	July 28
	24	14	Walsingham ..	"	"	297 M.	Aug. 11
	41	3	Middletown ...	"	"	157 M.	Aug. 21
	41	3	"	"	"	96 M.	Feb. 21
	9	1	Seneca	Haldimand .	"	157 M.	Aug. 21
	10	1	"	"	"	45 M.	Sept. 19
	Nelles Tract		"	"	"	68 M.	Aug. 26
	"	"	"	"	"	62 M.	Sept. 20
	4	1	"	"	"	25 M.	Oct. 22
	11	1	"	"	"	30 M.	July 4
	24	4	Oneida	"	"	21 M.	July 28
	41	5	"	"	"	17 M.	June 27
	3	8	Canboro.....	"	"	96 M.	Aug. 2
	7	3	"	"	"	157 M.	Sept. 6
	6	3	"	"	"	37 M.	Nov. 22
	8	3	"	"	"	62 M.	Jan. 8
	8	3	"	"	"	51 M.	Feb. 17
	9	3	"	"	"	24 M.	Dec. 24
	Nelles Tract		Seneca	"	"	96 M.	Dec. 12
	27	3	Bayham	Elgin	"	Dry	June 2
	Nelles Tract		Seneca	Haldimand..	"	"	Oct. 18
	39	2	Middletown ...	Norfolk.....	"	"	April 25
	27	7	Binbrook.....	Wentworth..	"	96 M.	Jan. 10
	B	1	Seneca	Haldimand..	"	34 M.	Jan. 24
	27	7	Binbrook.....	Wentworth..	"	62 M.	Jan. 21
	28	7	"	"	"	43 M.	March 13
	29	7	"	"	"	58 M.	April 9
	30	8	"	"	"	231 M.	June 3
	30	7	"	"	"	70 M.	May 7
	30 N.	8	"	"	"	43 M.	July 5
	8	3	Canboro	Haldimand..	"	68 M.	June 11
	8	3	"	"	"	27 M.	July 11
	7	3	"	"	"	48 M.	Oct. 2
	7	3	"	"	"	85 M.	Nov. 3
	7	3	"	"	"	34 M.	March 7
	3	4	Binbrook.....	Wentworth..	"	57 M.	Jan. 28
						Plugged	Sept. 27

GAS WELLS DRILLED IN 1919.—*Continued.*

Owner.	Locality.				Oil or Gas.	Production. per day. (cu. ft.)	Date of completion, 1919.
	Lot.	Con.	Township.	County.			
Drilled for Dr. Miller, Buffalo, by J. A. Coleman	15	2	Moulton	Haldimand	Gas	25 M.	Nov. 28
Coleman, J. A.	38	4	Wainfleet	Welland	"	15 M.	May 29
Port Colborne-Welland Gas and Oil Co.	68	1	Onondaga	Brant	"	68 M.	Feb. 27
Welland Gas and Oil Co.	66	1	"	"	"	110 M.	Jan. 29
	68	1	"	"	"	40 M.	April 11
Union Natural Gas Co.	3	3	Dover	Kent	Gas	100 M.	
					Oil	20 Bbls.	Jan. 2
	3	3	"	"	Gas	7,760 M.	May 31
	2	3	"	"	"	500 M.	Oct. 11
	2	3	"	"	Gas	200 M.	
					Oil	20 Bbls.	Jan. 9
	2	3	"	"	Gas	2,500 M.	May 24
	14	13	Tilbury	"	"	450 M.	June 4
	11	13	"	"	"	150 M.	June 4
	14	13	"	"	"	336 M.	July 29
	14	14	"	"	"	478 M.	April 2
Drilled for Standard Steel Construction Co. by Industrial Natural Gas Co.	203	.....	Thorold	Welland	"	Plugged	June
Industrial Natural Gas Co.	4	5	Crowland	"	"	20.5 M.	May 21
	1	7	"	"	"	Plugged	Aug. 18
	13	4	Humberstone	"	"	50 M.	Nov. 6
	4	5	"	"	"	36 M.	Feb. 18
	1	7	Crowland	"	"	60 M.	July 5
	1	7	"	"	"	149.2 M.	June 3
	1	7	"	"	"	25 M.	April 14
	5	6	"	"	"	23.5 M.	April 18
Beaver Oil and Gas Co., Ltd.	190	Talbot Road W.	Romney	Kent	"	360 M.	July 25
	28	2	"	"	"	350 M.	Oct. 10
	W. ½ 185	Talbot Road	"	"	"	Dry	March 12
Midfield Natural Gas Co., Ltd.	51	1	Oneida	Haldimand	"	17 M.	Oct. 24
	52	1	N. Cayuga	"	"	125 M.	Dec. 29
Northern Gas and Gasoline Co.	3	10	Amabel	Bruce	"	80 M.	Sept. —
Bertie Natural Gas Co.	22	1	Bertie	Welland	"	Plugged	
Binbrook Gas Co.	5	4	Binbrook	Wentworth	"	45.9 M.	Nov. 1
Castle Oil & Gas Co.	27	5	Euphemia	Lambton	"	175 M.	Oct. 17
	25	5	"	"	"	.....	June 25
	25	4	"	"	"	.....	March 1
Chippewa Oil & Gas Co.	3	.....	Caistor	Lincoln	"	Dry	Nov. 11
	2	.....	"	"	"	"	Oct. 1
Provincial Natural Gas Co.	32	Broken Front	Bertie	Welland	"	"	Aug. 8
	33	"	"	"	"	"	Feb. 23

The following chart shows the consumption or production for the years 1906 to 1919 inclusive:—



Office of Natural Gas Commissioner, Chatham.

Consumption of Natural Gas in Ontario, 1906-1919.

The following table shows the relation between temperature and pressure for the Tilbury field:—

AVERAGE TEMPERATURES AND PRESSURES, 1919.

Month.	Temperature.	Pressure.
January	30.1	122.0 lbs.
February	32.2	157.0 "
March	37.0	167.1 "
April	44.6	173.1 "
May	57.1	199.6 "
June	76.3	207.0 "
July	77.0	189.2 "
August	73.6	203.1 "
September	69.6	199.3 "
October	60.8	197.2 "
November	41.6	177.1 "
December	36.2	139.3 "

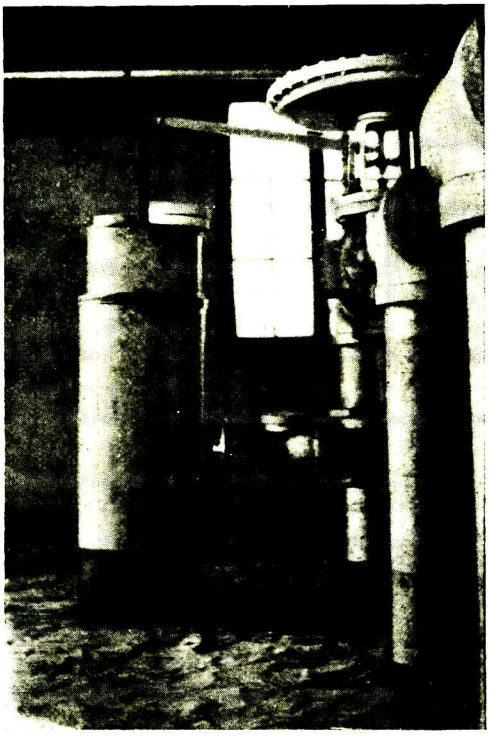
DURING YEAR 1920.

January	17.0	129.2 "
February	27.5	121.1 "

The average temperature for 1919 was 52.17 deg. F., and the average pressure, 177.58 lbs.

Pressure Chart No. 2 was taken from a recording pressure gauge before the gasometer attachment was installed and Pressure Chart No. 1 shows the reading after the installation. Pressure charts 4 and 3 were both taken from another regulator, before and after the installation of a gasometer respectively, and show similar results. This is an important innovation, and a very welcome addition to the distributing equipment because by the use of the gasometer attachment, great improvement is effected in the service to the consumer, who receives a more even pressure.

Many of the troubles caused by the effort to distribute natural gas under varying pressures are very real, and occasion the gas operator considerable concern. Frequent changes of pressure occurring in the distribution of Tilbury gas throw a heavy responsibility upon the regulators. These instruments are affected by the corrosive elements in the gas, and require constant attention. The Department has watched with interest the installation of a gasometer attachment, recently applied to low pressure regulators.



Gasometer attachment to low pressure regulator.

Field Operations

Ninety-four wells were drilled in 1920, most of them in the counties of Haldimond, Welland, Norfolk and Kent. Of these new wells, 73 were producers, and 21 or 22.3 per cent., were non-producers The 73 producers showed a total open flow measurement of 9,203,000 cubic feet. Following is a list of the new wells and the individuals or companies for whom they were sunk.

GAS WELLS DRILLED IN 1920

OWNER	LOCALITY				GAS OR OIL	PRODUCTION PER DAY,[1] CUBIC FEET	DATE COMPLETED
	LOT, CONCESSION		TOWNSHIP	COUNTY			
Richmond Gas Co.	1	4	Bayham	Elgin	Gas	300,000	Aug. 16th
Dominion Natural Gas Co.....	120	7	Bayham	Elgin	"	Dry	May 10th
"	18	2	"	"	"	39,000	Dec. 14th
Glenwood Natural Gas Co....	21	8	Aldboro	" depth 583	"	Dry	Jan. 12th
Glenwood Natural Gas Co....	14	1	Mersea	Essex	"	Dry	June 21st
Dominion Natural Gas Co...	Dochstader Farm		Canboro	Haldimand	"	46,000	March 24th
"	C. Kuren Farm		"	"	"	21,000	June 9th
Oswego Gas Co.....	5	1	"	"	"	32,000	July 17th
Dominion Natural Gas Co....	P. Kuren Farm		"	"	"	64,000	July 6th
"	W. Clifford Farm		"	"	"	70,000	July 28th
"	W. Clifford Farm		"	"	"	75,000	Aug. 13th
"	W. Crumb Farm		"	"	"	45,000	Sept. 1st
"	W. Crumb Farm		"	"	"	68,000	Nov. 19th
"	E. Crumb Farm		"	"	"	67,000	Sept. 24th
Dominion Natural Gas Co....	S. Crosby Farm		Canboro	Haldimand	"	157,000	Oct. 12th
"	S. Crosby Farm		"	"	"	105,000	Oct. 29th
"	4	3	"	"	"	Dry	Dec. 7th
"	8	3	"	"	"	97,000	Dec. 30th
Lalor, F. R...	7	1	Moulton	"	"	Est. 80,000	July 27th
Lalor, F. R...	7	1	"	"	"	" 70,000	Sept. 13th
Maple Leaf Oil & Gas Co.	15	2	"	"	"	25,000	May 15th
"	13	3	"	"	"	200,000	July 30th
"	13	3	"	"	"	175,000	Sept. 9th
"	9	3	"	"	"	250,000	Oct. 20th
"	10	2	"	"	"	200,000	Dec. 21st
Midfield Gas Co.....	53	1	North Cayuga	"	"	6,000	Feb. 9th
"	53	1	"	"	"	80,000	Mar. 25th
Oswego Gas Co.....	5	Stage Road	"	"	"	156,000	Aug. 20th
"	4	"	"	"	"	97,000	Sept. 23rd
Azoff Gas Co.	3	3	"	"	"	39,000	Nov. 18th
"	1	1	"	"	"	Dry	Dec. 31st

[1] It should be noted that the volume of gas given here is "open flow" and not the actual quantity of serviceable gas "in the line."

GAS WELLS DRILLED IN 1920.—*Continued*

OWNER	LOCALITY			GAS OR OIL	PRODUCTION PER DAY, CUBIC FEET	DATE COMPLETED
	LOT, CONCESSION	TOWNSHIP	COUNTY			
United Gas Companies...	4 1	North Cayuga	Haldimand	Gas	585,000	July 15th
"	4 1	"	"	"	382,000	Aug. 4th
"	4 1	"	"	"	Dry	Oct. 27th
"	4 1	"	"	"	78,000	Nov. 17th
Midfield Gas Co.....	53 1	Oneida	"	"	74,000	May 7th
"	54 Town Line	"	"	"	75,000	June 26th
"	53 1	"	"	"	50,000	Aug. 11th
Dominion Natural Gas Co.....	61 4	Oneida	"	"	111,000	Oct. 13th
"	68 River Road	"	"	"	85,000	Dec. 4th.
"	65 "	"	"	"	171,000	Dec. 13th
Sterling Natural Gas Co.....	17 1	Sherbrooke	"	"	200,000	Mar. 26th
"	17 1	"	"	"	Dry	May 31st
United Gas Companies...	3 1	Seneca	"	"	231,000	Sept. 21st
"	3 1	"	"	"	45,000	Oct. 6th
Dominion Natural Gas Co.....	F. Langford Farm	"	"	"	21,000	Jan. 10th
"	B. 2	"	"	"	34,000	Jan. 24th
"	R. Young Farm	"	"	"	Dry	Apr. 2nd
"	N. Kelly Farm	"	"	"	87,000	Aug. 21st
"	N. Kelly Farm	"	"	"	75,000	Apl. 4th
"	Shipway Farm	"	"	"	110,000	Dec. 17th
Port Colborne -Welland Gas Co.....	S. Bradt Farm	"	"	"	87,000	Oct. 11th
"	B. Hanna Farm	"	"	"	367,000	Dec. 4th
Petrol Oil & Gas Co.....	1 Front	Dover	Kent	"	Est. 500,000	May 25th
"	1 "	"	"	"	Dry	Dec. 4th
B. Jasperson.	15 13	East Tilbury	"	"	70,000	Mar. 17th
Glenwood Natural Gas Co.....	13 Middle Road	"	"	"	700,000	May 15th
"	13 "	"	"	"	225,000	Aug. 11th
"	14 "	"	"	"	Dry	Oct. 28th
Glenwood Natural Gas Co.....	3 1	Raleigh	"	"	45,000	Dec. 31st
"	191 Talbot Road	Romney	"	"	Dry	Mar. 13th
"	25 2	"	"	"	Dry	Aug. 16th
B. Jasperson.	28 2	"	"	"	80,000	Nov. 19th
Chippewa Oil & Gas Co....	3 3	Caistor	Lincoln	"	97,000	Jan. 7th
Castle Oil & Gas Co.....	25 5	Euphemia	Lambton	"	Est. 80,000	Mar. 2nd
"	27 5	"	"	"	Dry	July 6th
"	27 5	"	"	"	Dry	July 7th

GAS WELLS DRILLED IN 1920.—*Continued*

OWNER	LOCALITY				GAS OR OIL	PRODUCTION PER DAY, CUBIC FEET	DATE COMPLETED
	LOT, CONCESSION	TOWNSHIP	COUNTY				
Progressive Natural Gas Co.....	4 3	North Dorchester	Middlesex		Gas	Dry	May 14th
"	4 3	"	"		"	"	June 23rd
"	4 3	"	"		"	250,000	Dec. 14th
Dominion Natural Gas Co.....	Long Point	N. Walsingham	Norfolk		"	150,000	Mar. 6th
"	6 Front	Woodhouse	"		"	252,000	May 20th
"	35 3	Middleton	"		"	42,000	June 2nd
"	4 3	Houghton	"		"	90,000	July 10th
Dominion Natural Gas Co.....	43 2	Middleton	Norfolk		"	131,000	July 22nd
"	4 N. Talbot Road	"	"		"	Dry	Nov. 29th
"	6 Front	Woodhouse	"		"	140,000	July 31st
"	Niagara & Erie Land Co.	North Walsingham	"		"	68,000	Aug. 19th
"	"	"	"		"	80,000	Sept. 3rd
"	"	"	"		"	39,000	Oct. 21st
"	A. Keable Farm	"	"		"	Dry	Nov. 22nd
"	21 14	"	"		"	83,000	Dec. 11th
"	5 Front	Woodhouse	"		"	37,000	Oct. 2nd
"	6 "	"	"		"	42,000	Dec. 7th
Dominion Natural Gas Co.....	2 4	Binbrook	Wentworth		"	40,000	Oct. 30th
"	1 1	"	"		"	90,000	Dec. 23rd
Sparham, A.F	11 8	Glanford	"		"	Est. 50,000	Dec. 22nd
Provinc'l Natural Gas Co.	26 2	Bertie	Welland		"	40,000	June 21st
"	10 2	"	"		"	Dry	May 11th
"	10 5	"	"		"	Est. 85,000	June 25th
"	11 13	"	"		"	40,000	Aug. 15th
"	8 13	"	"		"	225,000	Oct. 21st
"	9 13	"	"		"	Dry	Nov. 15th
"	11 5	Willoughby	"		"	Dry	Dec. 16th

SUMMARY OF NEW WELLS.

	No.
Elgin County	4
Essex County	1
Haldimand County	48
Kent County	10
Lincoln County	1
Lambton County	3
Middlesex County	3
Norfolk	14
Wentworth County	3
Welland County	7
Total	94

TABLE IV.—NATURAL GAS WELLS DRILLED, 1921

County	Township	Number of Wells Abandoned in 1921	Number of Dry Wells Drilled in 1921	Producing Wells Drilled in 1921		Number of Producing Wells on Dec. 31st, 1921
				Number	Open Flow	
					cu. ft.	
Brant	Onondaga	4				53
Bruce	Amabel					2
Elgin	Aldborough	1				
	Bayham	1		1	75,000	56
	Malahide		2	1	200,000	1
Essex	Gosfield S.			1	17,000	(1)
	Mersea			1	25,000	4
Haldimand	Canboro	6		4	201,000	158
	Cayuga North		3	4	538,435	44
	Cayuga South	1				62
	Dunn	1		1	100,000	20
	Moulton	2		7	266,000	91
	Oneida			9	763,000	23
	Rainham	9				122
	Seneca	7	3	28	3,030,000	161
	Sherbrooke	1	1	2	280,000	14
	Walpole	16	2	4	225,000	157
Kent	Dover West	1	2	1	60,000	8
	Raleigh	3		1	1,000,000	24
	Romney	2				95
	Tilbury East	13	1	12	4,288,000	147
Lambton	Dawn	1		1	177,000	1
	Enniskillen					4
	Euphemia					6
	Sarnia	3		11	2,400,000	14
Lincoln	Caistor	13				50
	Gainsborough	1				2
Middlesex	Nissouri West					3
Norfolk	Charlotteville	1				14
	Houghton	3				2
	Middleton			2	273,000	17
	Walsingham N.			2	126,000	6
	Walsingham S.			1	18,000	15
	Windham					5
	Woodhouse	4		3	245,000	63
Welland	Bertie	6		8	2,860,000	97
	Crowland			3	325,000	50
	Humberstone	5				118
	Wainfleet	1				55
	Willoughby	4	1			51
Wentworth	Binbrook	2	3	6	197,000	71
	Barton					2
	Beverley		1			
	Flamboro West		1			
	Glanford	3	1	1	30,000	28
Total		114	21	115	18,716,435	1915

Note:—Gas wells drilled into the gravel beds above the rock are not included. The Table comprises 72 private wells, but no doubt this is short of the total number.

The shortage of money in 1920 certainly had much to do with limiting drilling operations, but the appointment of a Referee under the Natural Gas Conservation Act, 1921, with powers to fix rates had much more to do with en-

couraging operations in 1921. A number of independent companies who sell their gas to pipeline companies commenced work, one company drilling as many as 15 wells, 14 of which were producers. The real effect of this new legislation will be seen in 1922, as many companies were not ready to start work before cold weather set in, acquiring leases and financing having occupied most of the year.

It is regrettable that the total number of wells in operation in all fields and their rock pressures has not been recorded in past years. If this had been done the life of the old Welland-Haldimand field might have been gauged, but it is impossible to get enough information to predict its future in graph form as has been done with the Kent field (see Figure 3). It will be noted, however, that the number of wells drilled in 1921 is very much less than the number abandoned, and that the open flow of new wells averages 129,000 cu. ft., whereas ten years ago this would have been considered very low.

Without definite facts one can only sound the warning, CONSERVE.

The future of Ontario's gas supply is in new fields. The known fields have more than enough wells draining them at present. More exploration and deeper exploration must be carried out, or there will not be enough gas sold to make it profitable to maintain the long pipelines in Ontario at present. True enough, some deep drilling has been done and results are none too encouraging, but the tests are scattered and very little has been done to correlate the work of the different companies. Thorough survey of the work done in the past, and careful tabulation of the information gained, should be a useful guide in the search for new gas fields. It is hoped that this work may be undertaken in 1922.

The usual amount of drilling was carried out in the old fields excepting the fields in Bruce county and Oil Springs, where the limits of the present fields appear to have been reached.

Mr. Bon Jasperson tested a new field in Essex county with indifferent success.

The Union Natural Gas Company discovered a new deep field in Dawn township after two failures.

The Sarnia Gas and Oil Company has discovered a new gas field in Sarnia township at shallow depth. The wells have only a moderate production.

The Dominion Natural Gas Company has found a new field at Lakeview at the expense of some dry holes.

The Provincial Natural Gas Company has discovered a small body of gas under high pressure at Point Abino on the edge of the almost exhausted Welland field that has been producing gas for 33 years. Unfortunately there is space for only three wells in this small area.

The Valley Oil and Gas Company drilled a well at Dundas with a very small show of gas and oil, and in a second well at Copetown found such deep and difficult surface that the well had to be abandoned at 537 feet. The company is extending its operations in 1922.

Samuel S. Wyer's Report

In the spring of 1921, in view of the conflicting opinions freely expressed regarding the volume of gas remaining in the Kent county gas field—the principal gas area of Ontario—and its bearing on fair and reasonable prices for gas, the government of Ontario decided to have an examination and report made on

TABLE X.—GAS CONSUMPTION IN TOWNSHIPS, 1922—*Continued.*

Township	Population	No. of Consumers		Amount used, M cu. ft.			Rate cents per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND.—*Continued.*							
Seneca	1,576	174	71	18,222	12,671	.....	.45
Cayuga North	1,334	102	25	11,881	4,225	.....	.45
Cayuga South	571	67	29	4,579	5,577	.....	.45
Rainham	1,689	146	43	21,369	9,614	1,106	.30
Sherbrooke	272	27	10	2,313	2,520	.....	.40–.50
Dunn	818	134	21	15,334	2,206	.....	.20–.40
Walpole	3,018	242	50	31,627	10,355	.....	.45
Oneida	1,215	67	9	9,353	1,664	.....	.40–.50
WELLAND—							
Wainfleet	2,433	118	48	6,972	12,113	250	.40–.75
Humberstone	1,948	127	49	8,076	12,904	.....	.50
Bertie	3,201	563	78	33,870	22,208	114	.60
Pelham	2,392	.....	.....	.....	.....	.....	.60
Thorold	3,536	5	1	296	225	.....	.60
Willoughby	873	23	4	1,439	550	.....	.70
Crowland	3,465	55	25	3,343	5,839	.....	.50
Stamford	5,031	.....	3	.....	910	.....	.50–.70
LINCOLN—							
Caistor	1,235	61	50	5,702	4,718	.....	.45
Gainsboro	2,086	12	20	.....	.....	.....	.50
Grimsby	3,267	.....	.....	.....	.....	.....	.75
Louth	2,518	5	.....	317	.....	.....	.60
Grantham	3,977	19	.....	1,290	.....	.....	.60
WENTWORTH—							
Binbrook	1,127	68	53	9,753	9,400	.....	.40
Glanford	1,405	107	10	15,642	1,908	.....	.40
Barton	7,435	966	2	70,651	300	.....	.40
Ancaster	4,349	51	.....	4,263	.....	.....	.40
Saltfleet	4,672	16	.....	2,821	.....	.....	.40
Used by Gas Companies for drilling and power purposes	.....	.....	.....	.....	.....	143,619	.....
Total	180,184	8,985	1,008	1,013,103	218,268	197,102	.....

Table XI.—Gas Wells in Ontario by Townships. 1922

County	Township	Production	Rock Pressure	Acreage under Lease	Rentals Paid	No. of Wells Producing	No. of Wells Abandoned	Wells Drilled		
								No. Dry	No. Producing	Open Flow ~~Pressure~~
		M. cu. ft.	Lbs.		$					
Essex	Tilbury West			1,000	500			1		
	Gosfield, S.						1			
	Mersea					4		2		
Kent	Romney					97	4	1		
	Tilbury East	5,484,618	272	24,866	45,758					
	Raleigh					137	13		4	832
	Dover West					24	2			
Lambton	Sarnia	322,984	500	4,146	400	9		3	1	463
	Enniskillen		100	5,000	300	16		3	1	35
	Dawn		100	300	150	3				
	Euphemia	56,295	852	15,427	3,000	5		4	3	570
	Bayham		425	7,000	600	6				
Elgin	Malahide		215			55	1			
	Dunwich	166,714	525	9,360	4,235	2			1	156
Middlesex	Dorchester N						1			
Norfolk	Houghton	5,071	90	12,000	800	3				
	Middleton		480			3				
	Walsingham N		350			19			2	112
	Walsingham S		493			6				
	Windham	434,147	330	7,086	6,533	14	1			
	Charlotteville		248			5				
	Woodhouse		395			16			2	115
Haldimand	Walpole		280			65	1		3	236
	Rainham		169			161	7	2	12	1,718
	Cayuga North		132			120	6			
	Cayuga South		238			52	1	1	6	1,024
	Oneida		148			59	3			
	Seneca		159			30	1	3	8	1,125
	Canboro		122			163	14	9	15	1,240
	Dunn		111			164	6	2	6	271
	Moulton		223			17	2			
	Sherbrooke		264			102	3	2	19	1,068
		1,616,916	181	143,103	86,213	12		1		

Wentworth	Ancaster	.....	.....	.....	.....	.....	.....	1	.....	.....
	Binbrook	.....	88	.....	.....	70	4	.....	.....	.....
	Glanford	.....	75	.....	.....	27	.....	.....	.....	.....
	Barton	.....	90	.....	.....	2	.....	.....	.....	.....
	Gainsboro	.....	125	.....	.....	2	.....	.....	.....	.....
Lincoln	Caistor	.....	97	.....	.....	49	1	.....	.....	.....
	Wainfleet	.....	75	.....	.....	49	3	1	.....	.....
Welland	Humberstone	.....	.....	.....	.....	107	11	1	.....	.....
	Crowland	.....	.....	.....	.....	49	1	1	.....	.....
	Willoughby	463,675	94	28,732	5,845	44	7	.....	.....	.....
	Bertie	.....	.....	.....	.....	87	14	2	4	440
Brant	Onondaga	16,928	90	2,000	.....	51	.....	.....	.....	.....
Peel	Caledon East	.....	65	500	100	.....	.....	.....	2	775
Bruce	Amabel	953	140	500	100	1	1	.....	.....	.....
	Total in 1922	8,568,301	.....	261,020	153,634	1,907	109	40	89	10,180

License Fees Paid by Operators in Ontario

Under the terms of the Natural Gas Conservation Act, 1921, and Regulations made thereunder, those who lease and prospect for, drill and bore for natural gas must procure a license before conducting such operations; so also must those who produce, transmit by pipe line, and distribute natural gas, procure a license before doing so.

The fee for the licenses "to produce, transmit by pipe line and distribute natural gas" is ten dollars ($10.00). It was found that an unnecessary burden was being added to the prospector for natural gas by requiring a license fee of ten dollars ($10.00) and the fee for prospecting and to drill and bore was reduced to five dollars ($5.00).

License fees as above were paid by the following:

TABLE XII.—OPERATORS LICENSED TO LEASE AND PROSPECT FOR NATURAL GAS, 1922.

License No.	Name	Address
103	Anderson, J. H.	Oil Springs, Ont.
122	Anderson, Walter	9 Maple Ave., Hamilton. Ont.
117	Barr, D.	298 Talbot St., St. Thomas, Ont.
99A	Beaver Oil & Gas Co.	Buffalo, N.Y.
108	Coste, Eugene, & Co., Ltd	Niagara Falls, Ont.
96	Clover Gas & Oil Co.	1711 Main St., Buffalo, N.Y.
99	Dominion Natural Gas Co., Ltd.	518 Jackson Bldg., Buffalo, N.Y
109	Dover Oil & Gas Co.	79 Adelaide E., Toronto, Ont.
120	Eagle Oil & Gas Co.	508 Lumsden Bldg., Toronto.
100	Glenwood Natural Gas Co.	Buffalo, N.Y.
118	Hoover, A. E.	Selkirk, Ont.
102	Industrial Natural Gas Co.	Thorold, Ont.
98	Jasperson, Bon	Kingsville, Ont.
114	Jones, J. S.	Port Maitland, Ont.
111	Maple Leaf Oil & Gas Co.	48 St. Johns Pl., Buffalo, N.Y.
119	Middlesex Dover Oil Co.	26 King St. W., Toronto, Ont.
107	Petrol Oil & Gas Co.	Royal Bank Bldg., Toronto. Ont.
104	Provincial Natural Gas Co.	Niagara Falls, Ont.
101	Pilkington Bros.	Thorold, Ont.
110	Port Colborne-Welland Gas Co.	Port Colborne, Ont.
138	Parks, A. W.	Oil Springs, Ont.
121	Stringer, Harrison	Simcoe, Ont.
106	Snively, F. L.	90 Melrose Ave., Hamilton, Ont.
113	Sarnia Oil & Gas Co.	Sarnia, Ont.
105	Union Exploration Co.	Chatham, Ont.
112	Valley Oil & Gas Co.	42 Home Bank Bldg., Hamilton.
116	Winger, S. W.	R. R. No. 4, Hagersville, Ont.
115	Williams, Albert.	Clark St., Leamington, Ont.

countries for substitutes for natural gas. The loss to municipalities in taxes cannot be overlooked. At ten mills this would be $255,710, and the loss in wages paid $633,365. The last item would be reduced by a portion of the clerical staff who would still find local employment, but the vast numbers of employees are specially skilled men who would find employment in other natural gas fields. The clerical staff who would not move would be more than balanced by the drillers not included in the total who must seek employment elsewhere.

To sum up: the substitute fuels would cost three and a half times as much as natural gas did in 1923; the loss in money exported to pay for coal and oil would be $4,099,266; the loss in rentals $112,459; the loss in taxes and wages $889,075—a total of $5,100,800. Finally, probably six hundred skilled men would have to find employment in other gas fields. The effect of this reaches every branch of society from the lawyers who fight the rate battles to the owners of machine shops where materials are repaired and the merchants who clothe and feed the employees, all of whom would help to pay the difference in the price of fuels.

TABLE VI.—GAS WELLS IN ONTARIO AND THEIR PRODUCTION 1923

County	Township	No. of wells producing, 1923	No. of wells abandoned, 1923	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow, M cu. ft.	M cu. ft.			
Essex	Colchester, S			1					14,341	
	Gosfield, S	4		1	4	60	1,000	350	100	
	Mersea	4						119		
Kent	Romney	100	5	1	8	3,592		302		
	Tilbury, E	137	4		5	664	5,068,215	295	33,709	$59,034
	Raleigh	23	1		1	66		284		
	Harwich	29					5,800	20	2,000	
	Howard	33			3	3,300	7,652	13	3,100	
	Dover, W	9		1			187,342	420	5,168	
Lambton	Dawn	5		2			74,414	578	16,357	
	Enniskillen	3					9,390	100	700	150
	Euphemia	6					6,470	400	5,000	300
	Moore			1					3,000	1,493
	Sarnia	18	1	1	1	94	2,400	110	4,953	160
Middlesex	Dorchester, N	3		1			4,455	75	15,000	
	London			1					9,000	
Elgin	Dunwich			1					1,000	
	Bayham	56	1		2	136	155,754	200	8,355	2,475
	Malahide	2	1	1	1	150		330	1,000	
Norfolk	Houghton	3					4,840	450	800	75
	Middleton	17	1		1	180		281		
	Walsingham, N	6	2					350		
	Walsingham, S	12	4					420		
	Windham	4					302,461	248		
	Charlotteville	16						276		
	Woodhouse	62	6	1	4	590		270		
Haldimand	Walpole	164	11	3	13	1,083		266		
	Rainham	111	3		1	50		135		
	Cayuga, N	59	2	1	4	220		266		
	Cayuga, S	58	2					130		
	Oneida	34	2		6	852		171	159,755	42,225
	Seneca	175	4	5	16	1,141		129		
	Canborough	169	3		6	485		120		
	Dunn	17	1		1	30	1,747,195	132		

TABLE VI.—GAS WELLS IN ONTARIO AND THEIR PRODUCTION—*Continued* 1923

County	Township	No. of wells producing, 1923	No. of wells abandoned, 1923	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow, M. cu. ft.	M. cu. ft.			
	Moulton	117	3	2	13	1,472		200		
	Sherbrooke	12	1	.....	1	60		150		
Wentworth	Binbrook	68	.....	.....	.....	.....		85		
	Barton	1	.....	.....	.....	.....		50		
	Glanford	29	.....	.....	2	65		70		
Lincoln	Caistor	48	1	.....	.....	.....		100		
	Gainsborough	2	.....	.....	.....	.....		80		
Welland	Wainfleet	51	.....	.....	.....	.....		87		
	Humberstone	104	3	.....	.....	.....		85		
	Crowland	49	.....	1	.....	.....	518,523	50	29,865	6,322
	Willoughby	41	3	.....	.....	.....		73		
	Bertie	88	1	2	2	170		85		
Brant	Onondaga	50	.....	.....	.....	.....	31,834	80	3,989	225
Peel	Caledon, E	3	.....	.....	.....	.....	.....	60	12,000	.....
Bruce	Amabel	2	.....	.....	.....	.....	668	140	8,000	.....
Total	.....	2,004	67	27	95	14,460	8,128,413	.....	345,827	$112,459

TABLE VII.—OPERATORS LICENSED TO LEASE AND PROSPECT FOR NATURAL GAS, 1923

License No.	Name	Address
139	Allied Gas & Oil Co., Ltd.	Welland, Ont.
143	Abray, Thos.	Kingsville, Ont.
145	Anderson, Walter	9 Maple Ave., Hamilton, Ont.
140	Bermingham, T. F.	55 John Street, Hamilton, Ont.
125	Coste, Eugene, & Co.	Niagara Falls, Ont.
124	Clover Gas & Oil Co.	1711 Main St., Buffalo, N.Y.
133	Dominion Natural Gas Co., Ltd.	518 Jackson Bldg., Buffalo, N.Y.
150	Campbell, D. A.	337 Bd. of Trade Bldg., Toronto.
146	Downham, John	Strathroy, Ont.
123	Featherstone, C. W.	Dunnville, Ont.
131	Henderson, R. I.	Kent Bldg., Toronto, Ont.
147	Hoover, A. E.	Selkirk, Ont.
135	Industrial Natural Gas Co.	Thorold, Ont.
128	Irvin, J. J.	Dunnville, Ont.
126	Jasperson, Bon	Kingsville, Ont.
137	Jones, J. S.	Port Maitland, Ont.
132	McKillop, Wm.	Hamilton, Ont.
144	Provincial Natural Gas Co.	Niagara Falls, Ont.
130	Pilkington Bros.	Thorold, Ont.
141	Parks, A. W.	Oil Springs, Ont.
151	Reid, J. A.	79 Adelaide St. E., Toronto.
152	Roberts, J. R.	Hamilton, Ont.
142	Rowe, W. G.	292 Rushton Road, Toronto, Ont.
134	Southern Ontario Gas Co.	518 Jackson Bldg., Buffalo, N.Y.
129	Stringer, Harrison	Simcoe, Ont.
148	Sarnia Oil & Gas Co	Sarnia, Ont.
149	Smylie, J. W.	Royal Cecil Apts., Toronto, Ont.
155	Union Natural Gas Co	Chatham, Ont.
136	Walsh, J. A.	4023 Swiss Ave., Dallas, Texas.
127	Williams, Albert	Clark St., Leamington, Ont.

TABLE VIII.—OPERATORS LICENSED TO DRILL OR BORE FOR NATURAL GAS, 1923

License No.	Name	Address
116	Berry & Anderson	Caledonia, Ont.
102	Featherstone, C. W.	Dunnville, Ont.
111	" "	" "
112	" "	" "
119	Hoover, E. A.	Selkirk, Ont.
147	Hoover & May	" "
105	Hamaker, Wesley	Port Dover, Ont.
110	Industrial Natural Gas Co.	Thorold, Ont.
114	International Drilling Co.	Chatham, Ont.
115	" " "	" "
108	Kiser & Lauer	Tillsonburg, Ont.
109	" "	" "
113	McCutcheon, T. J.	Dunnville, Ont.
106	McKillop, Wm.	Hamilton, Ont.
107	McLister, J. J.	Dunnville, Ont.
117	Provincial Natural Gas Co.	Niagara Falls, Ont.
120	Sarnia Gas & Oil Co., Ltd.	Sarnia, Ont.
103	Snively, F. L.	90 Melrose Ave., Hamilton, Ont.
118	" "	" " " "
121	Union Natural Gas Co., Ltd.	Chatham, Ont.
123	" " "	" "
124	" " "	" "

The city of Welland was first served with natural gas in 1893, and Niagara Falls in 1904.

In the year 1920, the service to consumers in Niagara Falls and Welland had become so poor that it became necessary to forbid the use of gas for purposes other than heating water and cooking, and in 1924 the service for cooking was so poor that the company seriously considered discontinuing the service to a number of consumers. An impression of the present condition of the field is best conveyed by the rock pressure of a new well drilled in 1925 on Cassidy's point, a rather isolated section of the field. It gauged 65 pounds, and the open flow 25,000 cubic feet. In parts of the field, the rock pressure is as low as 20 pounds. The struggle for increased rates, which attends the failure of a gas field, began with the loss of the Buffalo market and has been carried on to the present date.

In the summer of 1924, the Provincial Natural Gas Company approached the Iroquois Gas Company of Buffalo and successfully negotiated for a supply of their gas, which is a mixture of natural gas, some coke oven gas, and a little carburetted water gas. The B.t.u. of the mixture averages 910, and the B.t.u. of the natural gas from the Welland field is 1,009. About the first of December, the laying of a new pipe line across the Niagara river was completed, and in that month over 15,000,000 cubic feet was imported and the supply to Niagara Falls materially improved. The two gases are introduced into the pipe line near Bridgeburg and mix while travelling through the 8-inch pipe line to Niagara Falls, a distance of about 18 miles.

The service in this city will not be satisfactory until certain changes are completed in the city of Buffalo and a compressor installed, when the supply to the Provincial Natural Gas Company will be independent of the fluctuation in demand in Buffalo. There is, however, the menace of a shortage, should the demand in Buffalo exceed the capacity of their manufacturing plant. It is understood that the Iroquois Gas Company will enlarge their capacity sufficiently to give assurance of good service. It is hoped that before a year has passed more consumers can be served and that some gas will be available for light heating.

Gas Wells and Their Production

Table VI gives at a glance the conditions of the gas fields in Ontario in 1924. A comparison of this table with that published in the report for 1923 shows the number of producing wells to have increased considerably. This is not the case. It was deemed advisable to publish the number of gas wells, from which gas was produced solely for the owners' private use separately from those where gas was produced and sold commercially. This has considerably increased the total. The number of wells abandoned has increased by fifteen. This is explained by the fact that a number of wells were being maintained to supply the demand in extreme weather; they were found to be unprofitable and were abandoned. The number of dry wells drilled shows a decrease of five; of producing wells, twenty-three. The falling off in open flow of these wells is 5,203 thousand cubic feet. The total production shows a decrease of 979,935 thousand cubic feet. The decline in rock pressure does not vary greatly from the gradual pressure drop in gas fields. The falling off in acres under lease of 39,379 acres and in rentals paid of $7,421 is probably due as much to the slump in drilling and to the fact that a number of independent operators gave up business, as to the old operating companies withdrawing from certain districts. This has been discussed in detail on page 1.

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TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1924

County	Township	No. of wells producing, 1924	No. of wells abandoned, 1924	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Colchester, S.			1					30,341	$629
	Maidstone								2,500	
	Gosfield, S.	7			3	103		350	1,285	37
	Rochester								1,300	
	Mersea	4						309		
	Pelee Island			1			4,757,847			50,459
Kent	Romney	103	4		7	2,100		297	36,555	
	Tilbury, E.	139	3	15	37	1,598		291		
	Raleigh	20	2					353		
	Dover, W.	8	1				199,770	380	1,408	
	Dover E				1	60				
Lambton	Dawn	5					57,400	690	1,820	
	Enniskillen	3					9,325	240	730	50
	Euphemia	6					5,252			
	Sarnia	17					1,600	117	4,622	160
	Bosanquet			1						
Middlesex	Dorchester, N.	3					2,649	60	15	
Elgin	Dunwich								1,000	
	Bayham	46	4					191	5,000	1,000
	Malahide	2		2			150,672	310		
Norfolk	Houghton	3						342	1,000	150
	Middleton	19		1	3	1325		345	1,802	1,150
	Walsingham, S.	11	1					372		
	Walsingham, N.	6						426		
	Windham	4						222		
	Charlotteville	16						336	49	100
	Woodhouse	60	4	2	2	126		234		
	Townsend				1	105				

Haldimand	Walpole	156	14	1	14	1488		238		525	525
	Rainham	100	9					183			835
	Cayuga, N	55	7	13	5	431		166			950
	Cayuga, S	58						158			
	Oneida	34	1	2	1	40		139			437
	Seneca	167	8	1	21	2,882		122			2,066
	Canborough	158	5			40		122			36,077
	Dunn	14	1				1,595,625	145	175,444		46,991
	Moulton	115	3	1	10	563		110			
	Sherbrooke	13		1				151			
Wentworth	Binbrook	63	3					59			
	Glanford	25	1					67			
Lincoln	Caistor	46	2					90			
	Gainsborough	3			1			67			
Welland	Wainfleet	38	2	2	2			107			
	Humberstone	95	4	1	1	20		69			
	Crowland	50		1	1	30	456,960	108	34,147		6,562
	Willoughby	39	2					40			
	Bertie	91		1	3	66		70			
Brant	Onondaga	33					8,926	84	300		225
	Oakland	1		2	1			350			
Bruce	Amabel	2					591	40	2,000		
	Estnor	1			1	10					
Peel	Caledon	3	1		1	50		362	4,760		
	Chingacousy								50		
Surface gas wells		69					14,000[1] 50,295[2]	16	69		
Private wells[3]		300					60,000		300		
Total		2,210	82	29	87	11037	7,370,914		306,497		147,737

[1]Used privately.

[2]Sold to Union National Gas Company.

[3]Estimated.

Elevations of Wells in Ontario

The elevations that follow were taken in the year 1922 and were intended to be used for preparing structure contour maps of the gas horizons in the Medina-Cataract (Lower Silurian) rocks. After this work had been partially completed, it was found that the structure did not play the same part in defining the limits of gas fields in the Lower Silurian as it did in the Trenton limestone (Ordovician) and the oil fields of the Onondaga (Devonian), or even in the Guelph (Middle Silurian). Dry holes were found on anticlines as frequently as in synclines, and the same applies to producing wells. The factor that apparently determines whether or not a formation contains gas in large quantities appears to be the degree of cementation rather than the contour or profile of the formation. Percentage of shale in the red sandstone is another matter of importance, especially where the sandstone becomes thinner. This sandstone (Grimsby) is finally replaced by red shale.

It would, therefore, appear that it is more important to publish the thickness of the gas-producing formation and to show where it is not present. This work is now in hand and will be published when completed. In the meantime, the many elevations taken will probably be of use to the operators for purposes of estimating the depth at which gas may be found and for ordering casing to be used in wells.

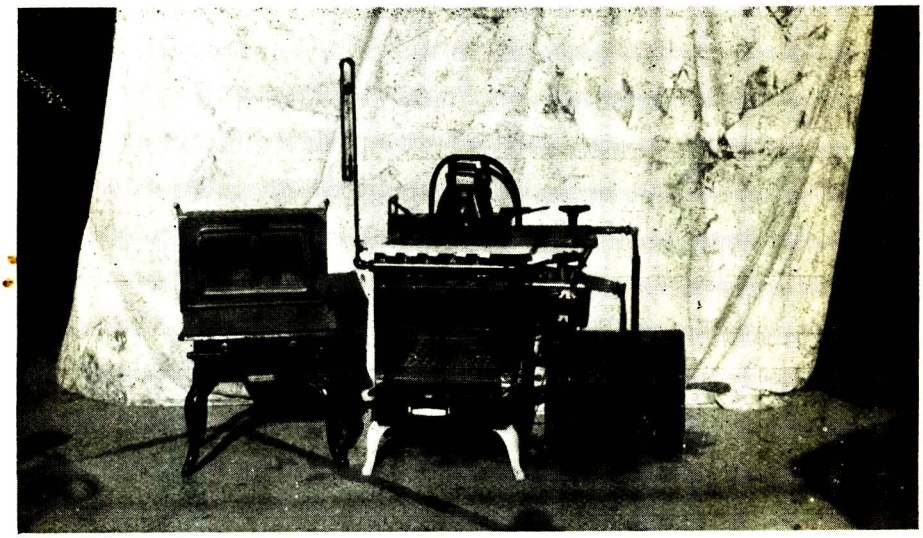
In order to reduce all elevations to a common basis, in every case the elevation of the derrick floor is given. If the pipe was removed from a well when it was plugged, an allowance of about two feet should be made for the height of the drive pipe above the ground.

All elevations were taken by spirit level excepting where noted.

It will be noted that the majority of wells are referred to by number and the name of the individual or company who operates the well. The logs of these can be had by corresponding with the operator. The names of owners have been abbreviated on account of lack of space. If the table of producers of natural gas on page 39 is referred to, the full name and address may be obtained.

Gas Wells and their Production

The number of gas wells reported in the year 1925 and their production is shown in Table X. As nearly as possible this is shown by townships, but where fields extend over a number of townships, it is shown by counties. The decline in production, by fields, has been tabulated on page 1. There has been a similar decline in the acres under lease and in the rentals paid, which is due to the negative results obtained from drilling in Essex county.



Travelling instruction equipment used by the Union Natural Gas Company to demonstrate economical methods of using natural gas, March, 1925.

TABLE X—GAS WELLS AND THEIR PRODUCTION, 1925

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield, South	10			3	90		353		
	Mersea	3	1					346		
Kent	Romney	102	3		2	1,622	4,966,207	300	33,659	$57,080.00
	Tilbury East	135	9		5	1,846		273		
	Raleigh	18	2					299		
	Harwich							18	6,914	
	Howard							10		
	Dover	6	2	1			126,687	431	4,812	400.00
Lambton	Dawn	5					35,561	690	11,905	
	Enniskillen	3					8,722	100	730	
	Euphemia	6					4,530			
	Sarnia	17					2,100	71	4,622	500.00
Middlesex	Dorchester, North	3					2,030	55	15	
	Adelaide								2,000	
Elgin	Bayham	43	9				140,231	191		
	Malahide	2						327		
Norfolk	Houghton	3						342		
	Middleton	26	1	3	8	1660		487		
	Walsingham, South	13			2	119		395		
	Walsingham, North	6						431		
	Windham	4						203		
	Charlotteville	16						271		
	Woodhouse	53	7	1				206		
Haldimand	Townsend	1			1	105				
	Walpole	146	17	2	7	855		254		
	Rainham	97	20	3	13	1,453		187		
	Cayuga, North	65	4	2	18	1,465		179		
	Cayuga, South	58	4	1	4	171		194		

	Oneida	28	6	1			1,544,348	136	168,517	47,858.30
	Seneca	136	31		2	247		124		
	Canborough	142	17	1				117		
	Dunn	14	3	1	4	923		224		
	Moulton	113	7	2	5	161		78		
	Sherbrooke	13						153		
Wentworth	Binbrook	49	14					70		
	Glanford	23	2					66		
	Ancaster	---	---	1	---	---				
Lincoln	Caistor	35	5		1	26		154		
	Gainsborough	6			3	190		152	1,729	
Welland	Wainfleet	43	4	1	2	55		96		
	Humberstone	96	2	1	3	75		62		
	Crowland	50					294,843	131	26,289	7,509.17
	Willoughby	39						50		
	Bertie	91						92		
Brant	Onondaga	32	5		5	55	979	107	300	225.00
	Oakland	0	1							
Bruce	Amabel	2					650	128	800	
Peel	Caledon	3							2,500	
	Albion	---	---	1	---	---	---			
Surface wells	Howard and Harwich	69					14,000[1] 56,386[2]		69	
Private wells[3]		300[4]					60,000[4]		300	
Total		2,125	176	22	88	11,115	7,257,274		265,161	113,572.47

[1]This gas is not metered, and therefore must be estimated. The wells are owned by private individuals and the gas is used for their own domestic purposes.

[2]This gas is sold to the Union Natural Gas Company, and all of it was used in Ridgetown.

[3]Principally Haldimand, Norfolk, and Welland counties.

[4]Estimated.

No of wells producing last year must equal the number of wells producing and abandoned - Mines producing wells drilled

Licenses Issued in 1925

The Natural Gas Conservation Act, 1921, and the Well Drillers' Act, 1925, provide that all operations connected with natural gas and the drilling of oil wells shall be carried on under license. Tables XI, XII, XIII, XIV, and XV show to whom these licenses were issued.

TABLE XI—OPERATORS LICENSED TO LEASE AND PROSPECT FOR NATURAL GAS, 1925

License No.	Name	Address
187	Abray, Thos	Kingsville, Ont.
191	Ajax Oil & Gas Co	509 Lumsden Bldg., Toronto.
194	Allied Oil & Gas Co	Welland, Ont.
218	Bermingham, T. F	55 John St. S., Hamilton, Ont.
197	Blain, E. B	684 Main St. E., Hamilton, Ont.
211	Central Development Co	Chatham, Ont.
195	Dominion Natural Gas Co	518 Jackson Bldg., Buffalo, N.Y.
202	Heath, W. O	Nelles Corners, Ont.
207	Heitbohmer, F	Stratford, Ont.
204	Henderson, R. I	1407 Northern Ontario Bldg., Toronto.
201	Hoover, A. E	Selkirk, Ont.
199	Industrial Natural Gas Co	Thorold, Ont.
192	Irvin, J. J	Dunnville, Ont.
217	McQuillen, M. W	Dunnville, Ont.
208	McWilliams, David B	370 Victoria Park Ave., Toronto.
198	Medina Natural Gas Co	Chatham, Ont.
216	Metropolitan Development Co	2 King St. E., Toronto.
212	Newton, Roy	Box 263, Petrolia, Ont.
193	Patterson, W. C	Dunnville, Ont.
190	Pilkington Bros	Thorold, Ont.
210	Port Colborne-Welland Natural Gas and Oil Co	Port Colborne, Ont.
205	Premier Development Co., Ltd	9 Richmond St. E., Toronto.
209	Provincial Natural Gas Co	Niagara Falls, Ont.
214	Rodgers, Alex	Tillsonburg, Ont.
203	Schweyer, O	Nelles Corners, Ont.
213	Snively, F. L	90 Melrose Ave., Hamilton, Ont.
196	Southern Ontario Gas Co	518 Jackson Bldg., Buffalo, N.Y.
206	Sullivan, Patrick	c/o Iroquois Hotel, Toronto.
200	Union Natural Gas Co	Chatham, Ont.
188	Willit, G. E	Bothwell, Ont.

Gas Wells and Their Production

The number of gas wells reported in the year 1926 and the quantity of gas that these wells delivered is shown in Table VII. These quantities are arrived at by adding the measured leakage to the total sold to consumers; but, as stated previously, in the Norfolk, Haldimand, and Welland fields, the wells are scattered, and it is not practical to measure the gas until it is collected into a main pipe line. There is, therefore, probably a hundred miles of pipe line on which no leakage is measured. As this cannot be measured with any accuracy, it is not considered.

It will be noted that there is an increase in the production of the Tilbury field and the Haldimand-Norfolk field. This is due to a general increase in the business of the gas companies. The improvement in appliances and in general service has created a greater demand for gas.



The photograph shows the results of an explosion of natural gas in the cellar of the home of Mr. D. M. Lee, on the outskirts of the city of Paris. A leakage of gas from an outside source found its way up a drain-pipe into the cellar, and a match ignited it. The house was practically a total wreck, as can be seen in the photograph; the brick veneer was completely demolished; fortunately there were no serious casualties.

TABLE VII—GAS WELLS AND THEIR PRODUCTION, 1926

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield, South	14			4	254		295	1,110	$215
	Mersea	3						253	534	714
Kent	Romney	105	2		5	1,179	5,365,423	285	12,856	18,694
	Tilbury, East	135	2		2	267		257	12,770	23,572
	Raleigh	15	3					282	1,820	2,904
	Harwich							17		
	Howard							9		
	Dover	7			1	662	159,136	425	6,729	7,130
Lambton	Dawn	6		2	1	1,500	330	700	10,905	8,813
	Enniskillen	3					8,952	130	730	
	Euphemia	6					3,555			
	Sarnia	19					2,100	71	2,000	
Middlesex	Dorchester, North	3						54	200	
Elgin	Bayham	42	1				36,794	174		
	Malahide	2						237		
Norfolk	Houghton	3		1				365		
	Middleton	27	5	2	5	293		396		
	Walsingham, South	15			2	88		409		
	Walsingham, North	5	2	1				448		
	Windham	4						212		
	Charlotteville	16						270		
	Woodhouse	50	5	2	1	202		239		
Haldimand	Townsend	1		1				240		
	Walpole	154	1	1	9	1,145		224		
	Rainham	109	5	2	17	2,513		224		
	Cayuga, North	80	6	4	17	1,574		187		
	Cayuga, South	58	5		6	204	1,782,950	179		

	Oneida	25	3					130		
	Seneca	129	7					120	155,811	51,079
	Canborough	136	7	1				116		
	Dunn	20	1	3	7			173		
	Moulton	103	6					103		
	Sherbrooke	13	1					153		
Wentworth	Binbrook	46	3					70		
	Glanford	21	3					61		
	Ancaster			1						
Lincoln	Caistor	36			1	26		101		
	Gainsborough	2	1	2				121		
Welland	Wainfleet	41	1					121		
	Humberstone	94	2					60		
	Crowland	49	2		2	8	276,259	104		
	Willoughby	36						20		
	Bertie	89	3		1	8		87		
Brant	Brantford			1	1	5				
	Onondaga	30	1		1	9	12,275	87	500	200
	Tuscarora			1	1	30				
Bruce	Amabel	2					650	125	800	
Peel	Caledon	3						50	1,000	150
Perth	Logan			1						
York	Whitchurch			1						
Surface wells	Howard, Harwich, Sarnia	69		8	5	5,812	14,000[1] 49,731[2] 4,341	69		
Private wells[3]		300[4]					60,000[4]	300		
Total		2,126	78	35	89	15,779	7,776,496		207,765	11,371

[1]This gas is not metered and therefore must be estimated. The wells are owned by private individuals, and the gas is used for their domestic purposes.

[2]This gas is sold to the Union Natural Gas Company, and it was used in Ridgetown and Sarnia.

[3]Principally Haldimand, Norfolk, and Welland counties.

[4]Estimated.

Licenses Issued in 1926

The Natural Gas Conservation Act, 1921, and the Well Drillers' Act, 1925, provide that all operations connected with natural gas and the drilling of oil wells shall be carried on under license. Tables VIII, IX, X, XI, and XII list the names of those to whom these licenses were issued in 1926.

TABLE VIII—OPERATORS LICENSED TO LEASE AND PROSPECT FOR NATURAL GAS, 1926

License No.	Name	Address
237	Blain, E. B.	684 Main St. E., Hamilton, Ont.
225	Central Development Co.	Chatham, Ont.
234	Colchester Oil and Gas Co.	Toronto, Ont.
222	Dominion Natural Gas Co.	518 Jackson Bldg., Buffalo, N.Y.
226	Fisherville Gas Co., Nos. 3 and 4	Fisherville, Ont.
235	Heitbohmer, F.	Stratford, Ont.
240	Hertell, H. W.	c/o Y. M.C.A.,Brantford, Ont.
229	Hoover and May	Selkirk, Ont.
223	Industrial Natural Gas Co.	St. Catharines, Ont.
239	McKillop, Wm.	Hepworth, Ont.
227	McQuillan, M. W.	Dunnville, Ont.
238	McWilliams, D. B.	Toronto, Ont.
219	Medina Natural Gas Co.	Chatham, Ont.
242	Newton, Roy	Petrolia, Ont.
228	Patterson, W. C.	Dunnville, Ont.
220	Peoples Oil and Gas Co.	Chatham, Ont.
233	Petrol Oil and Gas Co.	Toronto, Ont.
241	South Sarnia Properties, Ltd.	Sarnia, Ont.
221	Southern Ontario Gas Co.	518 Jackson Bldg., Buffalo, N.Y.
230	Union Natural Gas Co.	Chatham, Ont.
231	Union Natural Gas Co.	Chatham, Ont.
232	Union Natural Gas Co.	Chatham, Ont.

TABLE IX—OPERATORS LICENSED TO DRILL OR BORE FOR NATURAL GAS, 1926

License No.	Name	Address
206	Barr, R. L.	Sarnia, Ont.
194	Featherstone, C. W.	Dunnville, Ont.
195	Featherstone, C. W.	Dunnville, Ont.
196	Featherstone, C. W.	Dunnville, Ont.
197	Featherstone, C. W.	Dunnville, Ont.
198	Featherstone, C. W.	Dunnville, Ont.
192	Hoover, A. E.	Selkirk, Ont.
193	Hoover, A. E.	Selkirk, Ont.
181	Industrial Natural Gas Co.	St. Catharines, Ont.
199	Jasperson, B.	Kingsville, Ont.
201	Kiser Bros.	Chatham, Ont.
202	Kiser Bros.	Chatham, Ont.
189	Lauer, D.	Tillsonburg, Ont.
185	McCutcheon, T. J.	Dunnville, Ont.
186	McCutcheon, T. J.	Dunnville, Ont.
187	McCutcheon, T. J.	Dunnville, Ont.
188	McCutcheon, T. J.	Dunnville, Ont.
190	McLister, J. J.	Dunnville, Ont.
203	McKillop, Wm.	Hepworth, Ont.
182	Snively, F. L.	90 Melrose Ave., Hamilton, Ont.
183	Snively, F. L.	90 Melrose Ave., Hamilton, Ont.
184	Snively, F. L.	90 Melrose Ave., Hamilton, Ont.
205	Smith, Luke	Oakville, Ont.
200	Spence and Stratton	7607 Second Blvd., Detroit, Mich.
207	South Sarnia Properties, Ltd.	Sarnia, Ont.
191	Union Natural Gas Co.	Chatham, Ont.

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TABLE IV—GAS WELLS AND THEIR PRODUCTION, 1927

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled: No. dry	Wells drilled: No. producing	Wells drilled: Open flow	Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
Algoma	Josclyn	--	---	1	---	---	--			
						M cu. ft.	M cu. ft.			
Essex	Gosfield, South	19			4	255		278	1,260	$350.00
	Mersea	3						234		
Kent	Romney	130	3	2	21	5,391	4,994,071	280	12,831	22,677.65
	Tilbury, East	130	4		3	210		280		
	Raleigh	16						280		
	Dover	7					189,438	391	88	400.00
Lambton	Dawn	10		3	4	3,168	338	689		
	Enniskillen	3					7,519	242	730	
	Euphemia	6			33	4829	2,709			
	Sarnia	14	2				2,100	70		
	Metcalf	--	---	1	---	---	---			
Middlesex	Dorchester, North	341 3						102	100	
Elgin	Bayham	41	1				40,698	161		
	Malahide	2						252		
Norfolk	Houghton	3						365		
	Middleton	26		2	2	182		316		
	Walsingham, South	15						369		
	Walsingham, North	8			3	358		365		
	Windham	8			1	37		200		
	Charlotteville	16						225		
	Woodhouse	49	1	1				216		
	Townsend	1						290		
Haldimand	Canborough	130	12		3	155		117		
	Cayuga, North	90	7	7	16	2,879		199		
	Cayuga, South	60	1	2	4	163		181	157,232	53,078.63
	Oneida	23	2				1,668,148	131		
	Seneca	130	7	1	5	359		121		
	Dunn	30		2	8	1,375		187		
	Walpole	165	2	7	13	683		232		
				13	24					
				22	73					

TABLE IV—GAS WELLS AND THEIR PRODUCTION, 1927—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental Paid
				No. dry	No. producing	Open flow				
	Moulton	105	3					117		
	Rainham	130	4	3	24			226		
	Sherbrooke	12	1					149		
Wentworth	Glanford	20	1					69		
	Binbrook	46	1					87		
	Ancaster	—	—	1	—	—				
Lincoln	Caistor	36						91		
	Gainsborough	5						121		
Welland	Humberstone	90	3					60		
	Wainfleet	39	4					91		
	Bertie	88	1				278,967	87	22,504	$7,153.50
	Crowland	51			2	96		95		
	Willoughby	39						20		
Brant	Onondaga	38	2		2	30	13,224	85	300	
	Tuscarora	—	—	2	1	40				
Bruce	Amabel	2					224	125	800	
Peel	Caledon	6			3	150	1,500	50	1,500	150.00
Perth	Blanchard	—	—	1	—	—				
Surface wells	Harwich & Howard	69					14,000[1]			
							34,549[2]			
	Sarnia	3					3,729[3]			
Private wells[4]		300[5]					60,000[1]			
Total natural gas produced		2,217	62	36	119	18 478	7,311,214		197,345	$83,809.78
Manufactured gas imported					33		103,040			

[1]This gas is not metered and therefore must be estimated. The wells are owned by private individuals, and the gas is used for their domestic purposes.

[2]This gas is sold to the Union Natural Gas Company, and all of it was used in Ridgetown.

[3]This gas is sold to the Union Natural Gas Company, and all of it was used in Sarnia.

[4]Principally Haldimand, Norfolk, and Welland counties.

[5]Estimated.

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TABLE IV—GAS WELLS AND THEIR PRODUCTION, 1928

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield, South	20			1	50		240	1,260	$466
	Mersea	3						275		
Kent	Romney	142	1	2	13	5,987	5,228,451	268	11,426	2,354
	Tilbury, East	138	4		12	2,615		255	100	400
	Raleigh	17			1	386		255	19,435	12,632
	Harwich							16	22,221	14,443
	Howard							9		
	Dover	9	1		3	700	178,273	333	5,216	3,933
Lambton	Dawn	14		6	3	2,247	5,910	669	69,565	45,289
	Enniskillen	3	1		1		6,994	100	730	
	Euphemia	6					1,200			
	Sarnia	14					2,100	70		
Middlesex	Dorchester, North	3					300	81	100	
Elgin	Bayham	41					44,154	172		
	Malahide	2						215		
Norfolk	Houghton	3						300		
	Middleton	25	1					314		
	Walsingham, South	15						360		
	Walsingham, North	9			1	95		365		
	Windham	8						220		
	Charlotteville	16		3				237		
	Woodhouse	55		2	6	344		242		
	Townsend	1						305		
Haldimand	Walpole	182	1	15	19	1,881		242		
	Rainham	152	1	6	23	2,716		236		
	Cayuga, North	103	4	6	12	111		233		
	Cayuga, South	60	3	2	3		1,746,894	151	183,456	62,439
	Oneida	23						134		
	Seneca	128	8	3	6	342		110		
	Canborough	129	1					96		
	Dunn	30	1	5	1			210		

TABLE IV—GAS WELLS AND THEIR PRODUCTION, 1928—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled: No. dry	Wells drilled: No. producing	Wells drilled: Open flow	Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
						M cu. ft.	M cu. ft.			
	Moulton	95	10		3	89		103		
	Sherbrooke	12						150		
Wentworth	Binbrook	43	3					76		
	Glanford	14	6	4				67		
Lincoln	Caistor	36						93		
	Gainsborough	5						160		
Welland	Wainfleet	41			2	16		45		
	Humberstone	90	2		2	22		42		
	Crowland	48	5		2	25	301,847	105		
	Willoughby	39						20		
	Bertie	85	3					85		
Brant	Onondaga	27	1		2	20	13,804	130		
	Tuscarora	7			4	416		160	10,500	200
	Brantford	2			2	50				
Bruce	Amabel	2					240	125	500	
Peel	Caledon	6					100	36	600	90
Surface wells	Howard	69					14,000[1]			
	Harwich						26,541[2]	16		
	Sarnia	2	1				1,932			
Private wells[3]		300	6	2 (5)	6		60,000[4]			
Total		2,272	64	56	129	18,112	7,632,740			
Imported mixed gas							116,639			
Total distributed							7,749,379			

[1]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas used for domestic purposes.
[2]This gas is sold to the Union Natural Gas Company, and was used in Ridgetown and Sarnia.
[3]Principally in Haldimand, Norfolk, and Welland counties.
[4]Estimated. (5) 1 in Paslinch and 1 in Wellandport

TABLE III—GAS CONSUMPTION IN TOWNSHIPS, 1929—*Continued*

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	902	92	42	6,964	7,949	9,864	.50–.60
Cayuga, North	1,309	18	15	1,082	2,915	.....	.40–.60
Cayuga, South	510	62	16	3,964	3,056	.....	.60
Dunn	800	123	11	7,618	2,643	.....	.60
Moulton	1,628	122	30	11,031	5,007	.....	.50–.60
Oneida	1,287	67	12	6,098	2,224	.....	.50–.60
Rainham	1,695	136	28	9,996	5,389	264	.40–.60
Seneca	1,561	132	35	12,858	6,389	.....	.60
Sherbrooke	300	57	12	4,600	1,360	.....	.40–.60
Walpole	3,042	314	59	23,733	9,379	862	.60
LINCOLN:							
Caistor	1,220	88	27	5,725	3,986	202	.50–.60
Grantham	4,175	8	.....	508	.....	.....	.75
Louth	2,548	7	1	471	175	.....	.75
WELLAND:							
Bertie	3,298	186	71	13,745	14,148	.....	.50–1.00
Crowland	3,750	88	23	4,021	3,681	.....	.75–1.00
Humberstone	2,149	268	40	16,463	6,618	.....	.50–1.00
Pelham	2,365	61	2	4,239	352	.....	.75
Stamford	4,915	.....	7	.....	781	.....	.....
Thorold	3,401	8	1	130	176	.....	.75–.80
Wainfleet	2,357	93	30	5,131	5,082	.....	.40–.75
Willoughby	870	27	29	1,971	5,660	.....	1.00
WENTWORTH:							
Ancaster	4,550	55	.....	6,097	.....	.....	.70–.80
Barton	7,665	92	.....	16,501	.....	.....	.60
Binbrook	1,109	75	22	7,451	4,120	1,044	.50–.60
Glanford	1,415	126	4	15,601	739	973	.40–.60
Saltfleet	4,706	109	.....	4,586	.....	.....	.75
Total	.....	7,236	769	689,514	156,653	108,186	.....

SUMMARY

	M cu. ft.
Total distribution to customers	7,547,610
Used by companies for all purposes	136,728
Used by private well-owners	74,000
Leakage on transmission lines	578,962
Leakage on distribution plants	369,360
Leakage on rural lines	17,313
Leakage or loss on purchased gas	1,552
Total amount of gas distributed	8,725,525

Gas Wells and Their Production

In Table IV is given a summary by townships of the number of gas wells in Ontario, their production, and the number abandoned; the number of new wells drilled, with their open flow; and the rock pressure of each township. Only the acres under lease held by operating companies are herein reported.

TABLE IV—GAS WELLS AND THEIR PRODUCTION, 1929

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Colchester			1					96	
	Gosfield, South	20						171	1,260	$467
	Mersea	3						278		
Kent	Harwich						5,780,061	16	26,200	34,935
	Howard			3				9		
	Raleigh	19		1	2	10,647		266	12,334	16,044
	Romney	144	1	4	3	399		262	41,517	41,286
	Tilbury, East	138	1		1	200		243	12,508	18,669
	Dover	8	2	7	1	5,000	366,224	363	18,077	24,750
Lambton	Dawn	14		6			85,279	660	75,050	101,050
	Euphemia	3	4	3	1	130		403		
	Enniskillen	3					6,348	100	730	
	Sarnia	14					2,400	70	5,000	50
	Moore			2						
Middlesex	Dorchester, North	3					300	25	100	
	Mosa			1						
Elgin	Bayham	40	1				46,272	172		
	Malahide	2		1				215		
Norfolk	Charlotteville	16						224		
	Houghton	3						300		
	Middleton	25						294		
	Townsend	1						300		
	Walsingham, North	9						365		
	Walsingham, South	14	1					333		
	Windham	8						266		
	Woodhouse	56	1		2	104		267		
Haldimand	Canborough	128	1					96		
	Cayuga, North	120	5	7	19	2128		247		
	Cayuga, South	58	2					158		

	Dunn	31		8	1	97	1,866,136	197			
	Moulton	95						123	184,854	67,040	
	Oneida	23						119			
	Rainham	181	1	8	33	3,884		262			
	Seneca	151	1	14	24	1,306		119			
	Sherbrooke	12						120			
	Walpole	198	1	8	17	1,747		269			
Wentworth	Binbrook	43						81			
	Glanford	11	3					65			
Lincoln	Caistor	40	1	1	4	124		90			
	Gainsborough	5						100			
Welland	Bertie	84	1					85			
	Crowland	47	1	4				100			
	Humberstone	81	9				298,688	62			
	Wainfleet	40	1					43			
	Willoughby	37	2					20			
Brant	Onondaga	26	2		2	30		103			
	Tuscarora	16		1	9	529	31,558	135	43,696	500	
Bruce	Amabel	2									
	Kincardine	- -	- - -	1	- - -	- - -	107	100	50		
Peel	Caledon	6									
Algoma	Josclyn	- - -	- - - -	1	- - - -	- - - -	- - - -				
Surface wells	Harwich	69					14,000[1]				
	Howard						25,184[2]				
	Sarnia	2					630[2]				
Peel	Nelson	- - -	- - -	1	- - -	- - -					
Private wells[3]		300					60,000[4]				
Total		2,349	42	83	119	25 325	8,583,187		422,472	304,791	

[1]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[2]This gas is sold to the Union Natural Gas Company, and was used in Ridgetown and Sarnia.
[3]Principally in Haldimand, Norfolk, and Welland counties.
[4]Estimated.

In addition to the total Ontario production of 8,583,187 M cubic feet, there is a production of 3,986 M cubic feet of manufactured gas, and 138,352 M cubic feet of mixed gas is imported, making a total distributed of 8,725,525 M cubic feet.

Leakage

Tables V, VI, and VII give a statement of the measured leakage of gas from pipe lines between the wells and the consumer. This is not by any means all the leakage, for only 70 per cent. of the gas produced is measured. In order to arrive at an estimated figure for the total leakage, 30 per cent. should be added.

Although the total leakage is greater than for the year 1928, the percentage of leakage is actually less, because nearly one billion feet more gas was produced. By referring to the work done and improvements in service for the concurrent year, it will be seen that a very active effort is being made to reduce leakage. Gas companies have been making greater efforts in searching for defective and leaky pipe, and they conduct surveys of distribution plants or parts of plants to find the sources of the leakage. In most cases where excessive leakage is apparent, it can be traced to one locality where the character of the soil accelerates corrosion, where there is some defective pipe, or where poor workmanship in installing the pipe is the cause.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1930—*Continued*

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industria	
HALDIMAND.							
Canborough	902	82	49	6,290	8,093	492	$0.60
Dunn	800	119	10	7,275	2,615	.....	.60
Moulton	1,628	312	31	9,854	3,827	12,099	.50–.60
North Cayuga	1,309	5	12	153	2,076	.....	.60
Oneida	1,287	67	9	8,232	1,680	.....	.50–.60
Rainham	1,695	138	27	10,455	5,230	1,468	.40–.60
Seneca	1,561	150	53	12,242	7,630	.....	.60
Sherbrooke	300	82	11	4,653	1,189	.....	.50–.60
South Cayuga	510	58	16	3,752	2,812	.....	.60
Walpole	3,042	312	59	23,530	9,039	1,783	.40–.60
LINCOLN:							
Caistor	1,220	101	26	6,446	2,486	199	.50–.60
Gainsborough	2,017	23	2	1,932	229	.....	.50
Grantham	4,175	9	.....	581	.....	.....	.75
Louth	2,548	8	1	528	100	.....	.75
WELLAND:							
Bertie	3,298	189	69	12,666	13,315	.....	.50–1.30
Crowland	3,750	87	22	2,937	2,850	.....	.75–1.30
Humberstone	2,149	247	37	15,249	5,967	.....	.50–1.30
Pelham	2,365	60	2	3,944	115	.....	.75
Stamford	4,915	87	4	5,764	772	.....	1.00–1.30
Thorold	3,401	8	1	130	170	.....	.75–.80
Wainfleet	2,357	86	26	4,098	4,921	.....	.40–1.00
Willoughby	870	29	29	1,921	5,467	.....	1.00–1.30
WENTWORTH:							
Ancaster	4,550	55	.....	8,865	.....	.....	.70–.75
Barton	7,665	229	.....	10,051	.....	.....	.60–.75
Binbrook	1,109	72	21	9,614	4,186	786	.60
Glanford	1,415	125	4	14,690	664	393	.60
Saltfleet	4,706	135	.....	6,434	.....	.....	.75
Total	.....	7,773	771	657,845	148,194	79,857	.....

SUMMARY

	M cu. ft.
Total distribution to customers	7,188,799
Used by companies for all purposes	110,575
Used by private well-owners	74,000
Leakage in transmission lines	413,619
Leakage in distribution plants	288,367
Leakage in rural lines	15,881
Total amount of gas distributed	8,091,241

Gas Wells and Their Production

In Table V is given a summary by townships of the number of gas wells in Ontario, their production, and the number abandoned; the number of new wells drilled, with their open flow; and the rock pressure of each township. Only the acres under lease held by operating companies are herein reported.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1930

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield, South	20		1				171	5,898	$325
	Mersea	3						278		
	Sandwich West			1						
Kent	Raleigh	30		7	11	24,301	4,999,278	606		
	Romney	147		1	4	357		229	132,428	
	Tilbury, East	137	3	1	2	399		229		
	Dover	9		3	1	500	459,112	360	14,662	179,054
Lambton	Dawn	18		5	4	7,131	124,411	667	91,143	
	Euphemia	3						345		
	Enniskillen	3					4,836	100	760	
	Sarnia	14					2,400	70	5,000	50
	Sombra			1						
Middlesex	Dorchester, North	3					300	25	100	
	Mosa	1		4	1	1,048				
Elgin	Bayham	39	1				48,018	172		
	Malahide	1	1					215		
Norfolk	Charlotteville	15	1				277,971	224		
	Houghton	3						300		
	Middleton	25	1		1	300		294		
	North Walsingham	9						365		
	South Walsingham	13	1					333		
	Townsend	1						300		
	Windham	8						266		
	Woodhouse	53	3					267		
Haldimand	Canborough	126	3		1	28		96		
	Dunn	31	1	4	1	25		166		
	Moulton	88	8		1	17		123		
	North Cayuga	128	11	14	19	938		247		
	Oneida	23	3	3	3	102		119		
	Rainham	199	2	4	20	1,157		262	298,727	69,176
	Seneca	166	2	11	17	1,239		104		

	Sherbrooke	13	1	2	2	85	1,479,032	124			
	South Cayuga	56	2					158			
	Walpole	215		13	19	1,213		269			
Wentworth	Binbrook	42	1					81			
	Glanford	11						65			
Lincoln	Caistor	53	2	2	18	931		90			
	Gainsborough	5						100			
Welland	Bertie	89	2		8	292		85			
	Crowland	47	1		1	15		113			
	Humberstone	81	1				408,475	62			
	Wainfleet	36	4					114			
	Willoughby	38			1	15		35			
Brant	Onondaga	27			4	473	58,637	103			
	Tuscarora	44		2	28	2,517		142	44,315		
Bruce	Amabel	2					858	100	50		
Peel	Caledon	6									
Surface wells	Harwich	69					14,000[1]				
	Howard						6,088[2]				
	Sarnia	2									
Private wells[3]		300					60,000[4]				
Total		2,452	55	79	167	42,993	7,943,416		593,085	364,600	

[1]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[2]This gas is sold to the Union Natural Gas Company, and was used in Ridgetown.
[3]Principally in Haldimand, Norfolk, and Welland counties.
[4]Estimated.

Exploratory Drilling

Most of the exploratory drilling done in the past year was in the vicinity of old fields, following the work done in the year 1929.

The Union Natural Gas Company extended the Dawn field some distance into Euphemia township and pushed north with the De Clute field in Raleigh township, where two or three large producing wells were drilled by that company and the Highbank Oil Company. The wells of the old Oil Springs Oil and Gas Company at Oil Springs are being cleaned out and "shot," and production increased.

The Southern Ontario Company drilled a producing well in Mosa township, near North Newberry. The producing horizon is in the Grimsby sandstone (Red Medina). This is an unlooked-for extension of the Grimsby, which has not been heretofore recorded in any well within thirty miles eastward, where it is known to thin out and disappear.

The Norfolk and Haldimand fields have had a great deal of attention, and the number of new wells is more than usual. The Dominion Natural Gas Company led in these counties.

On the Tuscarora Indian Reserve the Ajax and Petrol Gas companies have drilled a number of producing wells. This Indian Reserve has all indications of holding a large reserve of gas for the future.

A well was begun in St. Vincent township, Grey county, but was closed down before the gas horizon was reached.

The year 1930 has been the most successful year on the basis of numbers of producing wells drilled since 1913. The number of feet drilled in 1930 was 232,940.

An example of the methods used to extend gas fields is to be found in the township of Middleton. A gas well was drilled by the Vacuum Gas and Oil Company in 1917 and has been producing continuously since that date. About five hundred feet distant another producing well was drilled by the Dominion Natural Gas Company. Following this, these and other companies drilled dry holes at all quarters of the compass, centred on these two producing wells, and [illegible] abandoned. The original rock pressure of these wells

TABLE II—DOMESTIC CONSUMPTION OF GAS, 1921–1931

Year	No. of pay consumers	Total quantity used	Quantity used per consumer
		M cu. ft.	M cu. ft.
1921	58,609	5,937,316	101.3
1922	63,229	6,028,947	95.3
1923	62,352	6,210,459	99.6
1924	61,100	5,933,595	97.1
1925	62,338	5,300,424	85.6
1926	63,695	5,595,521	87.8
1927	66,818	5,210,315	78
1928	70,259	5,699,553	71.2
1929	80,991	6,336,873	78.2
1930	84,135	6,332,519	75.2
1931	86,050	5,607,744	65.1

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1931—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	875	70	40	4,401	6,900	313	$0.60
Dunn	815	117	11	6,030	2,732	.....	.60
Moulton	1,607	138	22	6,486	3,630	.....	.60
North Cayuga	1,419	11	11	278	1,877	15,080	.60
Oneida	1,319	70	9	7,087	1,565	.....	.60
Rainham	1,700	170	29	8,472	4,789	774	.40–.60
Seneca	1,673	149	40	9,087	5,930	118	.60
Sherbrooke	357	73	9	3,966	1,149	.....	.60
South Cayuga	586	59	16	3,189	2,608	.....	.60
Walpole	3,235	317	58	18,063	8,666	1,130	.40–.60
LINCOLN:							
Caistor	1,238	116	1	7,087	122	252	.50–.60
Gainsborough	2,114	28	1	919	75	.....	.25–.75
Grantham	5,364	8	.....	484	.....	.....	.75
Louth	3,165	9	.....	549	.....	.....	.75
WELLAND:							
Bertie	4,246	193	64	10,831	11,264	.....	.50–1.30
Crowland	4,999	89	25	3,241	3,230	.....	.75–1.30
Humberstone	2,407	259	34	14,261	5,204	.....	.50–1.30
Pelham	2,685	66	1	3,579	65	.....	.75
Stamford	7,744	92	4	5,244	792	.....	1.00–1.30
Wainfleet	2,717	113	22	4,498	4,070	.....	.50–1.00
Willoughby	948	39	26	2,223	4,483	.....	1.00–1.30
WENTWORTH:							
Ancaster	4,596	66	.....	4,551	.....	.....	.60–.75
Barton	3,295	236	.....	12,709	.....	.....	.60
Binbrook	1,175	67	22	6,317	3,843	957	.60
Glanford	1,356	128	4	12,970	782	524	.60
Saltfleet	7,217	172	.....	6,326	.....	.....	.75
WATERLOO:							
Waterloo	11,974	19	.....	288	.....	.....	.80
Total	.....	7,787	693	572,213	127,284	91,464	.....

SUMMARY

	M cu. ft.
Total distribution to customers	6,847,816
Used by companies for all purposes	64,944
Used by private well-owners	74,000
Leakage in transmission lines	323,509
Leakage in distribution plants	197,876
Leakage in rural lines	13,530
Total amount of gas distributed	7,521,675

Gas Wells and Their Production

In Table V is given a summary by townships of the number of gas wells in Ontario, their production, and the number abandoned; the number of new wells drilled, with their open flow; and the rock pressure of each township. Only the acres under lease held by operating companies are herein reported. The total footage drilled in 1931 was 249,245.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1931

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Colchester South								1,604	
	Gosfield South	21			1	50		150	5,533	$193
	Mersea	3						280		
Kent	Harwich			1			4,376,184			
	Raleigh	33	1	4	4	2,140		549	195,957	
	Romney	145	3		1	357		228		
	Tilbury East	142			3	1,237		228		
	Chatham								1,580	197,735
	Dover	9					338,422	328	15,521	
Lambton	Dawn	19		5	1	25,023	124,392	623	79,837	
	Euphemia	3		1				345		
	Enniskillen	4				1,000	5,806	570	1,000	65
	Moore								4,400	
	Sarnia	13	1					100	5,000	
Middlesex	Caradoc			1					428	
	East Williams								1,573	
	Ekfrid			2					176	
	Mosa	3		2	2	2,092		803	275	
	North Dorchester	3					300	25	100	
Elgin	Bayham	38	1				43,536	168		
	Aldborough									
	Malahide	1						225		
Norfolk	Charlotteville	15						212		
	Houghton	7		2	4	1,057		412		
	Middleton	35		2	10	3,407		400		
	North Walsingham	9					312,535	310		
	South Walsingham	13						356		
	Townsend	1		3				290		
	Windham	8						237		
	Woodhouse	56	1	2	5	541		259		

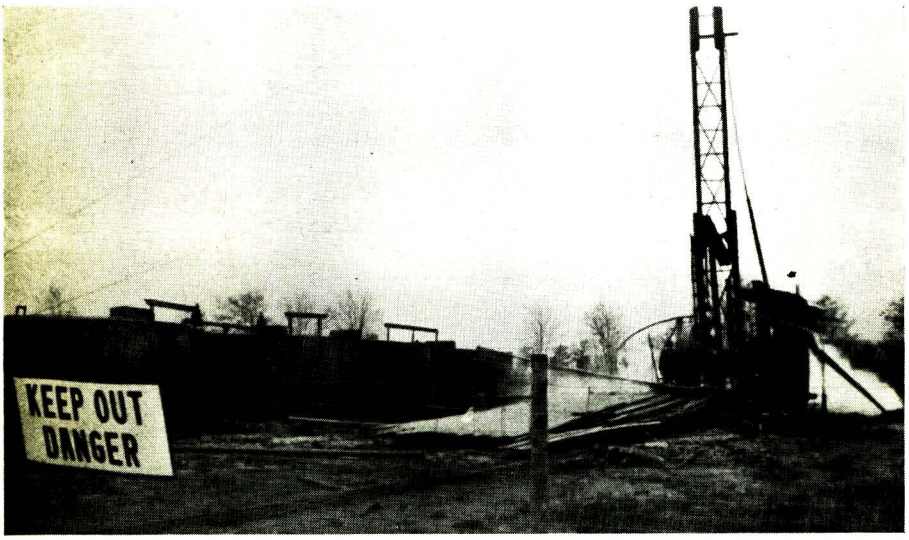
Haldimand	Canborough	138	3		15	501		95			
	Dunn	31						187			
	Moulton	107	5	6	23	1,057		129			
	North Cayuga	140	4	9	14	776		221			
	Oneida	40		5	15	436		173			
	Rainham	218	4	4	19	2,002		256	645,541	187,535	
	Seneca	171	5	3	11	398		101			
	Sherbrooke	17		2	3	145	1,590,452	237			
	South Cayuga	56						155			
	Walpole	219	3	8	6	374		260			
Wentworth	Binbrook	51			9	330		79			
	Glanford	11						70			
Lincoln	Caistor	62	2	2	10	351		98			
	Gainsborough	4	1					100			
Welland	Bertie	92	3	4	6	204		78			
	Crowland	48						123			
	Humberstone	67	10				377,566	59			
	Wainfleet	33	2					64			
	Willoughby	39						30			
Brant	Onondaga	43	1	6	13	431	170,521	87			
	Tuscarora	61		7	21	1,214		111	43,700	3,448	
	South Dumfries								2,930		
Bruce	Amabel	2					516	100	50		
Peel	Caledon	6									
Oxford	Dereham								1,600		
Surface wells	Harwich	69					14,000[1]				
	Howard						5,304[2]				
	Sarnia		2								
Private wells[3]		300					60,000[4]				
Total		2,606	52	81	196	45,123	7,419,534		1,006,814	388,976	

[1]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[2]This gas is sold to the Union Gas Company, and was used in Ridgetown.
[3]Principally in Haldimand, Norfolk, and Welland counties.
[4]Estimated.
Total footage drilled in 1931 is 249,245.

New Wells

The total open flow of new wells drilled in 1931 was greater than in any year for the past twelve years. There was little "wildcatting," and only one new field was discovered, at Doyle P.O., in northeastern Raleigh township. The Dawn gas field was extended, and two of the largest gas wells in Ontario are to be found there, each over twenty-five million cubic feet open flow. The total open flow of 196 new wells is 45,123 M cubic feet. The open flow of new wells from 1920 to 1928 was quite small, averaging about twelve million cubic feet yearly, and the steady increase during the past three years is very encouraging.

One of the features of the past year's development is the number of new companies entering the natural gas business on a small scale. These are principally in the eastern gas field.



Union Gas Company's No. 61 oil well in Dawn township, drilled in March, 1932. This well and two others have opened up a promising oil field in Dawn township.

The percentage of dry holes shows a decrease from 31 per cent. in 1930 to 28 per cent. in 1931. A study of Table V, published annually, will give comparisons with other years.

Leakage

In Tables VI, VII, and VIII, a statement will be found of the measured leakage of gas from pipe lines between the wells and the consumer. This represents about 70 per cent. of the total leakage; the remaining 30 per cent. is not measured on account of the widespread area covered by the wells in the Haldimand, Norfolk, and Welland fields, the transmission lines having much less in mileage than the connecting lines. By comparing these tables with the tables published in previous years, it will be noted that the leakage has been very much reduced. A study of this problem can only be made by comparing all features as shown in the different tables for each year. It is encouraging to note this improvement from year to year, which is being made by careful surveys and by the constant patrol of pipe-lines.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1932—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	893	88	46	6,295	8,102	323	$0.60
Dunn	791	119	10	5,808	2,358	.....	.60
Moulton	1,526	158	20	8,346	3,200	.....	.60
North Cayuga	1,310	40	10	3,025	2,084	5	.60
Oneida	1,317	70	15	6,529	2,379	49	.50–.60
Rainham	1,681	164	27	8,181	5,023	1,499	.50–.60
Seneca	1,609	140	35	9,894	5,711	299	.60
Sherbrooke	332	55	10	3,101	1,336	.....	.60
South Cayuga	586	57	16	2,641	2,886	.....	.60
Walpole	3,047	319	61	19,098	10,144	749	.40–.60
LINCOLN:							
Caistor	1,167	117	21	5,089	2,109	147	.50–.60
Gainsborough	2,046	21	.....	490	.....	.....	.75–.85
Grantham	5,007	9	.....	603	.....	.....	.75
Louth	2,829	10	.....	661	.....	.....	.75
WELLAND:							
Bertie	4,050	185	61	10,085	11,762	70	.45–1.30
Crowland	4,921	95	22	3,350	2,806	.....	.75–1.30
Humberstone	2,341	267	33	13,299	5,828	.....	.50–1.30
Pelham	2,603	61	1	4,087	78	.....	.75
Stamford	7,673	89	4	4,856	756	.....	1.00–1.30
Wainfleet	2,625	84	20	4,035	3,807	.....	.50–1.00
Willoughby	882	33	26	1,782	4,940	.....	1.00–1.30
WENTWORTH:							
Ancaster	3,400	94	.....	6,519	.....	.....	.70–.75
Barton	1,641	245	.....	15,596	.....	.....	.70–.75
Binbrook	3,226	70	21	6,306	3,837	790	.60
Glanford	1,273	125	4	11,837	593	542	.60
Saltfleet	4,954	215	.....	8,256	.....	.....	.75
WATERLOO:							
Waterloo	7,556	22	.....	621	.....	.....	.80
Total	.....	7,676	710	560,033	139,786	59,035	.....

SUMMARY

	M cu. ft.
Total distribution to customers	6,866,181
Used by companies for all purposes	40,592
Used by private well-owners	74,000
Leakage in transmission lines	240,509
Leakage in distribution plants	267,439
Leakage in rural lines	9,160
Total amount of gas distributed	7,497,881

Gas Wells and Their Production

In Table V will be found a summary, by townships, of the gas wells of the province, also full details of wells abandoned, new wells drilled, and those in operation; the production of gas, rock pressure, the acreage under lease, and the rentals paid.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1932

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled[1]			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Colchester South	.....	.....	.....	.....	.....	.....	.....	1,604	.....
	Gosfield South	21	.....	2	.....	.....		150	719	$684
	Mersea	3	.....	.....	.....	.....		266	.....	
Kent	Harwich	.....	.....	.....	.....	.....	4,506,072	.....		
	Orford	.....	.....	.....	.....	.....		.....		
	Raleigh	35	.....	1	2	420		550	104,883	
	Romney	145	1	.....	1	93		218		
	Tilbury East	144	.....	.....	2	420		218		146,459
	Chatham	.....	.....	.....	.....	.....	.....	.....	1,580	
	Dover	8	1	.....	.....	.....	275,958	342	7,279	
Lambton	Dawn	19	.....	.....	.....	.....	161,760	610	59,938	
	Euphemia	3	.....	.....	.....	.....		340		
	Enniskillen	4	.....	.....	.....	.....	7,111	700	1,000	.....
	Moore	.....	.....	.....	.....	.....	.....	.....	4,400	.....
	Sarnia	13	.....	.....	.....	.....	1,800	70	5,000	.....
	Sombra	.....	.....	1	.....	.....	.....	.....	1,450	.....
Middlesex	Ekfrid and others	.....	.....	.....	.....	.....	.....	.....	25,689	88
	Metcalfe	.....	.....	.....	.....	.....	.....	.....	1,186	.....
	Mosa	3	.....	.....	.....	.....	.....	713	275	.....
	North Dorchester	3	.....	.....	.....	.....	.....	50	.....	.....
Elgin	Bayham	35	3	.....	.....	.....	45,708	167		
	Dunwich	.....	.....	.....	.....	.....		.....		
	Malahide	1	.....	.....	.....	.....		190		
Norfolk	Charlotteville	13	2	.....	.....	.....	365,638	243		
	Houghton	7	.....	.....	.....	.....		522		
	Middleton	37	.....	1	2	145		258		
	North Walsingham	9	.....	1	.....	.....		312		
	South Walsingham	13	.....	.....	.....	.....		378		
	Townsend	1	.....	.....	.....	.....		270		
	Windham	8	.....	.....	.....	.....		228		
	Woodhouse	56	.....	.....	.....	.....		248		

Haldimand	Canborough	167	4	3	34	1,024	1,453,864	98	460,351	89,950
	Dunn	31			1	100		270		
	Moulton	115	4	1	16	405		127		
	North Cayuga	153		2	10	659		229		
	Oneida	52		2	12	977		135		
	Rainham	249	1	10	32	2,089		266		
	Seneca	180	5	2	14	601		94		
	Sherbrooke	18		2	1	35		242		
	South Cayuga	55	1					149		
	Walpole	226	4		11	1,581		254		
Wentworth	Binbrook	54		1	4	127		70		
	Glanford	11						57		
Lincoln	Caistor	62						110		
	Gainsborough	5			1	12		100		
Welland	Bertie	90	8		6	122	351,616	125		
	Crowland	48						106		
	Humberstone	66	1					52		
	Wainfleet	29	2					63		
	Willoughby	39						30		
Brant	Onondaga	41	2		2	60	140,612	86	46,630	2,840
	Tuscarora	58	3	2				92		
Bruce	Amabel	2					500	100	50	
Peel	Caledon	6								
Oxford	Dereham			1					1,148	
Surface wells	Harwich	69					14,000[2]			
	Howard						1,515[3]			
Private wells[4]		300					60,000[5]			
Total		2,707	42	32	151	8,870	7,386,154		723,182	240,021

[1]Total footage drilled in 1932 is 176,497.
[2]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[3]This gas is sold to the Union Gas Company, and was used in Ridgetown.
[4]Principally in Haldimand, Norfolk, and Welland counties.
[5]Estimated.

Work of the Year

Very little new work was done or extensive improvements made in 1932. The policy of the natural gas industry was retrenchment rather than expenditure. Only where new consumers requested gas were extensions made.

The Dominion Natural Gas Company report having carried out routine leakage surveys during the year. They laid three miles of 4-inch line from Burlington to Waterdown and installed a distribution system in the village. This company extended their distribution systems in Preston and Hespeler, which were installed in the previous year.

The Dominion Natural Gas Company also connected the five wells drilled near the village of Fairground, in Houghton township, to the main transmission line to Tillsonburg and Simcoe. These wells are also connected to the Central Pipe Line Company main to Aylmer. This will materially improve the service to these municipalities.

The Union Gas Company put its pipe line from the Haldimand gas field to the city of Hamilton into service, and are now furnishing the United Gas and Fuel Company of Hamilton with natural gas. The latter company has changed over its plant in East Hamilton from manufactured gas to natural gas, and their consumers in that territory are now supplied with natural gas, while those in the remainder of the city are supplied with manufactured gas purchased from the Hamilton By-Product Coke Oven Company. No other important extensions are reported by the Union Gas Company.

Leakage

Tables VI, VII, and VIII show the leakage of gas from pipe lines from the gas field to the consumer, as measured through meters at different points on the pipe lines. This does not include the leakage from field lines in any of the gas fields, nor from the transmission lines from the Haldimand field to Hamilton. It is not practicable to measure this leakage in the field on account of the vast number of separate collecting lines, nor is it practicable in the case of these transmission lines, because gas is being fed into them at so many points. Out of 7,310,000 M cubic feet produced by recognized gas companies, 4,330,000 M cubic feet were measured into pipe lines.

A comparison of leakage in 1931 and 1932 will show 1932 as a favourable year. Leakage has been materially reduced, and many distributing plants are under the standard set as "good operating practice." Leakage surveys are being constantly carried out.

There are 1,500 miles of gas transmission lines and 1,855 miles of gas distribution lines of all sizes in the province.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1933—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	840	98	46	5,944	8,300	196	.60
Dunn	805	152	10	6,318	2,048	.....	.60
Moulton	1,590	155	19	7,087	2,551	.....	.60
North Cayuga	1,282	51	10	3,277	2,142	.....	.60
Oneida	1,301	68	12	5,867	1,807	.....	.50–.60
Rainham	1,608	152	26	9,077	4,586	400	.50–.60
Seneca	1,589	148	29	9,128	5,222	.....	.60
Sherbrooke	346	55	9	2,343	1,122	.....	.60
South Cayuga	580	55	15	2,232	2,539	.....	.60
Walpole	3,145	315	57	19,352	8,571	270	.60
LINCOLN:							
Caistor	1,260	115	1	3,448	132	148	.50–.60
Gainsborough	2,091	29	.....	466	.....	.....	.75–.85
Grantham	5,010	9	.....	513	.....	.....	.75
Louth	2,903	11	.....	627	.....	.....	.75
WELLAND:							
Bertie	4,174	180	64	9,955	11,089	.....	.50–1.50
Crowland	5,082	88	18	2,210	2,109	.....	.75–1.50
Humberstone	2,368	244	33	7,242	5,158	.....	.70–1.50
Pelham	2,690	62	1	3,575	103	.....	.75
Stamford	8,020	87	4	4,839	739	.....	1.00–1.50
Wainfleet	2,718	183	22	3,952	3,675	.....	.60–1.00
Willoughby	905	31	26	786	4,396	.....	1.00–1.50
WENTWORTH:							
Ancaster	3,606	96	.....	7,538	.....	.....	.70
Barton	1,840	258	.....	17,805	.....	.....	.60–.75
Binbrook	1,080	81	21	5,801	3,496	330	.60
East Flamborough	3,705	50	.....	2,650	.....	.....	.60
Glanford	1,265	125	4	10,244	1,024	468	.60–.75
Saltfleet	4,837	260	.....	10,096	.....	.....	.75
WATERLOO:							
Waterloo	7,591	22	.....	549	.....	.....	.80
Total	.....	7,922	682	523,366	134,322	63,818	.....

SUMMARY

	M cu. ft.
Total distribution to customers	6,630,946
Used by companies for all purposes	45,552
Used by private well-owners	74,000
Leakage in transmission lines	274,367
Leakage in distribution plants	228,045
Leakage in rural lines	10,824
Total amount of gas distributed	7,263,734

Gas Wells and Their Production

Table V gives the details by townships and fields of the natural gas wells drilled in 1933. There was an increase over 1932 of 114 in the number of producing wells in the province. The number of producing wells drilled was 22 more than in 1932, and the open flow of the 173 wells drilled was 6,956 M cubic feet more than that of the 151 wells drilled in 1932.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1933

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	22			1	50		150	719	$381
	Maidstone			1						
	Mersea	3						265		
Kent	Harwich						4,201,704			
	Orford			2						
	Raleigh	36		4	1	12		521	55,547	145,414
	Romney	144	1					195		
	Tilbury East	150	1	1	7	540		214		
	Chatham Gore			1						
	Dover	9			1	535	252,694	350	5,351	
Lambton	Dawn	22		1	3	2,740	256,802	651	41,666	
	Euphemia	3						265		
	Enniskillen	4					6,459	231	1,000	
	Moore								4,000	
	Sarnia	13					1,800	70	6,573	
Middlesex	Caradoc and others									
	Ekfrid			1					11,271	88
	Metcalfe									
	Mosa	3						743		
	North Dorchester	3						50	10,000	90
Elgin	Aldborough									
	Bayham	35					45,968	156		
	Dunwich									
	Malahide	1						180		
Norfolk	Charlotteville	13						225		
	Houghton	7						342		
	Middleton	39	2	4	4	397		279		
	North Walsingham	10			1	45		312		
	South Walsingham	14			1	280	346,621	382		
	Townsend	1						330		
	Windham	8						233		
	Woodhouse	55	1	1				242		

Haldimand	Canborough	173	4	2	9	255		94		
	Dunn	50		7	21	1,627		201		
	Moulton	122	6	3	14	488		129		
	North Cayuga	160	3	2	12	839		216	338,902	104,489
	Oneida	54	2	2	4	80		155		
	Rainham	272		10	22	1,206		243		
	Seneca	173	11	6	5	1,090		94		
	Sherbrooke	18					1,524,251	238		
	South Cayuga	53	2					155		
	Walpole	274	2	14	50	5,026		257		
Wentworth	Binbrook	53	1					75		
	Glanford	11						59		
Lincoln	Caistor	61	1					110		
	Gainsborough	5						119		
Welland	Bertie	96			5	228		130		
	Crowland	36	12					116		
	Humberstone	62	4				333,619	54		
	Wainfleet	27	2		1	8		63		
	Willoughby	43		2	4	240		246		
Wellington	Puslinch			1						
Brant	Onondaga	40					121,578	87	43,900	1,050
	Tuscarora	66		2	7	140		113		
Bruce	Amabel	2					500	100	50	
Peel	Caledon	6								
Surface wells	Harwich	69					14,000[1]			
	Howard						663[2]			
Private wells[3]		300					60,000[4]			
Total		2,821	55	67	173	15,826	7,166,659		518,979	251,512

[1]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[2]This gas is sold to the Union Gas Company, and was used in Ridgetown.
[3]Principally in Haldimand, Norfolk, and Welland counties.
[4]Estimated.

Leakage

There is a slight increase in the leakage of natural gas in 1933 over 1932. This is mostly in the high-pressure transmission lines. Distribution plants show a reduction in leakage, which compensates for the increase in other places.

This increase is attributed to enforced economies through reduced revenues. It is certain that there has been a decrease in the sales of gas, as noted on page 2 of this report.

All gas companies have been urged to keep a strict watch on leaks on high-pressure lines and to keep this work up to a high standard.

Tables VI, VII, and VIII give details of the leakage for the year 1933. Leakage is measured by deducting the gas measured into distributing plants from the quantity measured into the transmission lines at the point where the gas in the field is collected. It is not possible to do this in the Haldimand-Norfolk field nor in the Welland field. The fields cover such an area that it is impractical to collect gas at a central point. The short transmission lines to Hamilton and Niagara Falls are such a small percentage of the total pipe lines that the result to be obtained does not merit the entailed expenditure.

The unmeasured leakage on these several hundred miles of collecting lines would probably increase the total by 25 per cent.

The actual miles of pipe lines of all sizes, gathering, transmission, and distribution, is 3,235 miles. To form a basis for comparison, all sizes of pipe are figured at their equivalent length in 3-inch pipe, which gives a total mileage of 54,890.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1934—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	840	95	48	6,299	8,069	140	.50–.60
Dunn	805	151	10	6,373	914	.....	.60
Moulton	1,590	153	16	7,321	2,482	.....	.60
North Cayuga	1,282	51	9	3,461	3,790	.....	.60
Oneida	1,301	53	12	5,603	1,783	.....	.50–.60
Rainham	1,608	156	26	8,473	4,547	598	.50–.60
Seneca	1,589	149	28	9,045	5,128	.....	.60
Sherbrooke	346	59	7	2,613	877	.....	.60
South Cayuga	580	53	15	2,135	2,737	.....	.60
Walpole	3,145	331	56	19,933	8,617	72	.60
LINCOLN:							
Caistor	1,260	62	1	2,114	117	136	.60–.85
Gainsborough	2,091	78	1	1,768	50	.....	.50–.75
Grantham	5,010	8	.....	549	.....	.....	.75
Louth	2,903	10	.....	607	.....	.....	.75
WELLAND:							
Bertie	4,174	176	61	10,297	9,532	.....	.75–1.30
Crowland	5,082	74	13	2,946	524	.....	.75–1.30
Humberstone	2,368	266	30	12,331	4,392	.....	.70–1.30
Pelham	2,690	62	1	3,648	80	.....	1.00–1.30
Stamford	8,020	85	4	4,953	616	.....	1.00–1.30
Wainfleet	2,718	190	21	4,101	3,592	.....	.60–1.00
Willoughby	905	30	26	1,670	4,004	.....	1.00–1.30
WENTWORTH:							
Ancaster	3,606	122	.....	14,048	.....	.....	.70
Barton	1,840	260	.....	22,217	.....	.....	.60–.75
Binbrook	1,080	83	21	6,646	3,656	349	.40–.60
East Flamborough	3,705	51	.....	2,908	.....	.....	.60
Glanford	1,265	126	4	10,774	1,126	467	.60–.75
Saltfleet	4,837	307	.....	13,660	.....	.....	.55–.75
WATERLOO:							
Waterloo	7,591	11	....	264	.....	.....	.55–.80
Total	.....	8,274	654	546,641	130,941	55,888	.....

SUMMARY

	M cu. ft.
Total distribution to customers	6,916,841
Used by companies for all purposes	59,919
Used by private well-owners	74,000
Leakage in transmission lines	368,738
Leakage in distribution plants	349,673
Leakage in rural lines	16,347
Total amount of gas distributed	7,785,518

Gas Wells and Their Production

In Table V is given a summary by townships of the number of gas wells in Ontario, their production, and the number abandoned; the number of new wells drilled, with their open flow; the rock pressure of each township; and the acreage under lease and the rentals paid.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1934

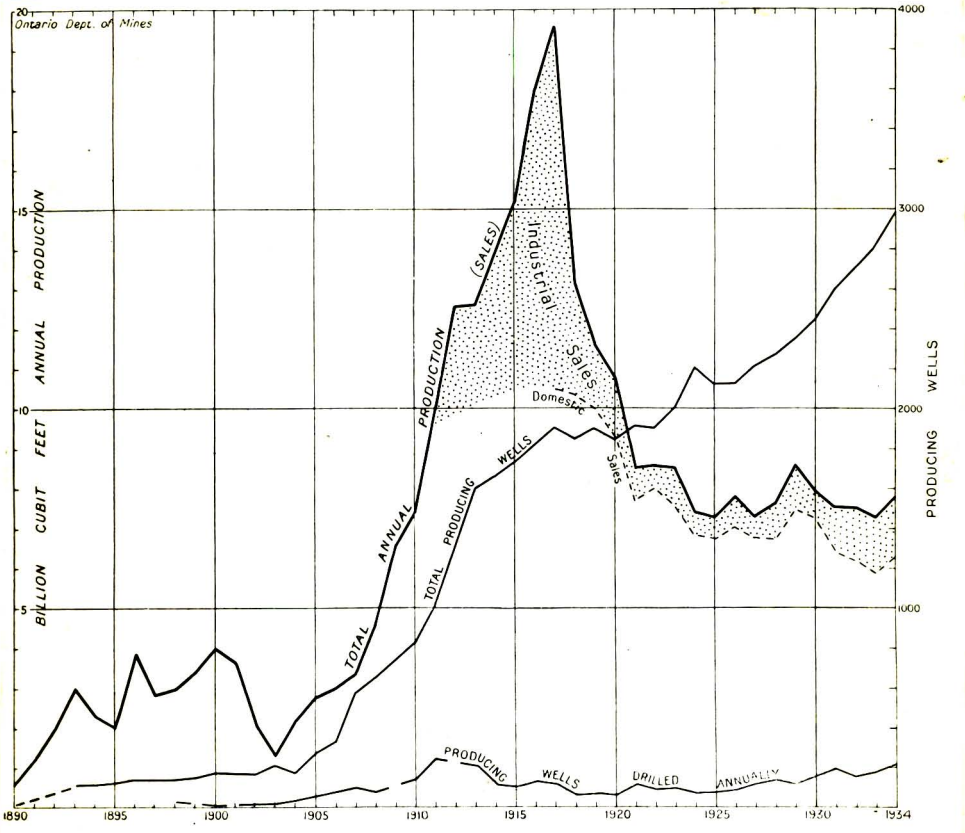
County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	23		1	1	75		150	744	$427
	Maidstone									
	Mersea	3						276		
Kent	Harwich						4,093,186			
	Orford									
	Raleigh	42	1	3	5	31,089		544	54,897	
	Romney	142	2					215		140,089
	Tilbury East	153			3	516		215		
	Dover	12		2	3	9,860	363,344	1,140	7,607	
Lambton	Dawn	23		4	1	198	508,596	656	19,763	
	Euphemia		3	1						
	Enniskillen	4					6,613	247	1,000	
	Moore								4,000	
	Sarnia	13					1,800	70	5,000	
	Sombra			3					7,998	
Middlesex	Mosa	3						706		
	North Dorchester	3						50		
Elgin	Aldborough			1						
	Bayham	39		2	4	2,157	51,483	595		
	Dunwich									
	Malahide	1						210		
Norfolk	Charlotteville	13						225		
	Houghton	5	2					400		
	Middleton	46		2	7	1,927		600		
	North Walsingham	10						319		
	South Walsingham	16			1	95	354,274	361		
	Townsend	2			1	17		195		
	Windham	10		1	2	190		230		
	Woodhouse	59		1	4	225		241		

Haldimand	Canborough	186	3	1	16	415		95		
	Dunn	52	5	1	7	267		196		
	Moulton	132	3	1	13	417		120		
	North Cayuga	178	.....	4	18	922		190		
	Oneida	61	1	4	8	458		126	305,543	111,031
	Rainham	280	1	2	8	779		235		
	Seneca	176	12	2	17	1,344		94		
	Sherbrooke	18	.....	.....	.....	.....		254		
	South Cayuga	54	.....	1	1	16	1,801,160	147		
	Walpole	327	1	29	55	3,967		250		
Wentworth	Ancaster	1	.....	.....	1	20		40		
	Binbrook	53	1	.....	1	48		72		
	Glanford	11	.....	.....	.....	.....		56		
Lincoln	Caistor	61	2	.....	2	110		69		
	Gainsborough	15	.....	5	10	261		126		
Welland	Bertie	99	1	.....	4	79		120		
	Crowland	29	7	.....	.....	.....		170		
	Humberstone	60	2	.....	.....	.....	318,409	65		
	Wainfleet	27	.....	.....	.....	.....		56		
	Willoughby	42	3	2	2	42		230		
Brant	Onondaga	41	9	2	8	431	109,486	82	45,100	102
	Tuscarora	76	1	.....	11	486		98		
Bruce	Amabel	2	.....	1	.....	.....	500	100	50	.....
Peel	Caledon	5	1	.....	.....	.....	.....	.....	.....	.....
	Chinguacousy	.....	.....	1	.....	.....	.....	.....	.....	.....
Surface wells	Harwich	69	.....	.....	.....	.....	14,000[1]	.....	.....	.....
	Howard									
Private wells[2]	.....	300	.....	.....	.....	.....	60,000[3]	.....	.....	.....
Total	.....	2,977	61	77	214	56,411	7,682,851	.....	451,702	251,649

[1]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes
[2]Principally in Haldimand, Norfolk, and Welland counties.
[3]Estimated

Gas Wells Drilled in 1934

The year 1934 has the record in new production since the period, 1910 to 1914, when the Tilbury field reached its peak of development. Until 1919, no figures were compiled to show the increase in open flow by years, and from 1919 to 1921 the figures were not complete; a comparison of these figures shows that 1934 exceeds all years since 1919 in open flow of new wells. This, as will be seen in Table V, is principally the result of drilling in the Declute field in Raleigh township. This field has now been extended a considerable distance to the east;



Graph of the natural gas industry in Ontario for the past forty-four years.

how much farther it can be extended is uncertain. It is scarcely likely to be more than doubled in area on land, but its limits under Lake Erie are impossible to estimate.

Second in importance are the extensions made in the Dover field. As early as 1923,[1] it was thought probable that the gas and oil in the Dover field lay along a fault. Subsequent drilling has proved the existence of the fault, which is part of a general east-west system of faulting in Kent and Lambton counties, and has traced it for a distance of 3 miles. Accumulation is on the

[1]Ont. Dept. Mines, Vol. XXXII, pt. V, 1923, p. 89.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1935—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	840	94	41	5,587	7,230	220	60c.
Dunn	805	138	10	6,248	868	.....	60c.
Moulton	1,590	160	13	6,415	1,959	.....	60c.
North Cayuga	1,282	47	11	3,672	2,283	.....	60c.
Oneida	1,301	66	8	3,494	1,379	.....	60c.
Rainham	1,608	160	26	8,192	4,222	1,224	60c.
Seneca	1,590	146	35	9,498	6,379	.....	60c.
Sherbrooke	350	25	7	2,271	762	.....	60c.
South Cayuga	580	56	11	2,189	2,853	.....	60c.
Walpole	3,145	333	55	19,353	8,550	69	60c.
LINCOLN:							
Caistor	1,260	57	5	2,188	370	155	60c.
Gainsborough	2,090	68	7	1,593	470	.....	60c.
Grantham	5,010	9	.....	522	.....	.....	75c.
Louth	2,905	10	.....	590	.....	.....	75c.
WELLAND:							
Bertie	4,175	174	59	9,336	9,006	.....	F
Crowland	5,082	55	16	2,093	1,822	.....	F
Humberstone	2,370	269	29	12,389	4,334	.....	F
Pelham	2,690	61	1	3,538	84	.....	L
Stamford	8,020	85	4	4,505	604	.....	F
Wainfleet	2,720	230	19	4,104	3,325	.....	60c.
Willoughby	905	28	25	1,512	3,750	.....	F
WENTWORTH:							
Ancaster	3,606	157	.....	16,573	.....	.....	70c. (M.B.$1.00)
Barton	1,840	266	.....	27,237	.....	.....	60c.
Binbrook	1,080	96	21	6,405	3,716	413	60c.
East Flamborough	3,705	50	.....	3,060	.....	.....	S
Glanford	1,265	130	4	10,587	1,062	511	60c.
Saltfleet	4,837	318	.....	14,997	.....	.....	M (M.B. 75c.)
WATERLOO:							
North Dumfries	2,361	57	.....	2,149	.....	.....	80c. (M.B. 50c.)
Waterloo	7,591	13	.....	296	.....	.....	G
Total	.....	8,515	653	554,589	127,231	71,630	.....

[1]M.B.—Minimum monthly bill.

SUMMARY

	M cu. ft.
Total distribution to customers	7,318,930
Used by companies for all purposes	51,091
Used by private well-owners	74,000
Leakage in transmission lines	446,159
Leakage in distribution plants	352,062
Leakage in rural lines	15,431
Total amount of gas distributed	8,257,673

Gas Wells and Their Production

In Table V is given a summary of all the phases of the production of natural gas; much of this will be seen in comparison with previous years in the graph on page 1, in which the annual increase in the total of natural gas wells and the open flow of new wells drilled are shown, as far as records are available.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1935

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	26			3	185		150	881	$446
	Mersea	3						250		
Kent	Chatham			1			4,161,021			
	Raleigh	44	1	3	2	36,000		556	52,911	150,911
	Romney	141	1					206		
	Tilbury East	154		1	1	15		206		
	Dover	22		2	10	24,779	935,446	825	11,426	
Lambton	Dawn	23					403,644	654	18,512	
	Enniskillen	4					7,156	240	1,000	
	Moore								4,000	
	Sarnia	13					1,144	70	5,000	
Middlesex	Mosa	3						570		
	North Dorchester	3		1				50		
Oxford	Dereham	2			2	450		465		
Elgin	Bayham	47	1		9	6,917	116,118	600		
	Malahide	1						210		
Norfolk	Charlotteville	13						218		
	Houghton	4	1					395		
	Middleton	48		1	2	2,235		600		
	North Walsingham	9	1				472,993	315		
	South Walsingham	17	1	1	2	112		350		
	Townsend	2						240		
	Windham	10						214		
	Woodhouse	64		2	5	253		241		

Haldimand	Canborough	199			13	324		91		
	Dunn	51	2		1	37		196		
	Moulton	127	9	8	4	135		122		
	North Cayuga	197	2	6	21	1,012		195		
	Oneida	74	2	12	15	679		120		
	Rainham	291	5	12	16	847		233	300,406	112,458
	Seneca	186	3	8	13	600		90		
	Sherbrooke	17	1					230		
	South Cayuga	55		2	1	8	1,576,323	148		
	Walpole	375	2	14	50	4,838		251		
Wentworth	Ancaster	1						40		
	Beverly			1						
	Binbrook	53						72		
	Glanford	13			2	60		58		
Lincoln	Caistor	64	1		4	196		69		
	Gainsborough	15	2		1	37		106		
Welland	Bertie	99	1	1	1	8		110		
	Crowland	26	3					150		
	Humberstone	57	3				290,119	58		
	Wainfleet	28	1	1	2	70		57		
	Willoughby	43		2	1	5		210		
Brant	Onondaga	45	1	4	5	112	120,461	82	46,500	680
	Tuscarora	78	4		6	376		90		
Bruce	Amabel	5		4	3	80	400	100	50	
Grey	Keppel	1		1	1	30				
Peel	Caledon	5								
Surface wells	Harwich, Howard	69					14,000[1]			
Private wells[2]		300					60,000[3]			
Total		3,127	48	88	196	80,400	8,158,825		440,686	$264,495

[1]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[2]Principally in Haldimand, Norfolk, and Welland counties.
[3]Estimated.

A comparison of this table with that for 1934 shows the extraordinary results obtained from two wells in the Declute field in Raleigh township. The Dover field is second in average open flow; 2 dry wells to 10 producing wells were drilled in 1935, as compared with 7 dry wells and 1 producing well in 1929, at which time practically all drilling in this field stopped. The tracing of the trend of the Dover fault in the past two years has been the cause of the great increase in producing wells in 1935.

In the Eden field in Bayham township excellent results have been obtained; 9 wells were drilled, none of which were dry. The average open flow is very high for this area, as is the rock pressure, and the field shows considerable promise.

In Middleton township, Norfolk county, two wells at comparatively shallow depth show a very high average open flow, but unfortunately they are not useful for domestic purposes, on account of the high hydrogen sulphide content of the gas; of necessity the total output is being diverted to industrial use.

In Haldimand county and in the adjacent counties, there were fewer wells drilled than in 1934, but the open flow compares favourably with that of last year.

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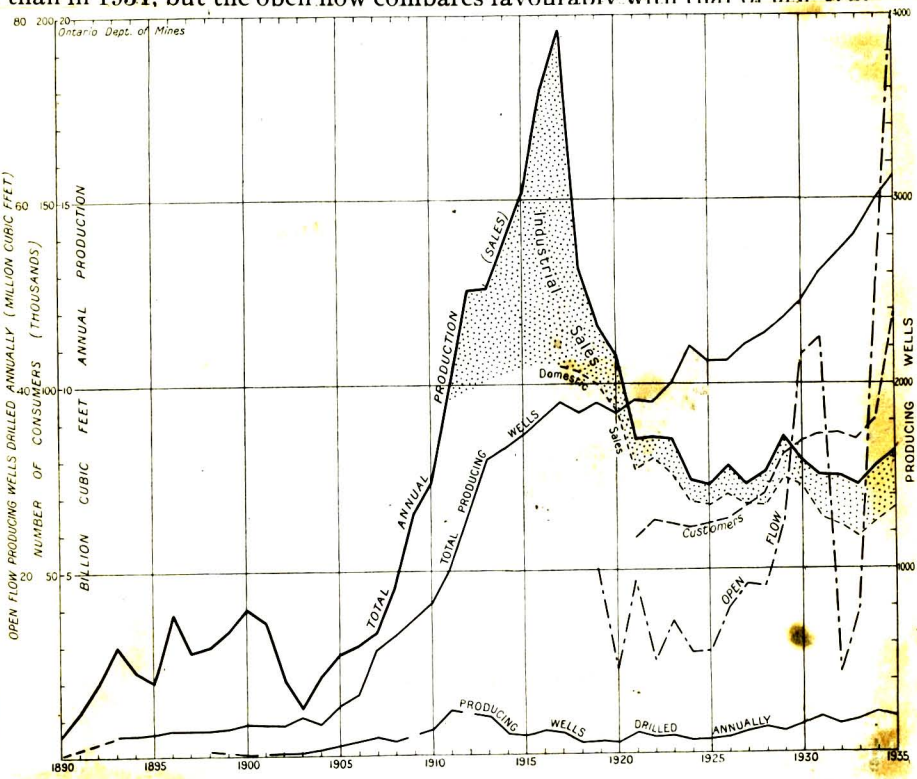

Graph of the natural gas industry in Ontario for the past forty-five years.

gas fields are drilled, and with the absence of new locations within the gas field must come more exploratory drilling.

The greatest activity in drilling is still centred in Walpole township, Haldimand county, although drilling activity has fallen off slightly in 1935. Other centres of activity are in Dover and Raleigh townships, Kent county; Bayham township, Elgin county; and Dawn township, Lambton county, where the success met with last year caused considerable interest.

Exploratory work has been carried out in Norfolk county, in Houghton and South Walsingham townships; in Oxford county, where two producing wells

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1936—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu.ft.	
OXFORD:							
East Oxford	1,957	8	.....	432	.....	.....	80c. (M.B. 50c.)
West Oxford	1,796	50	.....	1,520	.....	.....	G
HALDIMAND:							
Canborough	840	70	39	4,416	7,335	269	60c.
Dunn	805	142	9	6,480	698	294	60c.
Moulton	1,590	139	13	6,584	2,034	.....	60c.
North Cayuga	1,282	49	14	2,020	2,602	.....	60c.
Oneida	1,301	30	9	3,755	1,405	.....	60c.
Rainham	1,608	193	26	9,559	4,807	870	60c.
Seneca	1,590	148	33	8,703	5,830	.....	60c.
Sherbrooke	350	27	6	1,511	820	.....	60c.
South Cayuga	580	52	15	2,261	2,686	.....	60c.
Walpole	3,145	333	55	19,423	8,948	47	60c.
LINCOLN:							
Caistor	1,260	106	25	3,441	1,734	168	60c.
Gainsborough	2,090	26	2	594	100	.....	60c.
Grantham	5,010	11	.....	536	.....	.....	75c.
Louth	2,905	13	.....	650	.....	.....	75c.
WELLAND:							
Bertie	4,175	155	60	9,585	9,650	.....	F
Crowland	5,082	30	2	1,890	328	.....	F
Humberstone	2,370	227	28	12,190	4,262	.....	F
Pelham	2,690	77	3	3,773	250	.....	L
Stamford	8,020	80	4	5,040	632	.....	F
Wainfleet	2,720	179	17	4,542	3,048	.....	60c.
Willoughby	905	25	25	1,575	3,925	.....	F
WENTWORTH:							
Ancaster	3,606	164	.....	17,332	.....	.....	70c. (M.B. $1.00)
Barton	1,840	296	.....	31,442	.....	.....	60c.
Binbrook	1,080	99	22	7,165	3,687	411	60c.
East Flamborough	3,705	51	.....	3,315	.....	.....	S
Glanford	1,265	130	3	10,747	980	564	60c.
Saltfleet	4,837	396	.....	17,876	.....	.....	M (M.B. 75c.)
WATERLOO:							
North Dumfries	2,361	69	.....	2,224	.....	.....	80c. (M.B. 50c.)
Waterloo	7,591	5	.....	156	.....	.....	G
Total	.....	8,711	667	600,265	135,618	83,104	.....

SUMMARY

	M. cu. ft.
Total distribution to customers	8,943,312
Used by companies for all purposes	32,859
Used by private well-owners	74,000
Leakage in transmission lines	550,889
Leakage in distribution plants	501,494
Leakage in rural lines	17,910
Total amount of gas distributed	10,120,464

Gas Wells and Their Production

In Table V is given in detail by townships the production of gas wells in Ontario and the results of drilling activities in Ontario in the year 1936.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1936

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	27	1	.....	2	36		160	2,103	$471
	Mersea	3	.....	.....	.....	.....		283	.....	
Kent	Chatham	1	.....	4	1	250	4,830,232	625		
	Raleigh	41	5	3	2	13,583		504	80,409	157,185
	Romney	139	2	1	.....	.....		201		
	Tilbury East	154	1	.....	1	10		201		
	Dover	23	.....	1	1	426	842,362	645	19,278	
Lambton	Dawn	29	.....	5	6	21,766	1,427,979	605	35,696	
	Enniskillen	4	.....	.....	.....	.....	7,840	225	1,000	.....
	Moore	.....	.....	.....	.....	.....	.....	.....	4,000	.....
	Sarnia	13	.....	.....	.....	.....	1,100	38	5,000	.....
	Sombra	.....	.....	1	.....	.....	.....	.....	1,721	.....
Middlesex	Mosa	3	.....	.....	.....	.....	.....	593	.....	.....
	North Dorchester	.....	3	.....	.....	.....	.....	.....	.....	.....
Oxford	Dereham	13	.....	4	11	17,454	.....	415	1,479	.....
Elgin	Bayham	52	5	4	10	5,263	207,914	600		
	Malahide	1	.....	1	.....	.....		200		
Norfolk	Charlotteville	15	.....	1	2	162		225		
	Houghton	4	.....	1	.....	.....		340		
	Middleton	55	.....	.....	7	2,641		313		
	North Walsingham	9	.....	.....	.....	.....	462,653	296		
	South Walsingham	17	.....	.....	.....	.....		421		
	Townsend	2	.....	.....	.....	.....		182		
	Windham	10	.....	1	.....	.....		223		
	Woodhouse	68	2	2	6	585		219		

Haldimand	Canborough	189	13	.....	3	55		99		
	Dunn	51	2	.....	2	65		188		
	Moulton	134	6	3	11	353		119		
	North Cayuga	209	1	13	13	677		195		
	Oneida	75	2	1	3	68		142		
	Rainham	294	5	7	8	622		231	318,529	111,865
	Seneca	180	6	.....	.....	.....		89		
	Sherbrooke	17	.....	.....	.....	.....		132		
	South Cayuga	60	.....	3	5	184	1,735,171	150		
	Walpole	419	2	23	45	4,242		247		
Wentworth	Ancaster	1	.....	.....	.....	.....		40		
	Binbrook	52	1	.....	.....	.....		70		
	Glanford	12	1	.....	.....	.....		60		
Lincoln	Caistor	64	2	.....	.....	.....		75		
	Gainsborough	13	5	1	3	69		115		
Welland	Bertie	101	.....	1	2	30		95		
	Crowland	26	.....	.....	.....	.....		128		
	Humberstone	57	.....	.....	.....	.....	286,345	60		
	Wainfleet	27	4	3	3	61		56		
	Willoughby	43	.....	.....	.....	.....		205		
Brant	Onondaga	45	7	1	7	261	130,747	82	68,785	1,028
	Tuscarora	84	3	2	9	653		97		
Bruce	Amabel	7	.....	2	2	70	400	205	17,750	.....
Grey	Keppel	1	.....	1	.....	.....	.....	150	.....	.....
Peel	Caledon	5	.....	.....	.....	.....	.....	.....	.....	.....
Surface wells	Harwich	69	.....	.....	.....	.....	14,000[1]	.....	.....	.....
	Howard									
Private wells[2]	.....	300	.....	.....	.....	.....	60,000[3]	.....	.....	.....
Total	.....	3,218	79	90	165	69,586	10,006,743	.....	555,750	270,550

[1]This gas is not metered, and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[2]Principally in Haldimand, Norfolk, and Welland counties.
[3]Estimated.

It is encouraging to note the increase in the acreage under lease and rentals paid. This should be indicative of a revival in exploratory drilling, which follows an increase of 25 per cent. in gas production. Drilling on this new acreage should begin in 1937, as the number of new wells in 1936 shows a decrease over 1935. The decrease is mainly in Haldimand county and in Dover township, Kent county. In Haldimand county the number of producing wells drilled dropped from 134 to 90, but the average open flow of these new wells increased from 32 thousand cubic feet to 70 thousand cubic feet per well. The Haldimand field has been intensively drilled during the past five years; most of the promising areas have been completely drilled and the less promising areas are now being exploited, consequently the percentage of dry holes has increased from 31.6 per cent. in 1935 to 36 per cent. in 1936. The Dover field has been extended eastward into Raleigh township, but there is still room for more development in Dover township. New drilling has proved a gas field in Dereham township, Oxford county, where a discovery was made in 1935, and the year 1937 will doubtless show still greater drilling activity. The wells show a very substantial flow, and the depth is not great. The field has extended into Bayham township, where the Eden field has been under development for the past two years. Dawn township has again received some attention, and although the percentage of dry holes in this township is always high, producing wells are usually much better than average.

Although a great deal of this drilling may be called exploratory in the sense that the limits of the fields are not known, it is not in the direction of discovering new fields. The only activity of this nature is in Chatham township, where the Union Gas Company have been drilling for the past three years with indifferent results. They have, however, been sufficiently encouraged to continue drilling. The area to be explored is very large, and it will take some years to complete their programme.

Sixty-one drilling rigs were in operation in 1936; they drilled 90 dry holes, with a total footage of 105,722 feet, and 167 producing wells, with a total footage of 159,184 feet; in all, 264,906 feet, or 69,976 feet more than in 1935. The acreage under lease shows an increase of 115,064, and the rental paid shows an increase of $6,055.

Drilling contractors in the natural gas fields of Ontario have an investment of $339,763 and employ 203 men, to whom they pay $146,873 in wages. These figures are included in Table II.

Extensions of Gas Service

In 1936 the Dominion Natural Gas Company purchased the gas distributing plant from the city of St. Thomas and, by making an extension from its main pipe line at Talbotville, is supplying the citizens of St. Thomas with natural gas. Much the same system was used in effecting the change-over from manufactured gas to natural gas as was used in the city of London.[1]

The Union Gas Company, finding that the 10-inch line[2] carrying gas from the Dawn field to the city of London was liable to be overtaxed at periods of greatest demands in the winter months, laid an additional 8-inch line for a distance of 30 miles. In addition to this, 9 miles of 8-inch collecting lines was laid in the Dawn field. This removes any possibility of a shortage of gas in London.

[1]Ont. Dept. Mines, Vol. XLV, pt. 5, p. 13.
[2]Ibid.

Gas Wells and Their Production

Table V gives in tabular form the main items in connection with wells in the gas fields of Ontario. Similar tables have been published since 1921. These give a survey of the gas fields of Ontario and the progress of their development.

In 1937, the greatest activity was in the Brownsville field, where an intense drilling programme was carried out. Wells average nearly three million cubic feet open flow each. The field extends into the northwest part of Bayham township, Elgin county, making the third distinct gas field in this township, the other two being Vienna and Eden. The Vienna field is 27 years old and now nearly exhausted.

The Declute field is fairly well outlined on the east and west. It may yet extend to the north, although dry holes and small wells would indicate its present limit in that direction. To the south it undoubtedly extends under the waters of Lake Erie. This field has proved to be a major gas field, and though small in area, the wells are very large in open flow. The Brownsville discovery has encouraged drilling over a wide area.

The Haldimand field for the first time shows a decrease in the number of producing wells, as well as in the number of wells drilled in the year. The percentage of dry holes would indicate that the field has been almost completely drilled.

The Welland field is being given some attention after a period of many years when no wells were drilled.

Exploratory drilling is, as noted above, on the increase and great tracts of land have been leased in new territories. Much of this is not reported and not included in Table V.

The exploratory work being carried out in Chatham township is showing considerable success after the drilling of a number of dry holes. The success in the Brownsville field has encouraged exploratory drilling in East Nissouri, North Dorchester, Bayham, and Malahide townships, where new fields are being sought in the Guelph formation. Two wells in North Easthope township proved non-productive. Drilling north of the old Mersea oil and gas field in Tilbury North and West has been disappointing, as has been an attempt to enlarge the Dawn field. Drilling continues in two wells which have been drilled into the pre-Cambrian, one in Beverly township and one in Nassagaweya township. Some success has attended drilling in Prince Edward county in the town of Picton. These wells are very small in open flow and low in rock pressure.

Drilling rigs used solely in the search for natural gas in Ontario in 1937 number 65. Sixty-seven dry holes were drilled, with a total footage of 84,806 feet. One hundred and forty-four producing wells had a total footage of 141,859 feet; in all, 226,665 feet, as compared with 269,916 in 1936. Drilling contractors, who do all the drilling in Ontario, had an investment of $352,145, employed 180 men, and paid $133,519 in wages. These statistics are included with those in Table II.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1937

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	28		1	1	20		160	2,103	$486
	Mersea	4			1	198		300	135	
	Tilbury North			1						
	Tilbury West			1						
Kent	Camden						4,757,633			
	Chatham	8		4	7	3,135		750		
	Raleigh (Declute)	28	1	2	5	61,493		539		
	Raleigh	19		2	2	4,500		281	99,148	
	Romney	139						195		192,225
	Tilbury East	152	4	2	2	200		179		
	Dover	23		2			636,552	590	23,405	
Lambton	Dawn	29		4			1,858,672	569	29,901	
	Enniskillen	6					31,202	225		
	Sarnia	13					1,000	35		
Middlesex	Mosa	3						760		
	North Dorchester			1						
Perth	North Easthope			2						
Oxford	East Nissouri			1		107986	486931			
	Dereham (Brownsville)	45		3	32	99,153	455,611	450	2,505	1,067
Elgin	Bayham[1] (Brownsville)	8		3	7	8,833	31,320	450	664	699
	Bayham	51	5	4	5	874	260,974	232		
	Malahide	1		1				200		
Norfolk	Charlotteville	15						237		
	Houghton	4						455		
	Middleton	55	1	2	1	92		238		
	North Walsingham	9						300		
	South Walsingham	17					441,375	411		
	Townsend	2						350		
	Windham	10						201		
	Woodhouse	68	4	2	4	250		232		

Haldimand	Canborough	183	11	1	5	100		92		
	Dunn	51						185		
	Moulton	122	14	2	2	37		126		
	North Cayuga	206	11	6	8	363		193		
	Oneida	75	3		3	260		145		
	Rainham	297	7	1	10	597		224	314,116	111,329
	Seneca	178	3	1	1	37		88		
	Sherbrooke	16	1					129		
	South Cayuga	58	2				1,784,257	134		
	Walpole	428	7	12	15	650		246		
Wentworth	Ancaster	1						40		
	Binbrook	52						68		
	Glanford	12						56		
Lincoln	Caistor	62	3		1	35		82		
	Gainsborough	13						125		
Welland	Bertie	102	5	3	6	85		101		
	Crowland	26	3		2	29		135		
	Humberstone	56	1				298,493	62		
	Wainfleet	31			4	102		54		
	Willoughby	42	1					189		
Brant	Onondaga	44	5		4	86	112,482	70	47,030	4,245
	Tuscarora	78	8		2	69		91		
Bruce	Amabel	7					2,763	150	17,750	238
Grey	Keppel	1						150		
Peel	Caledon		5							
Prince Edward	South Marysburgh	1			1	19		73		
	Hallowell	4			4	147				
Hastings	Thurlow			2						
Surface wells	Harwich, Howard	69					[2]14,000			
Private wells[3]		300					[4]60,000			
Total		3,252	105	66	135	181,364	10,746,334		536,757	$310,289

[1]The part of Bayham that with Dereham township forms the Brownsville field.
[2]This gas is not metered, and therefore must be estimated.
[3]Principally in Haldimand, Norfolk, and Welland counties.
[4]Estimated.

Leakage

The year 1937 shows one of the best records in the industry for a reduction of leakage in gas distribution plants, transmission lines, and rural lines. The decrease is over 50 per cent. It has been noted under this heading in 1935 and 1936 that increases and decreases in leakage follow in inverse ratio the number of employees and the wages paid. The record for the year 1937 emphasizes these remarks, with the exception that the decrease in leakage is much greater than the increase in wages paid.

The method of discovering leaks has undergone a considerable change in ten years. Leaks were reported in the past by citizens or by the company's workmen, who noted a smell of gas at a certain point or that the grass was dead or the



Connecting the master gate valve on a large gas well in the Brownsville field. One man is "riding" while two men screw the valve to the well head.

soil blackened. A consumer would report the presence of gas in his basement or the sound of gas leaking from a pipe. At the present time, most gas companies employ an engineer and a crew of men who spend their full time in tracing leaks and making leakage surveys. Instruments have been devised to assist the engineer. In operation a perforated pipe is driven into the ground and the leak detector is attached to the open end. The presence of gas is indicated by the movement of a needle over a dial. As a result of such surveys and the replacement of corroded and leaky pipes by new and larger pipes, the reduction in leakage has been effected.

It will be noted that a number of municipalities that were included in this table in 1936 have been left off the list in Table VII. These are Belle River, Brantford, Chatham, Comber, Essex, Hagersville, Ingersoll, and St. George. In these places instead of selling less gas than was measured into the plant, more gas was sold, indicating a gain instead of a loss. In spite of repeated search and study, no definite explanation can be offered for this result.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1938—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
OXFORD:							
East Oxford	1,957	16	.....	992	.....	.....	80c. (M.B. 50c.)
West Oxford	1,796	57	.....	2,494	.....	.....	G
HALDIMAND:							
Canborough	840	83	30	4,107	5,289	841	60c.
Dunn	805	129	6	6,192	667	.....	60c.
Moulton	1,590	162	16	5,836	2,570	13	60c.
North Cayuga	1,282	49	14	2,668	2,103	.....	60c.
Oneida	1,301	102	12	6,004	2,047	.....	60c.
Rainham	1,608	200	24	9,618	4,312	1,007	60c.
Seneca	1,590	140	33	7,675	5,303	.....	60c.
Sherbrooke	350	28	3	1,887	655	.....	60c.
South Cayuga	580	55	14	1,818	1,898	.....	60c.
Walpole	3,145	336	55	17,190	7,993	554	60c.
LINCOLN:							
Caistor	1,260	81	24	3,301	3,323	295	60c.
Gainsborough	2,090	18	2	412	98	.....	60c.
Grantham	5,010	15	.....	767	.....	.....	75c.
Louth	2,905	13	.....	675	.....	.....	75c.
WELLAND:							
Bertie	4,175	156	59	8,223	9,011	.....	F
Crowland	5,082	55	16	2,241	1,300	.....	F
Humberstone	2,370	265	30	11,602	4,251	.....	F
Pelham	2,690	78	2	4,040	271	.....	L
Stamford	8,020	93	4	4,171	542	.....	F
Wainfleet	2,720	326	19	6,814	3,056	105	60c.
Willoughby	905	27	26	1,339	3,703	.....	F
WENTWORTH:							
Ancaster	3,603	82	.....	6,041	.....	.....	70c. (M.B. $1.00)
Barton	1,840	109	.....	8,317	.....	.....	60c.
Binbrook	1,080	99	19	5,825	3,169	495	60c.
East Flamborough	3,705	70	.....	4,550	.....	.....	S
Glanford	1,265	143	2	9,824	709	453	60c.
Saltfleet	4,837	504	.....	22,460	.....	.....	M (M.B. 75c.)
WATERLOO:							
North Dumfries	2,361	68	.....	2,740	.....	.....	80c. (M.B. 50c.)
Waterloo	7,591	5	.....	316	.....	.....	G
Total	.....	8,517	648	530,968	121,763	141,006	.....

SUMMARY

	M cu. ft.
Total distribution to customers	10,197,819
Used by companies for all purposes	56,756
Used by private well-owners	74,000
Leakage in transmission lines	228,004
Leakage in distribution plants	249,438
Leakage in rural lines	14,701
Field operations: leakage in gathering and transmission lines to measuring stations (estimated)	257,895
Total amount of gas distributed	11,078,613

Gas Wells and Their Production

In Table V will be found full details of the natural gas fields of Ontario. Similar tables have been published since 1921. The development and decline of the natural gas fields can be followed by comparing these annual statements.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1938

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	28						160	2,103	$286.50
	Malden			1					2,039	
	Mersea	5			1	50		310	50	
Kent	Chatham	8					5,063,515	771		
	Raleigh (Declute)	33	1	2	6	18,857		497		
	Raleigh	25		2	6	5,058		190	1,828,564	
	Romney	139	5		5	3,584		190		
	Tilbury East	145	8	1	1	114		190		
	Orford			1						
	Dover	23	1		1	900	509,677	570	11,080	241,556.77
Lambton	Dawn	29		3			1,885,003	523	45,318	
	Enniskillen	6					8,927	220		
	Euphemia			2						
	Sarnia	13					800	35		
Middlesex	Delaware			1					15,870	
	London								19,008	
	Mosa	3						730		
	West Nissouri			2						
Perth	Blanshard			1						
Oxford	East Nissouri			1						
	Dereham (Brownsville)	59		1	14	51,642	506,005	410	23,435	7,075.68
Elgin	Bayham[1] (Brownsville)	18		2	10	27,348	50,917	410	775	1,492.55
	Bayham	54		1	3	502	113,651	200	1,770	2,471.00
	Dunwich			2					12,700	
	Malahide	1		3				220	33,112	
	South Dorchester			2					11,174	
	Southwold			1					30,538	
	Yarmouth			1						
Brant	Onondaga	42	7		5	31	135,348	78	45,495	4,056.00
	Tuscarora	78	2		2	25		95		

Norfolk	Charlotteville	13	2				437,867	218	270,884	101,034.80
	Houghton	4						455		
	Middleton	55						210		
	North Walsingham	9						237		
	South Walsingham	17						364		
	Townsend	2						250		
	Windham	10						209		
	Woodhouse	72		1	4	566		222		
Haldimand	Canborough	173	10				1,912,882	90		
	Dunn	49	2	1				196		
	Moulton	120	2					129		
	North Cayuga	200	7	1	1	20		184		
	Oneida	67	8					124		
	Rainham	312	4	9	19	1,195		222		
	Seneca	169	9					88		
	Sherbrooke	16						126		
	South Cayuga	57	1					133		
	Walpole	434	7	6	13	735		242		
Wentworth	Ancaster		1							
	Binbrook	51	1					69		
	Glanford	12						56		
Lincoln	Caistor	63	3		4	90	253,085	82		
	Gainsborough	15			2	45		79		
Welland	Bertie	108	3	1	9	452		93		
	Crowland	26						100		
	Humberstone	56						61		
	Wainfleet	32	2	1	3	65		52		
	Willoughby	45		3	3	48		170		
Bruce	Amabel	1	6				1,129	100		
Grey	Keppel		1							
Prince Edward	South Marysburgh	1						20		
	Hallowell	6			2	75		65		
Surface wells	Harwich	69					[2]14,000			
	Howard									
Private wells		[3]300					[4]60,000			
Total		3,273	93	53	114	111,402	10,952,806		2,353,915	$357,973.30

Drilling continued in the Declute field with average success. The wells drilled in Raleigh township are in the extension of the Dover township gas and oil field, which now reaches across the Thames river into Raleigh township for about one mile, and the limits have not yet been reached. These wells are about 3,000 feet deep, and most of them produce both gas and oil. No drilling was done in Chatham township in 1938, where 8 producing wells are now closed in until further exploratory work is done. Drilling in the Dawn field in Lambton county has been most discouraging in 1937 and 1938; no producing wells have been found. Drilling in Middlesex to test the producing horizons of the Guelph and Clinton has met with no success, nor has a deep test well to the Trenton limestone in Blanshard township, Perth county. In the Brownsville field drilling continued throughout the year. There were at the end of the year 77 producing wells. Nine dry holes were drilled in Elgin county, in search of gas in the Guelph, which is the producing horizon of the Brownsville field. There was little drilling in Norfolk county. Drilling in Haldimand county has fallen off greatly; 50 wells were drilled in 1938 as compared with 67 wells in 1937. In previous years most of this drilling was in Walpole township, but in the past year Rainham township received the most attention. In Lincoln, Welland, and Brant counties a few wells are drilled each year. These fields are very old, and the rock pressure has declined to a minimum. Drilling in Bruce and Grey counties did not prove profitable, and the few producers drilled in 1936 with one exception have been abandoned. Two more producing wells have been drilled in the vicinity of Picton in Prince Edward county.

Although drilling activity as represented by totals was not as active in 1938 as in 1937, the year saw considerable exploratory work, which in 1939 is rapidly developing a new gas field in Malahide township. A new territory in the northern part of Huron county is claiming the attention of prospectors, who believe that a promising structure has been located. This structure was indicated in a map by M. Y. Williams published by the Geological Survey of Canada in Memoir 111, "The Silurian Geology and Faunas of Ontario Peninsula and Manitoulin and Adjacent Islands." Further work by independent geologists has been done since the work mentioned was published in 1919.

In 1938, 53 dry wells with a footage of 63,885 and 118 producing wells with a footage of 114,801 were drilled, a total of 171 wells and 178,686 feet.

The number of drilling rigs working was 63, and the number of men employed, 148. The wages paid them was $95,149. The capital invested in drilling equipment amounted to $327,716. These statistics are included in those in Table II.

Changes, Improvements, and Additions

In the past year distributing companies have spent a very considerable sum in improvements to service as evidenced by the addition to capital in Table II.

A distributing system was installed in Brownsville by the Oxford Pipe Line Company and in Glencoe by the Union Gas Company, giving these municipalities natural gas for the first time.

A compressor station was built by the Dominion Natural Gas Company at Rainham, in the central part of Haldimand county, in order to improve service to the Port Colborne and St. Catharines areas. Some remote wells in Sherbrooke township were also connected into the Port Colborne pipe line, and some larger-sized pipe lines were added in St. Catharines. In St. Thomas a considerable amount of new intermediate pressure line was laid, and two new regulator stations were installed. This became necessary through the increase in the demand for gas.

Gas Wells and Their Production

Table V shows in full the details of the natural gas fields of Ontario, and similar tables published since 1921 will afford a comparison for these years.

The development of the Brownsville field has led to a widespread search in that area. The Union Gas Company has been successful in discovering another gas field in the same formation that shows great promise. They now have 26 producing wells with a total open flow of 30,556 M cubic feet. Exploratory drilling has spread to Delaware, London, Blenheim, Southwold, Malahide, and Yarmouth townships. The Union Gas Company has also done a considerable amount of exploratory work in Kent county, particularly in Chatham and Dover townships and Camden gore. In Chatham township the company now has 9 producing wells, which as yet have not been turned into their transmission mains.

In the Haldimand and Welland fields drilling activity in 1939 was about the same as in 1938, except in Bertie township, where 31 wells were drilled in 1939 as against 10 wells in 1938. Within this field, now 50 years old, there are still small areas where the gas has not yet been exhausted. In many instances these areas are outlined and drilled by a study of the rock pressures of the old wells. Although the wells are small as compared with other gas fields, the high retail price in Welland county makes this exploration profitable.

Further exploratory drilling was carried out in Prince Edward county, where 6 small producers were completed.

The Haldimand gas field, after declining in production from 1912 to 1925, has shown an increase nearly every year since 1925 and now equals its production of 20 years ago. The number of producing wells in Haldimand in 1919 was 720 and their average production 3,250 M cubic feet. In 1939 there were 1,602 producing wells in Haldimand, and the average production was 1,317 M cubic feet. The wholesale price of gas in this field is at present about 30 cents per M cubic feet, an average gross return per well of $394.10, which is not a great deal to-day to cover the costs of drilling, operation, and maintenance of a gas well and the return to the owner of his investment and a profit.

The Welland field shows a slight increase, due no doubt to the 24 new wells drilled. This increase is not enough, however, to offset the average annual decline. This field now 50 years old will still maintain a diminishing production for a number of years. The present average annual production per well is 945 M cubic feet.

The Elgin county fields show a considerable drop in production. This is due mainly to operating conditions, which necessitated an increase in pipe line pressure, which in turn restricted the delivery of the gas from the wells. In addition to this, considerable trouble was encountered in operating the wells owing to salt accumulations in some wells and the intrusion of salt water into others.

The Tilbury field appears to be showing a steady annual decline. This may be offset for a few years by the use of compressors, which were in operation for part of 1939. More compressors are being installed in 1940.

The Declute field has been showing an increased annual production since it was discovered. Water came into the wells in the west end of the field some years ago, and at the end of 1939 the wells in the extreme east end of the field suddenly went to water. It is therefore probable that the production of the year 1939 or 1940 may be the peak.

The Dawn field has also shown a steady increase in production. Unlike the Declute field, no water has appeared in the Dawn field but the pressure has shown a considerable decline. This field, however, is not drawn on as extensively as is the Declute field.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1939

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	26	3		1	42		160	583	$1,017.55
	Mersea	5						313	3,274	
Kent	Camden			3						
	Chatham	9		2	1	140	5,279,994	763		
	Raleigh (Declute)	36		2	3	8,208		431		
	Raleigh	25	2	1	2	803		187	84,685	
	Romney	135	4					187		
	Tilbury East	137	10	2	2	403		187		
	Dover	22	1	2			433,496	300	4,091	
Lambton	Dawn	29		2			2,129,825	491	46,873	249,872.03
	Enniskillen	6		1			17,847	200		
	Sarnia	13					800	35		
Middlesex	Delaware			1					35,288	
	London			1					16,066	
	Mosa	3						700		
Oxford	Blenheim			1					21,497	
	Dereham (Brownsville)	62	4	2	7	6,589	842,511	341	26,970	10,135
Elgin	Bayham[1] (Brownsville)	16	6	1	4	12,604	267,129	341	570	2,017
	Bayham	55					59,554	180	1,770	2,755
	Malahide	26		8	25	30,566		550	52,644	
	South Dorchester								11,074	
	Southwold			1					13,719	
	Yarmouth			1						
Brant	Onondaga	42					108,640	95	46,738	3,820
	Tuscarora	75	12		9	722		120		

Norfolk	Charlotteville	13						220			
	Houghton	4						503			
	Middleton	52	3	1				221			
	North Walsingham	9						278			
	South Walsingham	19			2	212	362,780	341			
	Townsend	2						260			
	Windham	9	1					187			
	Woodhouse	71	1	3				220			
Haldimand	Canborough	168	6		1	14		89			
	Dunn	51		5	2	152		201			
	Moulton	116	7		3	34		137			
	North Cayuga	201	2	1	3	103		139			
	Oneida	66	3		2	86		115			
	Rainham	324	4	4	16	985		218			
	Seneca	166	6		3	57		88	294,985	103,454.69	
	Sherbrooke	15	1				2,109,935	201			
	South Cayuga	57						129			
	Walpole	438	8	6	12	752		236			
Wentworth	Binbrook	51						68			
	Glanford	12						52			
Lincoln	Caistor	62	1					95			
	Gainsborough	15						77			
Welland	Bertie	133		7	24	1,051		91			
	Crowland	27			1	3		100			
	Humberstone	57					279,696	51			
	Wainfleet	29	3	1				55			
	Willoughby	51		4	6	118		225			
Bruce	Amabel		1								
	Kincardine								9,486		
Prince Edward	South Marysburgh	1						70			
	Hallowell	12			6	263	374	76	400	115	
Surface wells	Harwich	69					[2]14,000				
	Howard										
Private wells		[3]300					[4]60,000				
Total		3,322	89	63	135	63,907	11,966,581		670,713	$373,186.27	

[1]That part of Bayham that with Dereham township forms the Brownsville field.
[2]This gas is not metered, and therefore must be estimated.
[3]Principally in Haldimand, Norfolk, and Welland counties.
[4]Estimated.

In 1939, 63 dry wells with a footage of 78,080 and 142 producing wells with a footage of 128,939 were drilled, a total of 205 wells and 207,019 feet.

The number of drilling rigs was 59, and the number of men employed 153. The wages paid them was $130,414. The capital invested in drilling equipment amounted to $367,720. These statistics are included in those in Table II.

Geophysics and Geochemistry in Prospecting

For the past fifteen years geophysics has played an important part in prospecting for areas suitable for the accumulation of oil. Vast amounts of time and money have been spent in research and producing and perfecting methods that are suited to particular areas. The theory and first instruments came from the universities of Europe and North America to the laboratories of the major oil companies in the United States, from which field work was conducted. Latterly, a number of independent geophysical companies have entered this field of prospecting; each have made discoveries and developed special technique, which are carefully guarded secrets. The instruments used for this work are standard instruments; their action is positive, but the skill in translating these readings into "structure maps" that approach accuracy is the result of the closest observation by men of great experience. The mathematics employed in the process is both very advanced and involved, and the possibility of misinterpretation can be referred to only in superlatives. For many years after the science was introduced into the oil and gas industry, the geophysicist who had not a thorough grounding in geology or who had not a competent geologist at hand was enveloped and lost in the labyrinth of his own science. There is no doubt that perfection is reached through practice, but, with the number of different methods in use, each by an even greater number of individuals or companies who use different secret methods of obtaining their results, the prospector who might wish to employ a geophysical party is faced with a major problem of selection.

It is true that the various methods were developed in very different areas, in each of which it was thought that the nature of the structure demanded a certain technique. The torsion balance was found most suitable in discovering the salt domes that occur in the region of the Gulf of Mexico. The magnetometer was found to be an accurate and speedy means of tracing the underground course of buried granite ridges in the mid-continent fields. On the gentler dips of the plains the reflection seismograph has found favour; and in mountainous regions, along with many others, the electrical resistivity method has been used. Within the past four years the industry has turned to the gravity meter or gravimeter on account of the speed with which an area can be covered. In principle, it is a refinement of the torsion balance. Within the past twelve months a new idea of identification of oil or gas pools has been advanced. This, so far as the writer's knowledge goes, arose in the minds of two or more American chemists, who refer to it as geochemical prospecting. The basis of this idea is very simple and very obvious.

Our first oil fields were discovered from the seepages of oil that reached the surface. Some seepages are very extensive, covering large areas, as in Baku (Russia) on the Caspian sea; others range through all gradations of size down to one individual seepage as at Bothwell, Ontario, which is not given any size but referred to as a spring of water and oil in the bank of the Thames river. At this spring reports relate that each day a pint of oil might be collected from the top of the water by spreading a blanket over the surface and wringing it. Seepages of gas are, of course, more common than seepages of oil, and there can be no doubt that seepages of oil or gas smaller than the Bothwell seepage are unnoticed, but

Tommy: The attached data on oil & gas recoveries from the Salina-Guelph pools of Moore Twp. will indicate the favorable economics of this area. When you consider that the cost of development (drilling completing etc.) was probably under $200,000 for each of these pools, the investment to income ration looks pretty attractive, doesn't it?

OIL & GAS RECOVERIES IN FIELDS OF MOORE TOWNSHIP

Lambton County, Ontario

(Data from Dept. of Energy Resources)

Field Name	Date Discovered	Type Structure	Cumulative Production To January 1, 1960 OIL(bbls.)	GAS(MMCF)	Approx. * Gross Value (both oil & gas)
Corrunna	1950	Pinnacle reef	378,403	1,668	$1,700,000
Seckerton	1952	Pinnacle reef	109,316	2,218	$1,100,000
Waubuno	1951	Pinnacle reef	1,033	4,312	$1,500,000
Colinville- (a) & Kimball (b)	1947	(a)Pinnacle reef (b) - Anticline	29,892(a) 13,866(b)	26,920	$9,400,000
Payne **	1949	pinnacle reef	(No oil)	9,440	$3,300,000
Talford	1959	?	3,321	---	$ 10,000

* "Gross value" of hydrocarbons figured on basis of $3.00 per bbl. for oil and 35¢ per MCF for gas --- approx. prevailing field prices at this date.

** The Payne field did not produce after 1958 as it was taken over for gas storage during that year. The 9 billion (plus) Cu ft. of gas taken from that pool is recognized as only a portion of the total recoverable gas in place within that reef.

Compiled March 28, 1961
A.E. Smith

TABLE V—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED AND WAGES PAID, 1921–1940

Year	Retail rate, cents per M cu. ft.	No. of pay consumers	Total quantity used	Quantity used per consumer	Capital invested in all natural gas operations	No. of men employed	Wages paid
			M cu. ft.	M cu. ft.			
1921.....	47	58,609	5,937,316	101.3	$17,328,757	632	$592,606
1922.....	47	63,229	6,028,947	95	17,769,664	692	539,072
1923.....	50	62,352	6,210,459	99.6	25,570,972	603	633,365
1924.....	55	61,100	5,933,595	97.1	24,781,723	727	639,167
1925.....	56	62,338	5,300,424	85.6	26,111,387	692	625,826
1926.....	57	63,695	5,595,521	87.8	30,500,874	860	842,305
1927.....	60	66,818	5,210,315	78	31,987,879	1,123	1,148,339
1928.....	60	70,259	5,699,553	71.2	36,601,828	1,209	1,497,999
1929.....	58	80,991	6,336,873	78.2	35,162,736	1,323	1,529,367
1930.....	64	84,135	6,332,519	75.2	36,162,268	1,328	1,545,648
1931.....	62	86,050	5,607,744	65.1	42,921,142	1,241	1,383,286
1932.....	63	86,631	5,409,154	62.2	45,982,719	893	1,059,643
1933.....	63	84,933	5,102,340	60	51,766,592	958	958,336
1934.....	62	89,990	5,262,631	58.5	41,934,395	931	1,010,979
1935.....	60	118,719	5,553,902	46.8–52	42,975,846	1,273	1,219,520
1936.....	60	118,117	6,956,453	59.3	45,197,240	1,336	1,354,611
1937.....	60	123,527	7,767,359	62.8	49,059,740	1,501	1,668,188
1938.....	60	127,861	7,912,220	61.8	51,189,094	1,439	1,631,677
1939.....	60	131,598	8,673,200	65.9	53,300,113	1,633	1,883,252
1940.....	60	136,698	9,671,008	70.7	56,938,282	1,736	2,071,031
1941	60	141520	8885751	62·7	56 385 701	1738	2 205 725

Natural Gas Fields

TABLE I—SUMMARY OF NATURAL GAS DISTRIBUTION

	1939	1940	1941
	M cu. ft.	M cu. ft.	M cu. ft.
Total distribution to customers	11,337,644	12,629,776	11,343,255
Used by companies for all purposes	51,605	74,791	85,992
Used by private well-owners	74,000	74,000	74,000
Leakage in transmission lines	139,445	116,218	226,230
Leakage in distribution plants	255,483	234,029	281,361
Leakage in rural lines	16,191	17,129	17,016
Field operations: leakage in gathering and transmission lines to measuring stations (estimated)	200,159	37,394	.....
Total amount of gas distributed	12,074,527	13,183,337	12,027,854

normal decline in rock pressure and open flow measurements. Over the greater part of the field compressors were in general use, which greatly increased the daily peak production of this field. Lake drilling commenced again, and one producing well was completed in Lake Erie opposite lot 187, Romney township; it is anticipated that further drilling in Lake Erie will be carried out during the coming year in the hope of developing additional quantities of gas.

The Declute field in Raleigh township produced considerable quantities of gas until late in the year when edge-water encroached at the eastern end of the field, with the result that the production declined rapidly. By the end of the year both the rock pressure and open flow measurements showed a serious decline.

In the Dawn field the production was slightly greater than in the previous year. The open flow stood up much better than in 1939, while the rock pressure showed a greater drop than in the period 1938–39. Owing to the increased consumption in the City of London, there was a very heavy pull on the field until the latter part of the year when the wells of the Malahide field were placed

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1940

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Colchester South			5					683	
	Gosfield South	25	2		1	35	37,241	160	583	$384.40
	Malden	2		4	2	222			1,217	
	Mersea	4	1					323	3,274	
Kent	Camden								3,665	
	Camden gore			1					22,516	
	Chatham	12		4	3	1,471	18,849	758	22,963	
	Chatham gore			1					2,413	
	Dover	22	1		1	200	381,837	300	6,901	976.00
	Harwich			1					1,294	
	Orford			1					18,778	
	Raleigh	66	1	4	6	13,120	3,658,540	373	10,275	275,760.72
	Romney	136			1	160	163	180	320	
	Tilbury East	133	4				1,904,478	180	317	950.00
Lambton	Brooke								1,091	
	Dawn	29					2,266,290	446	15,290	
	Enniskillen	4	2				9,256	200	14,250	
	Euphemia								227	
	Plympton			1						
	Sarnia	13					800	35		
	Zone								8,398	
Middlesex	Delaware								16,532	
	London								3,891	
	McGillivray			1						
	Mosa	3		1			21,444	310	1,611	
	North Dorchester			2					9,466	
	West Nissouri								1,202	
	Westminster								37,239	
Simcoe	Nottawasaga	1			1	35		485		

										95	
Oxford	Dereham			6							
	Dereham (Brownsville)	16 / 56	1 / 8	2	1 / 2	543 / 4,850	226 515 / 809,745	330	3,949	2,471.72
	North Norwich			2						
	South Norwich			1						
	West Oxford			1					5,720	
Elgin	Aldborough						81,356	162	4,748	2,650.00
	Bayham	55		6					415	600.00
	Bayham (Brownsville)	16	1		1	543	226,515	285	57,101	13,018.00
	Malahide	53	1	6	28	39,805	608,860	550	14,310	
	South Dorchester			1					7,235	
	Southwold			1					9,703	
	Yarmouth			1						
Brant	Brantford	2			2	32	879	100		
	Onondaga	41	2		1	12	17,132	77	3,345	1,007.50
	Tuscarora	72	13	1	10	371	133,182	117	43,700	2,695.00
Norfolk	Charlotteville	13						217		
	Houghton	4						508		
	Middleton	54	1	1	3	764		222		
	North Walsingham	8	1					255		
	South Walsingham	19					432,510	417		
	Townsend	3			1	50		171		
	Windham	11			2	119				
	Woodhouse	77			6	2,225		302		
Haldimand	Canborough	165	4		1	25		83		
	Dunn	35	1					198		
	Moulton	112	4					128		
	North Cayuga	198	5	1	2	14		183		
	Oneida	72	2	4	8	318		127		
	Rainham	327	6	3	8	550		203		
	Seneca	165	5	7	4	80		80	352,374	140,869.52
	Sherbrooke	30					2,101,759	182		
	South Cayuga	56	1					123		
	Walpole	441	12	9	15	932		226		
Wentworth	Binbrook	50	1					64		
	Glanford	12						50		
Lincoln	Caistor	65	3	1	6	165		74		
	Gainsborough	14	1					71		

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1940—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Welland	Bertie	141	5	1	13	231		89		
	Crowland	28	.....	.....	1	20		115		
	Humberstone	69	.....	2	11	232	267,567	105		
	Wainfleet	30	1	.....	.....	.....		69		
	Willoughby	54	2	3	5	138		180		
Prince Edward	Hallowell	14	.....	.....	2	17	1,000	75	400	$115.00
	South Marysburgh	1	.....	.....	.....	.....	.....	70	.....	.....
Bruce	Bruce	.....	.....	.....	.....	.....	.....	.....	140	.....
	Culross	.....	.....	.....	.....	.....	.....	.....	211	.....
	Greenock	.....	.....	.....	.....	.....	.....	.....	3,389	.....
	Kincardine	.....	.....	.....	.....	.....	.....	.....	6,516	.....
Huron	Morris	.....	.....	.....	.....	.....	.....	.....	195	.....
	Turnberry	.....	.....	.....	.....	.....	.....	.....	1,041	.....
	East Wawanosh	.....	.....	.....	.....	.....	.....	.....	400	.....
Surface wells	Harwich	69	.....	.....	.....	.....	[1]14,000	.....	.....	.....
	Howard									
Private wells	.....	[2]300	.....	.....	.....	.....	[3]60,000	.....	.....	.....
Total	.....	3,382	91	86	147	66,736	13,053,403	.....	719,383	$441,497.86

[1]This gas is not metered, and therefore must be estimated.
[2]Principally in Haldimand, Norfolk, and Welland counties.
[3]Estimated.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1941

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Colchester South			1						
	Gosfield South	26			1	25	32,418	160	583	$922.55
	Malden	1	1	7					1,217	
	Mersea	5						323	3,274	
Kent	Camden									
	Camden gore	1		3	1	223		716		
	Chatham	20	1	12	9	10,817		748		
	Harwich						4,081,164		101,772	233,063.27
	Orford			2						
	Raleigh	65	2	1	2	1,520		171		
	Romney	140			4	1,198		171		
	Tilbury East	135		1	2	606		171		
	Dover	22		1			341,516	440	2,802	550.00
Lambton	Brooke								8,498	
	Dawn	28	1	1			1,661,500	440	25,642	
	Enniskillen	4		1			7,449	200	14,350	
	Euphemia								227	
	Sarnia	13					800	35		
	Sombra								521	
Middlesex	Delaware								15,658	
	Mosa	2	1					300	1,600	
	North Dorchester			2					10,141	
	Westminster								36,998	
Simcoe	Nottawasaga	1						485		
Oxford	Dereham			1						
	Dereham (Brownsville)	22	34				178,841	200	555	1,353.00
	North Oxford	13	3	1			41 236			
	South Norwich			3			220,077			
	West Oxford			6						

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1941—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Elgin	Bayham (Brownsville)	13	3	.....	.....	.....	41,236	200	265	750.00
	Bayham	51	4	.....	.....	.....	71,692	145		
	Aldborough	.....	.....	1	.....	.....	.....	.....		
	Dunwich	.....	.....	2	.....	.....	.....	.....		
	Malahide	70	.....	5	17	26,472	2,497,447	414		
	Yarmouth	.....	.....	2	.....	.....	.....	.....		
Norfolk	Charlotteville	13	.....	1	.....	.....		208		
	Houghton	4	.....	.....	.....	.....		505		
	Middleton	52	3	7	1	35		244		
	North Walsingham	8	.....	1	.....	.....	421,717	260		
	South Walsingham	19	.....	.....	.....	.....		396		
	Townsend	4	.....	.....	1	15		190		
	Windham	22	.....	12	11	1,396		510		
	Woodhouse	81	1	4	5	541		202		
Haldimand	Canborough	156	14	1	5	617		81		
	Dunn	50	.....	.....	.....	.....		246		
	Moulton	104	9	.....	1	9		130		
	North Cayuga	199	7	3	8	355		135		
	Oneida	84	3	8	15	629		119	534,721	164.899.50
	Rainham	326	5	3	4	80		182		
	Seneca	171	3	1	9	200		77		
	Sherbrooke	15	.....	.....	.....	.....		204		
	South Cayuga	56	.....	1	.....	.....	1,962,524	124		
	Walpole	473	9	26	41	2,338		204		
Wentworth	Ancaster	.....	.....	2	.....	.....		.....		
	Binbrook	50	.....	.....	.....	.....		64		
	Glanford	12	.....	.....	.....	.....		78		
Lincoln	Caistor	65	2	2	2	40		79		
	Gainsborough	15	.....	.....	1	15		79		

Welland	Bertie	145	8	1	12	99		88		
	Crowland	28						110		
	Humberstone	79	2	4	13	232	274,039	53		
	Wainfleet	28	4	2	2	123		46		
	Willoughby	54	1	3	1	30		65		
Brant	Brantford	2						100		
	Onondaga	35	6				182,360	113	45,818	2,676.15
	Tuscarora	76	3	4	7	300		90		
Prince Edward	Hallowell	14								
	South Marysburgh	1								
Bruce	Bruce								140	
	Culross			2					100	
	Greenock								3,389	
	Kincardine			1					7,416	
Huron	East Wawanosh								400	
	Morris								145	
	Turnberry								1,041	
Surface wells	Harwich	69					[1]14,000			
	Howard									
Private wells		[2]300		1	2	35	[3]60,000			
Total		3,429	127	143	177	47,950	11,828,703		817,273	404,214.47

[1]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[2]Principally in Haldimand, Norfolk, and Welland counties.
[3]Estimated.

During the year 320 wells were completed, of which 177 were producers. There were 233 wells drilled during the preceding year, of which 147 were producers, having a total open flow or flowing capacity of 66,736 M cubic feet. The total open flow developed for the year 1941 was only 47,950 M cubic feet, a decrease of 28.2 per cent. from the preceding year, although there were 87 more wells completed. Along with the drop in the total open flow developed, it will be noted that while the number of producers drilled was greater than in 1940, the percentage of dry wells increased sharply. The average open flow of the wells completed in 1941 also showed a decrease from those drilled in 1940. Details and information covering drilling operations for the year will be found in Table VI.

The productive capacity of the Brownsville field, Dereham and Bayham townships, continued to decline, and the number of producing wells dropped from 72 in 1940 to 35 by the end of 1941. Only 220,077 M cubic feet of natural gas was produced, as compared to 1,036,260 M cubic feet for 1940. With the exception of the Malahide and Declute fields, all showed a normal decline both in productive capacity and rock pressure. In the case of the Malahide field, Malahide township, Elgin county, there were indications by the spring of 1941 of a serious decline both in production and rock pressure, and by the end of the year it was quite evident that the field could no longer be considered as a major producer. For the year, a total of 2,497,447 M cubic feet was withdrawn, as against 608,860 M cubic feet for the initial and preceding year. The drop in rock pressure and production at the Declute field, while rather sharp, was not as severe as at the Malahide field. Production for the year totalled 1,482,186 M cubic feet as against 2,717,192 M cubic feet for 1940. The Dawn, Haldimand, and Welland gas fields showed little change other than uniform decline in productive capacity and rock pressure. In the Haldimand field, which is quite extensive, 83 new producing and 43 dry wells were completed during the year. The Welland field also received attention with the drilling of 28 new producing and 10 dry wells. The Chatham field, which was placed in operation at the close of 1940, produced 165,010 M cubic feet of gas. There were 21 wells drilled in the field during the year, of which 9 were producers and 12 dry.

Leakage

Owing to the shortage of labour and the very high priority on pipe, the distributing companies found it difficult to make the usual repairs and replacements to pipe lines. In Tables VII, VIII, and IX will be found the measured leakage of gas between the field and the consumer. It will be noted in Table VIII, "Leakage in Distribution Plants," that in many towns and cities the actual leakage was in excess of the "allowable," for the year, particularly in Dunnville, Kingsville, Leamington, Merritton, St. Catharines, Paris, Port Colborne, St. Thomas, and Tillsonburg. The excessive leakage in the distribution systems of the above towns and cities, however, is not abnormal, since a check of the tables for previous years indicates a similar condition. The total leakage in distribution plants for the year, however, was within the allowable and, with the exception of the year 1940, when the actual leakage exceeded the allowable leakage, compares favourably with the preceding years. On rural lines the actual leakage was 9.4 per cent., the highest in the last five years but still within the allowable leakage for the year.

Natural Gas Fields and Exploration

Drilling results for the year were of a disappointing nature; although the number of completions was 294, there were 144 non-producers. The open flow or "flowing capacity" of all producing wells "drilled in" during the year was only 17,264 M cubic feet, a drop of 64 per cent. from the preceding year and the lowest since 1933. The total acreage under lease also declined sharply from 817,273 to 567,538 acres, which unquestionably reflects the results of drilling and exploration during the year. In Table VI are given all statistics relative to natural gas wells and their production.

At the Brownsville field in the township of Dereham and Bayham, production dropped to 77,905 M cubic feet from 220,077 M cubic feet for the year 1941, a trend which quite possibly will continue until the field is finally abandoned.

In the Malahide field, Malahide township, producing wells for the first time showed a decline both in production and rock pressure, producing 868,299 M cubic feet as compared to 2,497,447 M cubic feet for the year 1941. By the end of the year, water had encroached and many wells were abandoned. A number of bore-holes were drilled without success in the Malahide area in search of new production.

Production in the Chatham field set a new high with the recovery of 1,127,281 M cubic feet. Drilling operations and exploratory work met with little success, and of the total of 15 wells drilled, 14 were dry.

In the Dawn field, Dawn township, there was a decrease in production for the year of 144,798 M cubic feet from the preceding year. With the decrease in production the well pressures also declined, although it may be said that in order to prepare sections of the field for the storage of re-formed refinery gas, greater quantities of gas were withdrawn from the field than would be the normal practice.

The Tilbury field, Kent county, was again operated at near capacity with the withdrawal of 2,528,029 M cubic feet, an increase of nearly 100,000 M cubic feet over the preceding year's production. Again, as during the previous year, drilling operations were undertaken in the bed of Lake Erie from 800 to 1,000 feet from shore and opposite the western section of the Tilbury field. Five wells were drilled, and all were relatively small producers. Unfortunately, the economics of lake wells are such as to require reasonably large producing wells to justify the capital investment necessary to complete such wells.

The production of the Haldimand field, Haldimand county, was 2,049,320 M cubic feet, approximately 150,000 M cubic feet greater than in 1941. Although the number of wells drilled for the year was 129, the total new open flow developed was only 6,122 M cubic feet, or 47 M cubic feet for each well completed.

In the Dover, Kingsville, Lincoln, Norfolk, Onondaga, Welland, and Wentworth fields, very little, if any, change was noted other than a normal decline in open flow and well pressure (rock pressure) measurements.

Exploratory drilling was continued throughout the year in Townsend and Windham townships, Norfolk county. In Townsend township 8 producing and 3 dry wells were completed by the Dominion Natural Gas Company, indicating the development of a small commercial gas field. Gas was encountered in the Clinton formation at depths ranging from 940 to 965 feet. The results from drilling operations in Windham township were erratic, and of the completions, 3 were producers and 5 were dry. Gas was found in the Clinton at depths of 1,060 to 1,080 feet.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1942

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Anderdon			1						
	Gosfield South	27			1	13	32,419	170	583	$903.53
	Malden	1								
	Mersea	5		1				298		
Kent	Camden			4					11,826	
	Camden gore	1		2				475	13,521	
	Chatham	20	1	14	1	732	1,127,281	585	28,393	
	Chatham gore								901	
	Dover	22					310,261	290	1,786	208.00
	Harwich			1					5,341	
	Howard								290	
	Orford			2						
	Raleigh	65		3			3,352,354	212	6,820	1,350.00
	Romney	144	2		6	1,439		169	2,459	
	Tilbury East	128	7	1				169	9,858	950.00
	Zone								150	
Lambton	Brooke								7,512	
	Dawn	34			6	2,108	1,516,702	417	23,649	
	Enniskillen	4					8,647	200	7,833	
	Euphemia								50	
	Sarnia	13					800	35		
	Sombra								1,250	
Bruce	Culross			1						
Simcoe	Nottawasaga	1								
Middlesex	Delaware			1					5,837	
	Mosa	2								
	North Dorchester			1					11,349	
	Westminster			1					34,928	

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1942—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Welland	Bertie	151	2	...	8	172	288,663	106	5,626	2,359.03
	Crowland	27	1	...	...	...		130	15,678	3,772.00
	Humberstone	83	3	...	7	136		100	3,769	800.13
	Wainfleet	33	1	6	6	1,095		325	7,240	350.00
	Willoughby	54	...	1	...	...		210	1,199	746.00
Prince Edward	Hallowell	14	...	...	...	...	...	...	...	...
	South Marysburgh	1	...	...	...	...	...	...	...	...
Surface wells	Harwich	69	...	...	...	...	[1]14,000	...	...	...
	Howard									
Private wells	Haldimand	[2]300	...	...	3	...	[3]60,000	...	...	...
	Norfolk									
	Welland									
Dominion Gas Co. (not detailed)	Various	...	...	...	...	...	...	...	142,660	113,316.06
Total	...	3,503	74	144	150	17,264	10,476,770	...	567,538	$172,857.31

[1]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[2]Principally in Haldimand, Norfolk, and Welland counties. The number is estimated.
[3]Estimated.

Oxford	Dereham (Brownsville)	22	.....	3	.....	.....	58,782	270	2,600	658.00
	South Norwich	1	.....	2	1	122	.....	550	.....	.....
Elgin	Aldborough	.....	.....	.....	.....	.....	.....	.....	1,775	.....
	Bayham (Brownsville)	12	1	.....	.....	.....	19,123	240	350	883.00
	Bayham	51	.....	1	.....	.....	118,257	135	25,587	5,840.00
	Dunwich	.....	.....	.....	.....	.....	.....	.....	6,861	.....
	Malahide	71	5	19	6	3,290	868,299	343	37,010	.....
	South Dorchester	.....	.....	1	.....	.....	.....	.....	3,684	.....
	Southwold	.....	.....	1	.....	.....	.....	.....	.....	.....
	Yarmouth	.....	.....	2	.....	.....	.....	.....	3,649	.....
Brant	Brantford	2	.....	1	.....	.....	145,134	40	150	62.37
	Onondaga	34	1	1	.....	.....		125	38,080	770.00
	Tuscarora	74	3	3	1	25		97	7,500	1,903.00
Norfolk	Charlotteville	13	.....	2	.....	.....	431,926	178	.....	.....
	Houghton	4	.....	1	.....	.....		305	.....	.....
	Middleton	51	1	1	.....	.....		210	3,715	1,499.00
	North Walsingham	8	.....	.....	.....	.....		236	.....	.....
	South Walsingham	19	.....	.....	.....	.....		381	300	250.00
	Townsend	11	1	3	8	904		300	813	128.00
	Windham	25	.....	5	3	566		362	150	50.00
	Woodhouse	84	.....	4	3	300		203	16,262	4,576.00
Haldimand	Canborough	157	1	.....	2	23	2,124,122	81	1,271	450.00
	Dunn	51	1	.....	2	1,008		120	3,507	340.00
	Moulton	99	9	.....	4	132		138	2,196	1,725.00
	North Cayuga	192	9	1	2	252		170	10,231	2,273.50
	Oneida	90	4	8	10	578		124	6,303	2,798.63
	Rainham	328	4	1	6	279		175	11,613	5,531.85
	Seneca	168	4	2	1	80		170	6,573	2,283.75
	Sherbrooke	18	1	2	4	383		204	160	.....
	South Cayuga	56	1	2	1	35		129	3,057	137.50
	Walpole	511	9	34	47	3,352		206	18,671	13,992.96
Wentworth	Binbrook	54	.....	3	4	116		60	.....	.....
	Glanford	12	.....	.....	.....	.....		45	.....	.....
Lincoln	Caistor	71	2	1	7	124		71	4,762	1,750.00
	Gainsborough	15	.....	.....	.....	.....		80	200	200.00

Natural Gas Fields

Table VI gives an analysis of the producing gas fields of the Province. This table has been published since 1921, and anyone interested can follow the history of each individual gas field over that period. All fields with the exception of two have shown a decline over a period of at least four years; the following notes explain the present shortage of natural gas and the necessity of adding other gases to make up our supply.

The Brownsville field, which produced more than one billion cubic feet in 1939 and 1940, dropped to a little more than fifty million cubic feet in 1943 and in 1944 will probably show only 60 per cent. of the 1943 production. The Dawn field, which produced two and a quarter billion cubic feet in 1939 and 1940, dropped to half that in 1943. Production in the Declute field, which was nearly two and three-quarter billion cubic feet in 1940, dropped to less than half a billion cubic feet in 1943. Production in the Norfolk fields dropped by 50 per cent. and in the Bayham fields by 90 per cent. in the same period.

The Malahide field provides the major disaster to the industry because it was the source of supply for London. The production of this field dropped from two and a half billion cubic feet in 1941 to eighty-seven million cubic feet in 1943.[1] The Tilbury field, which has been in production for more than 35 years, shows a steady annual decrease, as does the Dover field; but the Haldimand field, which is about the same age, shows a remarkable productivity. It has increased production steadily since 1933. As the wells in this field are small and water is not a problem, it will no doubt have a long life. The Welland gas field, now fifty-five years old, has been given attention recently. One hundred and twenty-one producing wells drilled since 1939 have increased the production by sixteen million cubic feet since 1939. This field, which at its peak in 1893 produced just over two billion cubic feet, is still producing almost three hundred million cubic feet annually, an astonishing record.

The Brownsville and Malahide fields, like the Leamington field, "went to water" at about 320 pounds pressure. This type of field is not an easy one to forecast in the early days of development, although the Brownsville field did show early symptoms of being a "water-drive" field.[2] In this type of field, water under pressure of 320 pounds displaces the gas as the gas is removed. It is most difficult, if not impossible, to forecast the volume of this type of field in the early life of the field—say the first year—before the pressure shows much drop. In the case of the Brownsville field, before the field had been in production one year the volume had been calculated at from seven to fifteen thousand million cubic feet, yet in its total life it will not produce more than three thousand seven hundred million cubic feet. When a gas company makes plans to sell fifteen thousand million cubic feet and finds that it has only a quarter of this quantity, a critical situation is bound to occur.

The story of the Malahide field is similar to that of the Brownsville field, although water did not make its appearance quite as soon as in the Brownsville field.

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[1]At the end of 1944, production in the Malahide field had come to an end.
[2]Ont. Dept. Mines, Vol. XLVI, 1937, pt. 5, pp. 86, 87.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1943

County	Township	No. of wells producing, Dec. 31, 1943	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	27					28,732	170	583	$867
	Malden	1								
	Mersea	5						282		
Kent	Camden								11,653	
	Camden gore	2			1	222			10,831	
	Chatham	21		1	1	480	311,029	566	21,854	
	Chatham gore								125	
	Dover	21	1				220,133	205	2,125	1,561
	Harwich								7,181	
	Howard								1,953	
	Raleigh (Declute)	41					475,567			
	Raleigh	24		1				215	4,925	2,250
	Romney	145		1	1	744	2,445,565	200	3,609	1,320
	Tilbury East	130		2	2	122		155	9,732	950
	Zone	4		5	4	2,417	2,202	645	12,069	
Lambton	Brooke								6,646	
	Dawn	35	2	2	3	1,777	1,092,293	427	22,409	
	Enniskillen	4					9,779	200		
	Euphemia								1,531	
	Sarnia		13							
	Sombra			2					11,628	
Simcoe	Nottawasaga	1		1						
Halton	Nassagaweya			1						
Middlesex	Delaware			1					5,289	
	London								292	
	Mosa	1	1						5,313	
	North Dorchester								1,189	
	Westminster			3					28,314	

Oxford	Dereham (Brownsville)	20	2	1	.....	.....	36,710	210	270	$722
	South Norwich	1	.....	1	.....	.....	3,730	400	235	.....
Elgin	Aldborough	.....	.....	.....	.....	.....	.....	.....	75	.....
	Bayham (Brownsville)	8	4	.....	.....	.....	15,008	230	382	300
	Bayham	44	7	.....	.....	.....	7,082	100	1,014	210
	Malahide	52	19	5	.....	.....	87,091	322	25,622	.....
	South Dorchester	.....	.....	.....	.....	.....	.....	.....	774	.....
	Yarmouth	.....	.....	.....	.....	.....	.....	.....	160	.....
Brant	Brantford	2	.....	.....	.....	.....		40		53
	Onondaga	27	7	.....	.....	.....	98,105	100	44,850	855
	Tuscarora	71	6	3	3	70		87		1,828
Norfolk	Charlotteville	15	.....	3	2	91		239	.....	.....
	Houghton	4	.....	.....	.....	.....		.....	25,000	3,155
	Middleton	49	5	.....	3	221		214	3,530	1,124
	North Walsingham	8	.....	2	.....	.....	240,399	232	.....	.....
	South Walsingham	19	.....	.....	.....	.....		300	300	200
	Townsend	20	.....	14	9	679		345	433	50
	Windham	24	1	2	.....	.....		320	450	250
	Woodhouse	90	.....	6	6	543		420	20,745	6,060
Haldimand	Canborough	152	6	.....	1	26		120	1,760	709
	Dunn	44	7	2	.....	.....		165	2,982	751
	Moulton	106	.....	.....	7	43		130	2,994	1,709
	North Cayuga	202	11	5	21	914		200	12,598	4,389
	Oneida	116	6	13	32	1,087		175	4,153	1,559
	Rainham	327	3	.....	2	18		175	10,536	4,899
	Seneca	166	2	.....	.....	.....		90	7,256	3,023
	Sherbrooke	19	.....	1	1	8	2,470,967	90	160	.....
	South Cayuga	69	1	6	14	794		150	2,004	138
	Walpole	505	23	13	17	519		206	20,263	13,793
Wentworth	Binbrook	54	.....	.....	.....	.....		45	.....	.....
	Glanford	12	.....	.....	.....	.....		51	.....	.....
Lincoln	Caistor	74	5	1	8	246		70	5,271	1,739
	Gainsborough	12	3	.....	.....	.....		49	500	583

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1943—*Continued*

County	Township	No. of wells producing, Dec. 31, 1943	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Welland	Bertie	157			8	314		106	6,322	$2,953
	Crowland	27						115	1,100	140
	Humberstone	80	5				296,016	100	16,886	4,389
	Wainfleet	35	1	6	3	24		150	10,700	1,526
	Willoughby	54						198	1,189	520
Prince Edward	Hallowell	15			1	5				
	South Marysburgh		1							
Surface wells	Harwich	69					[1]14,000			
	Howard									
Private wells	Haldimand	[2]300					[2]60,000			
	Norfolk									
	Welland									
Dominion Gas Co. (not detailed)	Various fields								125,855	99,978
Union Gas Co. (not detailed)	Various fields									139,084
Total		[3]3,511	142	104	150	11,364	7,914,408		525,620	$303,637

[1]The gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[2]Estimated.
[3]179 of these wells were not operated in 1943.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1944

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	27					28,949	170	583	$869
	Malden		1	2						
	Mersea	5					24,000	282	1,481	50
	Tilbury North								925	
	Tilbury West								4,500	
Kent	Camden								11,665	
	Camden gore	3		3	1	438	42,272	690	12,520	
	Chatham	25		3	4	777	294,580	572	22,412	
	Chatham gore								1,940	
	Dover	20	1				181,211	190	2,378	817
	Harwich			1					627	
	Howard								74	
	Raleigh (Declute)	39	2				362,310	300	3,501	1,350
	Raleigh	21	3	1			163,537		2,178	700
	Romney	142	3				1,053,220	150	8,078	1,320
	Tilbury East	124	6				891,716		11,183	1,178
	Zone	18		7	14	10,134	277,920	669	16,523	
Lambton	Brooke								577	
	Dawn	32	4	2	1	79	676,292	378	21,039	
	Enniskillen	3	1				9,553		105	75
	Euphemia								5,414	
	Sombra								7,773	
Simcoe	Nottawasaga		1	2					500	250
Middlesex	Delaware								2,324	
	London								200	
	Lobo								605	
	Mosa		1	1					12,835	
	North Dorchester								7,232	
	Westminster			2					6,892	

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1944—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Oxford	Dereham (Brownsville)	16	4	.....	.....	.....	27,108	.....	700	$564
	South Norwich	2	.....	.....	1	37	1,065	.....	3,092	400
Elgin	Aldborough	.....	.....	1	.....	.....	.....	.....	7,976	.....
	Bayham (Brownsville)	5	3	.....	.....	.....	10,283	.....	275	200
	Bayham	30	14	.....	.....	.....	22,374	(1)	16,709	1,979
	Malahide	22	30	4	.....	.....	39,652	345	13,730	609
	Yarmouth	.....	.....	.....	.....	.....	.....	.....	160	.....
Brant	Brantford	2	.....	.....	.....	.....	1,425	.....	150	53
	Onondaga	24	3	.....	.....	.....	13,528	90	4,156	930
	Tuscarora	70	1	4	.....	.....	66,216	86	35,230	2,182
Norfolk	Charlotteville	15	.....	1	.....	.....	1,800	192	5,672	.....
	Houghton	4	.....	.....	.....	.....	21,600	(1)	2,226	199
	Middleton	38	12	3	1	4,100	18,648	185	6,609	930
	North Walsingham	8	.....	.....	.....	.....	960	232	909	.....
	South Walsingham	19	.....	.....	.....	.....	21,604	370	1,713	150
	Townsend	38	.....	14	18	2,347	47,680	345	15,296	262
	Windham	24	1	3	1	6	17,650	240	6,245	250
	Woodhouse	95	.....	4	5	319	112,864	220	17,690	2,594
Haldimand	Canborough	146	7	.....	1	24	189,329	77	9,456	1,830
	Dunn	48	1	.....	5	511	41,245	175	5,431	640
	Moulton	104	6	2	4	70	117,730	120	5,947	1,443
	North Cayuga	207	12	9	17	610	218,427	140	19,116	3,679
	Oneida	124	4	18	[2]12	499	142,340	170	19,668	1,805
	Rainham	324	13	6	10	359	409,940	160	18,164	5,359
	Seneca	153	13	3	.....	.....	169,637	75	14,368	2,376
	Sherbrooke	17	4	1	2	41	28,840	180	620	75
	South Cayuga	89	1	12	21	1,279	94,344	130	8,238	263
	Walpole	530	3	7	28	1,995	758,144	190	39,852	12,663

Wentworth	Beverly	1			1	27				
	Binbrook	44	10				5,516	56	3,523	
	Glanford	10	2				20,316	45	744	
Lincoln	Caistor	77	4		7	293	65,520	85	6,186	$1,669
	Gainsborough	11	1				5,747	70	868	237
Welland	Bertie	164	1	1	8	129	122,547	90	14,633	4,831
	Crowland	27	1		1	8	14,589	109	1,937	295
	Humberstone	81	2	1	3	53	47,796	50	6,994	1,722
	Wainfleet	39	5	8	9	307	83,086	100	10,718	1,875
	Willoughby	53	1				43,399	120	4,926	1,448
Cochrane	Hobson			1						
Prince Edward	Hallowell		15							
Surface wells	Harwich, Howard	69					[3]14,000			
Private wells	Haldimand, Lincoln, Norfolk, Welland	[4]311		[5]1	[6]11	278	[7]60,000			
Union Gas Co. (not detailed)	Various fields									165,995
Dom.Nat.GasCo. (not detailed)	Various fields									115,603
Total		3,500	197	129	186	24,720	7,082,509		495,991	$341,719

[1]Wells are constantly in use and no rock pressure could be taken.
[2]1 well reopened and added to producers.
[3]This gas is not metered and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[4]Estimated.
[5]South Cayuga township, Haldimand county.
[6]4 in Caistor township, Lincoln county; 3 in North Cayuga township and 1 in each of Moulton and Sherbrooke townships, Haldimand county; and 1 in each of Wainfleet and Thorold townships, Welland county.
[7]Estimated

Leakage

Tables VII, VIII, and IX show the leakage in distribution plants and on transmission lines in Ontario. A glance at the summary and comparison in Table I shows that the leakage is on the increase while production is decreasing. Leakage is a function of pressure and not of production. Both the pressure and production are decreasing. It would seem, therefore, that there must be a greater number of leaks in the pipe lines.

The over-all reduction of employees during the last three years shown in Table III indicates that the demand of war industries has removed many from the repair gangs, and this condition has been reflected in the increased leakage; but new and better methods of finding leaks should partly offset this. The Heath Tree Service are using their knowledge of the growth, colour, and texture of trees, grass, and shrubs to locate gas leaks. This has outmoded the old pressure surveys where the gas mains are along the boulevards or fence lines; but where the gas lines are under pavements, it is still necessary to use the pressure method followed by test holes and leak meter.

The time has come when the leakage problem must be taken very seriously. The measured leakage in 1944 is 564,677 M cubic feet—one year's supply for Chatham and Dunnville. This is not all preventable waste, but much of it is. The standards set are easily attainable by good management, as can be seen in many places under the allowable leakage. Leakage is too great in Leamington and Dunnville with 4½ times the allowable leakage; Port Dover, 3½; Hagersville, Highgate, and St. Catharines, 3; Tillsonburg, 2½; and Belmont, Fenwick, Ingersoll, Jarvis, Kingsville, Paris, Thorold, Waterford, and Woodburn, 2.

TABLE VII—LEAKAGE IN DISTRIBUTION PLANTS, 1944

Town or city	Company	Equivalent miles of 3-inch pipe in distribution plants	Leakage for year		Average No. of consumers	Leakage per consumer	Pressure, ozs. per sq. in.
			Actual	Allowable			
			M cu. ft.	M cu. ft.		cu. ft.	
Alvinston	Union Gas Co.	6.2	127	1,240	233	541	6
Ancaster	Dom. Nat. Gas Co.	1.4	[1]	280	202	.....	4
Appin	Union Gas Co.	.98	27	196	46	587	5
Beachville	Beachville Gas Synd.	5.84	135	1,168	33	409	4
Belle River	Union Gas Co.	4.48	33	897	245	135	5
Belmont	Belmont Gas Co.	8	3,245	1,600	110	29,500	6
Blenheim	Union Gas Co.	13.37	143	2,674	666	215	5
Bothwell	Union Gas Co.	5.54	[1]	1,108	191	.....	5
Brantford	Dom. Nat. Gas Co.	94.25	9,515	18,850	6,257	1,520	4
Brigden	Union Gas Co.	3.90	1,214	780	170	7,141	6
Byron	Union Gas Co.	3.03	[1]	606	96	.....	6
Cainsville	Dom. Nat. Gas Co.	5.57	194	1,114	33	5,878	4
Cayuga	Dom. Nat. Gas Co.	5.86	587	1,172	219	2,680	4
Chatham	Union Gas Co.	85.42	.....	17,084	5,062	.....	6
Comber	Union Gas Co.	3.86	[1]	773	153	.....	6
Corunna	Union Gas Co.	3.23	629	646	251	2,506	6
Courtright	Union Gas Co.	4.42	[1]	884	142	.....	6
Delhi	Dom. Nat. Gas Co.	7.08	417	1,416	654	638	4
Dorchester	Dom. Nat. Gas Co.	2.86	688	572	146	4,712	4
Dresden	Union Gas Co.	13.05	998	2,610	602	1,658	5
Dunnville	Dom. Nat. Gas Co.	13.87	12,691	2,774	1,177	10,800	4
Dutton	Dom. Nat. Gas Co.	8.16	4,527	1,632	253	17,900	4
Essex	Union Gas Co.	11.71	[1]	2,342	562	.....	5
Fenwick	Dom. Nat. Gas Co.	1.51	613	302	148	4,150	4
Florence	Union Gas Co.	1.87	73	374	70	1,042	5
Fonthill	Fonthill Gas Co.	6.54	2,275	1,308	326	6,960	6

[1]These distribution plants show a total gain of 14,845 M cubic feet.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1945

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Brant	Brantford	2					1,065	100	150	$53
	Onondaga	23	1				12,334	105	1,365	658
	Tuscarora	67	3				59,267	80	43,700	1,537
Elgin	Aldborough			1					15,746	
	Bayham	[1]31					23,888	200	20,453	2,131
	Bayham (Brownsville)	5					12,879	190	235	225
	Dunwich								211	
	Malahide	22	1	1	1	117	25,445	325	1,561	
	Yarmouth								160	
Essex	Gosfield South	27					24,918	170	583	764
	Malden			2						
	Mersea	5					2,498	280	1,050	
	Tilbury North								925	
	Tilbury West								4,500	
Haldimand	Canborough	149	7	1	10	296	141,766	75	2,460	1,797
	Dunn	55	1	1	8	885	42,414	170	3,665	764
	Moulton	104	2	4	2	23	101,797	115	2,802	1,311
	North Cayuga	221	5	6	19	1,416	210,469	135	13,222	4,097
	Oneida	[1]122	4	5	1	17	107,329	165	4,814	1,612
	Rainham	[1]319	13	1	6	205	381,301	155	12,664	6,108
	Seneca	155	2	4	4	84	119,767	70	7,502	2,370
	Sherbrooke	17					20,540	175	160	
	South Cayuga	90	1	4	2	52	83,924	125	2,134	175
	Walpole	565	7	17	42	2,684	676,453	180	21,362	13,190

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1945—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Kent	Camden			2					10,987	
	Camden gore	3		2				690	11,493	
	Chatham	25		1			297,978	565	23,076	
	Chatham gore								1,865	
	Dover	16	4				162,286	130	3,430	1,113
	Harwich								1,712	
	Howard								1,840	
	Raleigh	20	1				65,905	150	3,393	700
	Raleigh (Declute)	39					461,428	284	1,000	400
	Romney	138	8		4	1,048	578,321	150	2,509	75
	Tilbury East	119	5				1,481,756	150	9,630	950
	Zone	34		6	16	11,548	665,568	650	18,049	
Lambton	Brooke								302	
	Dawn	31	1				408,052	375	12,287	
	Enniskillen	[1]4					13,268		605	125
	Euphemia			1					6,126	
	Moore								225	
	Sombra								7,523	
Lincoln	Caistor	[1]84	1		4	185	64,711	80	5,539	1,910
	Gainsborough	[1]13					5,903	65	860	340
Middlesex	Ekfrid								505	
	London								60	
	Lobo								55	
	Mosa			4					19,740	
	Westminster								123	
Norfolk	Charlotteville	15					17,569	190		
	Houghton	4					15,000	400		
	Middleton	39		2	1	3,500	48,705	180	1,788	600
	North Walsingham	8		1			9,370	225		
	South Walsingham	19					29,992	365	805	400
	Townsend	61		17	23	3,215	106,891	340	895	729
	Windham	24					27,191	235	450	250
	Woodhouse	99		3	4	317	208,525	210	11,251	2,731

Oxford	Dereham (Brownsville)	14	2				17,157	325	100	178
	South Norwich	2		1			90	400	235	
Simcoe	West Gwillimbury			2						
Welland	Bertie	179	2	5	12	740	143,179	85	23,005	7,403
	Crowland	32	1		5	405	19,937	105	2,700	197
	Humberstone	75	3		1	60	65,492	50	2,737	825
	Wainfleet	41	1	3	3	83	65,026	100	3,829	1,300
	Willoughby	51					38,321	115	1,254	576
Wentworth	Beverly	1		2				30		
	Binbrook	44					48,582	53	87	
	Glanford	10					11,713	40		
York	East Gwillimbury			1						
Surface wells	Harwich and Howard	69					[2]14,000			
Private wells		[3]320		2	9	175	[3]60,000			
Used by gas companies (not detailed)	Various fields								142,327	249,001
Total		3,612	76	102	177	27,055	7,199,970		495,821	$306,595

[1]Wells reopened and added to producers (11) are as follows: Enniskillen, 1; Bayham, 1; Oneida, 1; Rainham, 2; Caistor, 4; Gainsborough, 2.
[2]This gas is not metered, and therefore must be estimated. The wells are owned privately, and the gas is used for domestic purposes.
[3]Estimated.

Leakage

Tables VII, VIII, and IX show the leakage in distribution plants, rural lines, and transmission lines in Ontario in 1945. A comparison of these tables with those for the year 1944 shows that leakage is on the increase.

In line with the remarks in last year's report on leakage, the distributing companies made many leakage surveys and did much repair work to their lines, which had deteriorated owing to the shortage of labour during the war years. The repair work is mostly done in the summer months, and the results are not apparent in the Department's reports until a full year can be observed. It will be noted that some distribution plants still show a gain instead of a loss. It is notable that for two years in succession the distribution plants in Byron, Chatham, Comber, Glencoe, Mount Brydges, Sarnia, Simcoe, and Thamesville show a gain. It has been claimed that, owing to seasonal differences and continuous meter reading, variations in the month of December may cause this gain in certain places, but this cannot happen in two successive years and in selected places. It is apparent that this is an error in measuring gas and that it can be corrected by the makers of the orifice or positive meters, for these meters can be made to measure accurately.

The leakage in the towns of Leamington and Dunnville are again the greatest, being from four to five times the allowable. Hagersville, Dutton, Belmont, St. Catharines, Highgate, Thorold, Kingsville, Preston, Woodstock, and Ingersoll are excessive.

There has been no satisfactory standard set as good operating practice for allowable leakage in transmission lines. Under normal circumstances leakage on high pressure transmission lines varies with the gauge pressure on the line. It may be noted that the transmission line from the Dawn gas field carrying a pressure of 80 pounds shows a gain in volume, which, of course, is quite impossible. This and all other leakage problems will be made the subject of investigation by the inspectors of this Department during the coming season.

TABLE VII—LEAKAGE IN DISTRIBUTION PLANTS, 1945

Town or city	Company	Equivalent miles of 3-inch pipe in distribution plants	Leakage for year		Average No. of consumers	Leakage per consumer	Pressure, ozs. per sq. in.
			Actual	Allowable			
			M cu. ft.	M cu. ft.		cu. ft.	
Alvinston	Union Gas Co.	6.2	201	1,240	251	800	6
Ancaster	Dom. Nat. Gas Co.	1.4	103	280	87	1,180	4
Appin	Union Gas Co.	.98	52	186	44	1,110	5
Beachville	Beachville Gas Synd.	28.5	373	5,700	28	13,320	4
Belle River	Union Gas Co.	4.48	210	896	258	810	5
Belmont	Belmont Gas Co.	8	3,052	1,600	154	19,710	6
Blenheim	Union Gas Co.	13.37	1,722	2,674	687	2,510	5
Bothwell	Union Gas Co.	5.54	108	1,108	187	580	5
Brantford	Dom. Nat. Gas Co.	94.25	1,461	18,850	6,368	230	4
Brigden	Union Gas Co.	3.9	477	780	185	20,580	6
Byron	Union Gas Co.	3.03	[1]	606	98	.....	6
Cainsville	Dom. Nat. Gas Co.	5.57	363	1,114	35	10,370	4
Caledonia	Port Colborne–Welland Gas and Oil Co.	8	1,543	1,600	550	2,810	4
Cayuga	Dom. Nat. Gas Co.	5.86	917	1,172	210	4,370	4
Chatham	Union Gas Co.	85.42	[1]	17,084	5,338	.....	6
Comber	Union Gas Co.	3.86	[1]	772	165	.....	6
Corunna	Union Gas Co.	3.23	189	646	251	790	6
Courtright	Union Gas Co.	4.42	494	884	141	3,500	6
Delhi	Dom. Nat. Gas Co.	7.08	973	1,416	672	1,450	4
Dorchester	Dom. Nat. Gas Co.	2.86	1,437	572	145	990	4

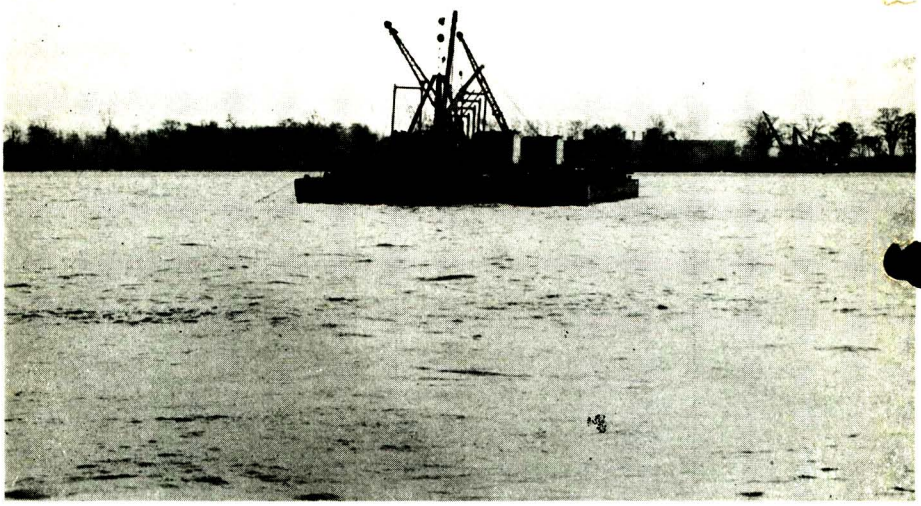
[1]These distribution plants show a total gain of 10,927 M cubic feet.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1946

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Brant	Brantford	2					1,152		150	$43
	Onondaga	19	4				10,882	61	1,235	365
	Tuscarora	56	12		1	62	53,154		43,696	1,537
Elgin	Aldborough			4					20,070	
	Bayham	40	1				13,661	170	18,403	2,093
	Bayham (Brownsville)	5					6,045		335	225
	Dunwich								2,598	
	Malahide	15	12	1	5	1,335	45,437	440	950	
	Yarmouth	1		1	1	225		440	160	
Essex	Gosfield South	27					19,936		583	884
	Maidstone			1						
	Malden	2		3	2	646		400	3,000	1,100
	Mersea	5					2,340	269	504	
	Tilbury North								400	
	Tilbury West			1					3,500	
Haldimand	Canborough	156	2	8	9	293	191,327	88	2,460	1,211
	Dunn	66	1	8	18	1,949	75,163	292	3,711	487
	Moulton	102	2				78,435	124	2,902	1,316
	North Cayuga	240	8	14	26	1,191	240,027	154	13,231	4,384
	Oneida	119	11	8	8	920	89,923	142	4,851	1,395
	Rainham	316	14		11	601	374,378	150	12,987	5,786
	Seneca	152	5	4	2	80	114,937	70	7,652	2,374
	Sherbrooke	16	1				18,065	161	160	25
	South Cayuga	94		1	4	205	65,664	163	2,676	300
	Walpole	571	18	18	24	1,950	649,283	194	22,134	13,631

1945, when 30 fewer producing wells were drilled. The number of abandoned wells is 121, an increase of 45 over the previous year. The number of men employed in the industry was 1,359, and their wages totalled $1,797,316.

The drilling in the Haldimand, Norfolk, and Welland fields seemed to have reached an economic limit some years ago; still the operators keep trying another location. The results obtained show how nearly the fields have reached complete development. The average open flow of new wells in the Welland field



LAYING PIPE UNDER THE DETROIT RIVER

The photograph shows equipment used by the Union Gas Company to lay 16-inch pipe line 10 feet under the bed of the Detroit river. The trench was first dug by a dredge using a rotating head to loosen the clay and a heavy-duty pump to remove this material. The pipe can be seen in the water in front of the scow and standing at an angle of about 30 degrees up a trestle ramp. Additional lengths of pipe can be seen at the right-hand side of the scow; these are welded to the upper end as the pipe is lowered to the bottom of the river.

is 65 M cubic feet per well. In the Haldimand field it is 66 M cubic feet, and in the Norfolk field it is 40 M cubic feet. The margin of profit in such wells and the benefit to consumers in general is equally small. The original average rock pressures of the Haldimand and Welland fields was more than 300 pounds per square inch. A glance at the present rock pressures as set out in Table VI will show how far the process of depletion has gone in fifty years of continuous operation.

The quantity of gas produced in each township is shown in Table V and can be compared with previous years by referring to corresponding tables in the annual reports for those years.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1946—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Oxford	Dereham (Brownsville)	6	8				15,586	180	200	400
	South Norwich	1	1	1			1,368			
Simcoe	West Gwillimbury			1						
Welland	Bertie	183	4	6	8	175	141,294	72	23,846	7,512
	Crowland	35		1	3	92	31,771	28	3,935	611
	Humberstone	83	2		10	446	55,514	55	2,237	717
	Stamford	5			5	135	2,453	80	100	61
	Thorold	3			4	269	14,275	100	200	300
	Wainfleet	41					57,040	46	4,509	967
	Willoughby	54	1	2	4	79	38,292	76	2,418	656
Wellington	Peel			1						
Wentworth	Beverly	1								
	Binbrook	46	2		4	98	40,925	52	687	50
	Glanford	10					10,384	42		
Surface wells	Harwich and Howard	55					6,500			
Private wells		335			6	61	60,000			
Used by gas companies (not detailed)	Various fields								154,589	265,572
Total		3,696	121	129	207	24,442	7,051,309		555,486	$339,248

Kent	Camden								9,799	
	Camden gore	14		1	11	3,114	61,006	767	11,299	
	Chatham	26		4	1	117	235,751	569	18,301	
	Chatham gore				1	100			225	
	Dover	14	2				134,814	113	3,171	1,013
	Harwich			1					2,134	
	Howard								1,900	
	Orford			2						
	Raleigh	22		2	2	388	60,186	102	10,084	5,250
	Raleigh (Declute)	39					439,245	296	1,000	350
	Romney	134	4	1			568,733	152	4,038	1,520
	Tilbury East	117	2	1			1,472,474	130	10,158	1,218
	Zone	41	1	3	8	3,597	692,149	620	18,375	
Lambton	Brooke								302	
	Dawn	31					319,897	344	12,087	
	Enniskillen	4		2			17,401		9,934	339
	Euphemia								6,276	
	Moore			1					3,891	
	Sombra	6			6	5,053		835	36,492	6,221
Lincoln	Caistor	91	2	1	9	321	65,721	80	9,039	2,181
	Gainsborough	13					8,405	71	810	260
Middlesex	Ekfrid								505	
	Mosa			1					10,299	
Norfolk	Charlotteville	15		3			16,470	217		
	Houghton	4					10,000			
	Middleton	39					35,442	173	1,788	600
	North Walsingham	14		4	6	581	35,525	283		
	South Walsingham	19		1			31,660	350	805	300
	Townsend	64		11	3	156	115,265	270	915	1,154
	Windham	24		1			26,170	246	450	250
	Woodhouse	103	1	6	5	203	179,784	180	10,290	4,590

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1947—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu.ft.	M cu. ft.	
LINCOLN:							
Caistor	1,038	38	....	3,722	.....	.....	72½c. (M.B.[2] 65c.)
Gainsborough	1,921	61	9	3,984	2,088	.....	82½c.
Grantham	6,550	79	....	3,841	.....	.....	97½c. (M.R.[1] 25c.)
South	3,495	5	....	243	.....	.....	97½c. (M.R.[1] 25c.)
MIDDLESEX:							
Caradoc	2,548	23	....	2,432	.....	3,482	K
Delaware	1,005	4	....	222	.....	.....	K
Ekfrid	1,828	22	....	1,995	.....	.....	K
Lobo	1,789	1	....	38	.....	3,240	K
Mosa	1,349	2	....	77	.....	.....	K
Westminster	8,376	134	....	9,872	.....	.....	E and K
NORFOLK:							
Charlotteville	3,072	47	....	3,340	.....	.....	82½c.
Houghton	1,752	42	....	1,218	.....	.....	T
Middleton	2,323	201	....	15,934	.....	.....	82½c.
North Walsingham	2,001	23	1	1,516	191	.....	82½c.
South Walsingham	1,901	37	....	1,980	.....	.....	60c.
Townsend	4,024	95	....	4,280	.....	.....	82½c.
Windham	958	88	....	7,320	.....	.....	82½c.
Woodhouse	2,448	298	....	21,560	.....	.....	82½c.
OXFORD:							
Dereham	3,120	31	....	2,128	.....	378	90c. (M.B.[2] $1.00)
East Oxford	2,249	10	....	489	.....	.....	G
South Norwich	2,127	9	....	1,792	.....	.....	90c. (M.B.[2] $1.00)
West Oxford	1,965	15	....	779	.....	.....	G
WATERLOO:							
North Dumfries	2,770	95	....	2,123	.....	.....	G
Waterloo	8,581	7	....	501	.....	.....	G
WELLAND:							
Bertie	4,035	1,288	39	104,599	5,916	.....	F
Crowland	7,860	53	15	1,671	1,657	.....	F
Humberstone	2,995	511	23	33,266	3,926	.....	F
Pelham	2,850	45	4	2,189	628	.....	L and 97½c.
Wainfleet	2,707	316	14	17,334	2,266	4,727	82½c.
Willoughby	837	26	16	1,831	2,825	.....	F
WENTWORTH:							
Ancaster	4,993	211	....	18,191	.....	.....	(3)
Barton	3,538	512	....	13,193	.....	3,403	92½c. (M.B.[2] $1.00)
Binbrook	1,192	116	17	9,144	2,733	.....	82½c.
East Flamborough	3,872	214	....	9,168	.....	.....	(3)
Glanford	1,420	165	2	12,971	434	.....	82½c.
Saltfleet	7,591	374	....	10,503	.....	.....	(3)
West Flamborough	2,779	11	....	161	.....	.....	(3)
Total	.....	12,848	445	959,282	89,439	75,210	.....

Gas Wells and Their Production

Table VI, which has been published annually since 1922, gives a breakdown of the wells drilled in each township and the quantity of gas produced. The chief companies, the Dominion Natural Gas Company and the Union Gas Company of Canada, do not measure the gas produced by townships but by the field as a whole. The quantity of gas produced as given by townships is, therefore, in most cases only an approximation. An examination of the acres under lease gives some idea of the relative importance of the different townships as gas fields.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1947

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Brant	Brantford	2					1,269	80	150	$40
	Onondaga	19					11,931	60	1,235	325
	Tuscarora	47	10		1	23	60,621	87	43,696	1,637
Elgin	Aldborough								31,298	
	Bayham	39	1	1			12,300	167	1,253	2,289
	Bayham (Brownsville)	7					12,340	200	1,000	269
	Dunwich								3,706	
	Malahide	16		2	1	26	37,459	410	847	1,500
	Yarmouth	5		2	4	1,115	6,000	430		
Essex	Gosfield South	27					16,868	160	583	920
	Malden	3		5	1	700		400	3,000	700
	Mersea	5					2,240	268		
	Tilbury North			3					50	
Haldimand	Canborough	160	3	3	7	314	188,922	87	2,600	1,296
	Dunn	94		5	28	2,907	144,498	264	2,954	918
	Moulton	104		3	2	64	74,711	124	2,333	1,246
	North Cayuga	247	4	12	11	594	247,329	160	13,417	5,383
	Oneida	124	14	14	19	759	117,169	134	3,445	1,383
	Rainham	303	13	2			334,620	148	11,685	5,467
	Seneca	145	10	5	3	75	96,715	70	6,178	2,320
	Sherbrooke	16					15,588	160	260	25
	South Cayuga	98	4	2	8	692	64,621	155	2,049	425
	Walpole	555	21	6	5	105	555,275	190	21,151	13,716

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1947—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Oxford	Dereham (Brownsville)	7			1	90	14,033	300	1,000	310
	South Norwich	1					1,792			
Welland	Bertie	191			8	134	135,333	72	23,506	7,593
	Crowland	39			4	60	40,304	28	4,893	742
	Humberstone	96	3	2	16	[1]813	59,275	54	1,887	817
	Stamford	5					5,874	80	100	173
	Thorold	11		2	7	319	27,676	110	1,550	1,052
	Wainfleet	41	1	4	1	37	50,890	46	4,540	938
	Willoughby	59	1	3	6	124	53,622	76	2,184	936
Wentworth	Beverly		1							
	Binbrook	46					40,275	52	687	50
	Glanford	10					9,592	43		
Surface wells	Harwich and Howard	55					6,000			
Private wells		367			32	253	60,500			
Used by gas companies (not detailed)									159,250	281,741
Total		3,793	114	113	207	40,571	7,785,921		583,887	$351,886

[1]8 storage wells.

Kent	Camden			1					8,824	
	Camden gore	15		6	1	159	246,004	544	10,421	
	Chatham	25	1				220,158	510	10,749	
	Chatham gore	1							225	
	Dover	13	1				129,184	170	3,039	925
	Harwich								557	
	Howard			1					1,528	
	Orford								2,137	
	Raleigh	22					56,324	150	6,198	279
	Raleigh (Declute)	38	1				427,309	266	1,000	350
	Romney	132	2				557,127	151	3,628	1,345
	Tilbury East	115	2				1,244,489	130	9,330	1,050
	Zone	42	1	1	2	483	1,251,338	520	17,411	
Lambton	Brooke								358	
	Dawn	31	3		3	[1]18,530	506,599	300	11,887	
	Enniskillen	4		1			10,752		11,094	339
	Euphemia			2					10,660	
	Moore	3		5	3	1,605	210		39,085	370
	Plympton			2					8,574	
	Sarnia			1						
	Sombra	8	2	6	4	9,218	134,742	780	33,578	2,719
Lincoln	Caistor	92	9	4	10	274	73,978	79	9,239	2,722
	Gainsborough	12	2		1	3	7,668	66	710	260
Middlesex	Ekfrid								1,608	
	Metcalfe								2,985	
	Mosa								10,042	
Norfolk	Charlotteville	15					13,875	205		
	Houghton	4					12,615	380		
	Middleton	39					28,300	173	1,788	600
	North Walsingham	22		2	8	452	45,629	347		
	South Walsingham	20		1	1	12	31,819	348	805	350
	Townsend	63	1				70,499	230	1,020	1,204
	Windham	24					21,772	212	450	250
	Woodhouse	109	3	3	9	631	189,888	180	12,470	5,012

[1]3 storage wells.

Leakage

Tables VII, VIII, and IX, which show the leakage on all pipe lines in Ontario where gas is measured, have been published annually since the year 1922. A comparison of these tables shows a fluctuation in leakage. Much of this is due to errors in measurement, and the source of these errors has up to date not been discovered. Research done during the past year has shown that the maintenance of orifice meters requires much greater care in both inspection and repair than hitherto thought necessary. It is hoped that when maintenance men have become highly skilled in refinements in measurement, then volumes and pressures, which fluctuate through wide ranges, will become comparable.

TABLE VII—LEAKAGE IN TRANSMISSION LINES, 1947

	Equivalent miles of 3-inch pipe	Volume received	Volume delivered	Actual leakage	Average pressure on pipe lines
		M cu. ft.	M cu. ft.	M cu. ft.	lbs. per sq. in.
Port Alma to Sarnia and Petrolia	434.3	3,610,021	3,534,239	75,782	40–80
Glenwood to Hamilton	710.05	1,355,138	1,340,488	14,650	60
Glenwood to Leamington	54.65	444,485	401,893	42,592	65
Port Alma to Ridgetown	78.07	286,713	274,519	12,194	28–80
Dawn field to Bothwell	16.7	55,067	54,626	441	30–50
Port Alma to Windsor	356.74	2,327,694	2,267,997	59,697	30–80
Galt to Hespeler	14.45	210,557	209,481	1,076	20
Caledonia to Hamilton	58.5	157,948	143,128	14,820	15–50
Tilbury field line	1.57	2,193	1,988	205	100
Dawn field to London	.....	1,178,408	1,178,408	.....	40–80
Leamington to Cottam	20	156,289	138,142	18,147	15
Finger to St. Catharines	49.38	524,983	512,602	12,381	50
Total	1,794.41	10,309,496	10,057,511	251,985	.....

Table VIII shows the leakage on tributary lines to the main transmission lines, where a considerable number of consumers are served.

TABLE VIII—LEAKAGE ON RURAL LINES, 1947

Division	Equivalent feet of 3-inch pipe in all rural lines	Leakage for year		Average No. of consumers	Leakage per consumer	Average pressure on pipe lines	
		Actual	Allowable			Low pressure	High pressure
		M cu. ft.	M cu. ft.		cu. ft.	ozs.	lbs.
Windsor system	123,526	8,436	4,680	560	15,064	5	.....
Sarnia system	322,107	8,147	12,202	185	44,037	5	.....
London system	14,642	481	554	45	10,688	5	.....
Ridgetown system	129,215	4,033	4,894	520	7,756	.....	5
Main (Blake system)	32,313	3,287	1,224	85	38,434	4	.....
Total	621,803	24,384	23,554	1,395	.....	.....	.....

It will be seen in Table IX that some plants showed a gain instead of a loss as through leakage. Inquiries have failed to show how these gains occur, but some hope is in sight through the studies made in the inspection of the orifice meter. The present refinements in inspection are far beyond anything done in the past, and it is hoped that this problem, which has hitherto baffled the companies, may soon be solved or at least minimized.

TABLE IX—LEAKAGE IN DISTRIBUTION PLANTS, 1947

Town or city	Company	Equivalent miles of 3-inch pipe in distribution plants	Leakage for year		Average No. of consumers	Leakage per consumer	Pressure ozs. per sq in.
			Actual	Allowable			
			M cu. ft.	M cu. ft.		cu. ft.	
Alvinston	Union Gas Co.	6.2	.....	1,247	270	.....	6
Ancaster	Dom. Nat. Gas Co.	1.4	33	280	91	360	4
Appin	Union Gas Co.	.99	73	198	49	1,490	5
Beachville	Beachville Gas Synd.	28.5	533	5,700	36	14,800	4
Belle River	Union Gas Co.	4.6	.....	912	278	.....	5
Belmont	Belmont Gas Co.	8	3,335	1,600	133	25,075	6
Blenheim	Union Gas Co.	13.37	2,856	2,665	739	3,864	5
Bothwell	Union Gas Co.	5.57	.....	1,110	212	.....	5
Brantford	Dom. Nat. Gas Co.	94.25	46,434	18,150	6,363	7,297	4
Brigden	Union Gas Co.	4.07	722	798	182	4,000	6
Byron	Union Gas Co.	3.05	507	608	98	5,173	6
Cainsville	Dom. Nat. Gas Co.	5.57	285	1,114	31	9,193	4
Cayuga	Dom. Nat. Gas Co.	5.86	1,395	1,172	230	6,087	4
Chatham	Union Gas Co.	88.28	.....	.....	5,530	.....	6
Comber	Union Gas Co.	3.89	125	775	170	736	6
Corunna	Union Gas Co.	3.76	498	739	251	1,984	6
Courtright	Union Gas Co.	4.61	456	918	154	2,961	6
Delhi	Dom. Nat. Gas Co.	7.08	3,375	1,416	702	4,808	4
Dorchester	Dom. Nat. Gas Co.	2.86	643	572	151	4,251	4
Dresden	Union Gas Co.	12.99	1,821	2,673	674	2,701	5
Dunnville	Dom. Nat. Gas Co.	13.87	6,765	2,774	1,239	5,460	4
Dutton	Dom. Nat. Gas Co.	8.16	2,919	1,632	264	11,057	4
Essex	Union Gas Co.	11.89	.....	2,360	640	.....	5
Fenwick	Dom. Nat. Gas Co.	1.51	96	302	143	671	4
Florence	Union Gas Co.	1.86	.....	375	75	.....	5
Fonthill	Fonthill-Ridgeville Gas Co.	6.54	1,111	1,308	351	3,165	6
Glencoe	Union Gas Co.	7.97	.....	1,590	299	.....	5
Hagersville	Dom. Nat. Gas Co.	7.38	5,272	1,476	526	1,403	4
Hespeler	Dom. Nat. Gas Co.	8.97	2,165	1,794	630	3,438	4
Highgate	Dom. Nat. Gas Co.	2	50	400	122	410	4
Ingersoll	Dom. Nat. Gas Co.	20.82	12,561	4,164	1,349	9,311	4
Inwood	Union Gas Co.	2.12	.....	423	93	.....	5
Jarvis	Dom. Nat. Gas Co.	4.05	3,161	810	255	12,400	4
Kingsville	Dom. Nat. Gas Co.	13.49	4,433	2,698	761	5,825	4
Lambeth	Dom. Nat. Gas Co.	3.84	1,292	768	169	7,645	4
Leamington	Leamington, Town of	25	21,347	21,311	1,992	1,716	6
London	City Gas Co.	326.12	58,440	39,707	17,358	3,370	5
Merlin	Union Gas Co.	2.71	826	541	170	4,859	6
Merritton	Dom. Nat. Gas Co.	4.52	119	904	676	175	4
Mount Brydges	Union Gas Co.	3.68	.....	734	150	.....	5
North Pelham	Dom. Nat. Gas Co.	.72	448	144	45	9,955	4
Norwich	Norotto Gas Co.	25.5	1,549	5,100	139	1,115	5
Paris	Dom. Nat. Gas Co.	14.92	8,454	2,984	1,060	7,975	4
Petrolia	Union Gas Co.	17.72	4,780	3,539	886	5,395	6
Port Colborne	Dom. Nat. Gas Co.	30.4	3,434	608	1,755	1,956	4
Port Dover	Dom. Nat. Gas Co.	7.94	8,474	1,588	703	12,054	4
Port Lambton	Union Gas Co.	2.16	.....	418	100	.....	5
Preston	Dom. Nat. Gas Co.	20.96	4,858	4,192	1,213	4,000	4
Ridgetown	Union Gas Co.	17.99	2,580	3,582	753	3,430	5
Rodney	Dom. Nat. Gas Co.	5.39	2,034	1,078	279	7,290	4
St. Catharines	Dom. Nat. Gas Co.	68.8	37,862	1,376	6,868	5,510	4
St. George	Dom. Nat. Gas Co.	2.11	340	422	153	2,220	4
St. Thomas	Dom. Nat. Gas Co.	55.85	24,514	11,170	3,297	7,435	4
Sarnia	Union Gas Co.	103.9	16,198	20,712	6,198	2,610	5
Shedden and Fingal	Dom. Nat. Gas Co.	6.11	2,364	1,222	161	14,680	4
Simcoe	Dom. Nat. Gas Co.	29.69	[1]	5,938	2,576	1,090	4
Sombra and Port Lambton	Union Gas Co.	2.65	429	529	220	1,950	5

[1]These distribution plants show a gain of 4,716 M cubic feet.

TABLE IX—LEAKAGE IN DISTRIBUTION PLANTS, 1947—*Continued*

Town or city	Company	Equivalent miles of 3-inch pipe in distribution plants	Leakage for year		Average No. of consumers	Leakage per consumer	Pressure, ozs. per sq. in.
			Actual	Allowable			
			M cu. ft.	M cu. ft.		cu. ft.	
South London	Dom. Nat. Gas Co.	8.87	4,573	1,774	458	9,980	4
Thamesville	Union Gas Co.	6.94	.....	1,382	316	.....	5
Thorold	Dom. Nat. Gas Co.	13.19	3,692	2,638	1,270	2,910	4
Tilbury	Union Gas Co.	9.68	231	1,916	676	340	5
Tillsonburg	Dom. Nat. Gas Co.	23.49	10,430	4,698	1,453	7,180	4
Wallaceburg	Union Gas Co.	26.45	.....	.....	1,760	.....	6
Waterford	Dom. Nat. Gas Co.	5.88	[1]	1,176	350	1,120	4
West Lorne	Dom. Nat. Gas Co.	3.89	1,848	778	212	8,720	4
Wheatley	Dom. Nat. Gas Co.	3.46	[1]	692	267	1,910	4
Windsor	Union Gas Co.	523.25	34,123	104,215	23,870	1,020	5
Woodburn	Dom. Nat. Gas Co.	2.03	759	406	49	1,550	4
Woodstock	Dom. Nat. Gas Co.	48.45	19,766	9,690	2,638	7,530	4
Wyoming	Union Gas Co.	5.2	785	1,037	193	4,070	6
Total	.....	1,874.99	378,173	323,722	103,524	.....	.....

	M cu. ft.
Actual leakage	378,173
Gain[1]	4,716
Net loss	373,457

Licenses Issued in 1947

The Natural Gas Conservation Act, R. S. O. 1937, The Well Drillers' Act, R. S. O. 1937, and the Regulations made under these Acts require that the several operations carried out shall be done under license. Tables X to XIV show a list of those to whom licenses were issued during 1947. The licenses required under the above Acts and the cost of each are as follows:—

To Lease and Prospect for Natural Gas	$5.00
To Drill or Bore for Natural Gas or Oil	5.00
To Produce Natural Gas	10.00
To Distribute Natural Gas	10.00
To Operate Natural Gas Pipe-Lines	10.00

TABLE X—OPERATORS LICENSED TO LEASE AND PROSPECT FOR NATURAL GAS, 1947

License No.	Name	Address
6316	Annan Petroleum, Ltd.	Toronto, Ont.
6269	Barnhart, C.	Chatham, Ont.
6286	Beattie, J. A.	Glencoe, Ont.
6285	Blackwell, G. A.	Caledonia, Ont.
6311	Bond, N. R.	Toronto, Ont.
6276	Canfield Natural Gas Co., Ltd.	Dunnville, Ont.
6249	Chalton, W. E.	Ingersoll, Ont.
6296	Clutton, E.	Leamington, Ont.
6304	Coste, E. F.	Toronto, Ont.
6305	Coste, Eugene, and Co.	Toronto, Ont.
6267	Coste, L. A.	Toronto, Ont.
6265	Crowland Gas Syndicate	Welland, Ont.
6266	Crowland Gas Syndicate	Welland, Ont.
6280	Dell, H. C.	Niagara Falls, Ont.
6302	Dolphin, R.	Strathroy, Ont.
6315	Doran, B.	Meaford, Ont.
6281	Finnigan, C.	Niagara Falls, Ont.
6250	Hayes, J.	Simcoe, Ont.

TABLE X—OPERATORS LICENSED TO LEASE AND PROSPECT FOR NATURAL GAS, 1947—*Continued*

License No.	Name	Address
6317	Imperial Oil, Ltd.	Toronto, Ont.
6252	Jamieson, A. H.	Tillsonburg, Ont.
6277	Jones, S. O.	Orchard Park, N. Y.
6299	Kennedy, W. D.	Detroit, Mich.
6253	Kiff, H.	Leamington, Ont.
6254	Kiff, W.	Leamington, Ont.
6260	Killby, W.	Chatham, Ont.
6258	McClelland, L. M.	Chatham, Ont.
6247	McKillop, W.	Hamilton, Ont.
6291	McPherson, R.	Windsor, Ont.
6308	Mahaffy, A. M.	Toronto, Ont.
6309	Mahaffy, M. F.	Toronto, Ont.
6275	Mehlenbacher, L. B.	Cayuga, Ont.
6279	Mercer, W. J.	Niagara Falls, Ont.
6314	Newberry, C. H.	Caro, Mich.
6313	Newberry, E.	Otter Lake, Mich.
6255	Palmer, J. E.	Wainfleet, Ont.
6282	Quinn, M. M.	Buffalo, N. Y.
6289	Rahn, C. H.	Grimsby, Ont.
6318	Ramsey Drilling Co.	Toronto, Ont.
6268	Reaume, H.	Chatham, Ont.
6257	Reicheld, F. W.	Jarvis, Ont.
6272	Reichheld, O. E.	Chatham, Ont.
6306	Ricker, A.	Canboro', Ont.
6284	Roth, E. A.	Detroit, Mich.
6270	Sadlier, L.	Chatham, Ont.
6290	Sauer, C. E.	Chippawa, Ont.
6271	Scullard, F. B.	Chatham, Ont.
6312	Sider, A.	Stevensville, Ont.
6287	Sider, R.	Ridgeway, Ont.
6297	Singleton, C.	Glencoe, Ont.
6251	Smiley, T.	Blackheath, Ont.
6259	Smith, J. H.	St. Thomas, Ont.
6278	Stein, A.	Buffalo, N. Y.
6274	Stover, R. M.	Highgate, Ont.
6273	Thompson, J.	Chatham, Ont.
6301	Tole, A. E.	Blenheim, Ont.
6256	Treleaven, A.	London, Ont.
6262	Tyrill, E. W.	Fort Erie North, Ont.
6263	Walsh, J. F.	Buffalo, N. Y.
6293	Warren, G.	Canboro', Ont.
6310	Weiss, A. A.	Toronto, Ont.
6283	Whittal, F.	Amherstburg, Ont.
6303	Whittal, F.	Amherstburg, Ont.
6298	Wilson-Sullivan Development Co.	Sarnia, Ont.
6294	Winter, L. E.	Leamington, Ont.

TABLE XI—OPERATORS LICENSED TO DRILL OR BORE FOR NATURAL GAS OR OIL, 1947

License No.	Name	Address
1625	Annan Petroleum, Ltd.	Toronto, Ont.
1571	Culver, Marvin	Selkirk, Ont.
1587	Culver and Havill	Stevensville, Ont.
1624	Demaray, C.	Kerwood, Ont.
1608	Dennis, G. A.	Selkirk, Ont.
1613	Dominion Petroleum Co., Ltd.	Glencoe, Ont.
1630	Earl, S. B.	Kerwood, Ont.
1586	Ehde and Meier	Thamesville, Ont.
1591	Evans, Harry	Tillsonburg, Ont.
1592	Evans, Harry	Tillsonburg, Ont.
1593	Evans, Harry	Tillsonburg, Ont.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1948—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
LINCOLN:							
Caistor	1,038	54	.....	2,870	.....	14	72½c. (M.B.[2] 65c.)
Gainsborough	1,921	66	8	4,801	1,228	.....	82½c.
Grantham	6,550	83	.....	3,680	.....	.....	97½c. (M.R. 25c.)
South	3,495	5	.....	230	.....	.....	97½c. (M.R. 25c.)
MIDDLESEX:							
Caradoc	2,548	30	.....	2,357	.....	4,655	K
Delaware	1,005	5	.....	222	.....	.....	K
Ekfrid	1,828	23	.....	1,812	.....	.....	K
Lobo	1,789	1	.....	76	.....	2,931	K
Mosa	1,349	2	.....	86	.....	.....	K
Westminster	8,376	144	.....	9,195	.....	148	E and K
NORFOLK:							
Charlotteville	.....	47	5	3,010	584	.....	82½c.
Middleton	2,323	196	2	14,058	222	.....	82½c.
North Walsingham	2,001	11	1	1,310	211	.....	82½c.
South Walsingham	.....	37	4	1,782	552	.....	60c.
Townsend	.....	95	.....	3,850	.....	.....	82½c.
Windham	.....	88	1	6,590	194	.....	82½c.
Woodhouse	.....	298	10	19,410	1,547	.....	82½c.
OXFORD:							
Dereham	3,120	37	.....	2,460	.....	.....	90c. (M.B. $1.00)
East Oxford	2,249	12	.....	538	.....	.....	G
South Norwich	2,127	9	.....	1,583	.....	.....	90c. (M.B. $1.00)
West Oxford	1,965	73	.....	5,066	.....	827	G
WATERLOO:							
North Dumfries	2,770	97	.....	2,126	.....	.....	G
Waterloo	8,581	9	.....	647	.....	.....	G
WELLAND:							
Bertie	4,035	948	39	73,325	6,879	.....	F
Crowland	7,860	69	15	2,232	1,939	.....	F
Humberstone	2,995	527	20	32,946	3,209	.....	F
Pelham	2,850	52	4	2,305	658	.....	L and 97½c.
Wainfleet	2,707	344	15	16,982	2,225	4,003	82½c.
Willoughby	837	47	17	2,831	1,908	.....	F
WENTWORTH:							
Ancaster	4,993	211	.....	16,830	.....	.....	[3]
Barton	3,538	40	.....	1,951	.....	.....	92½c. (M.B. $1.00)
Binbrook	1,192	117	17	7,699	2,691	2	82½c.
Glanford	1,420	175	2	11,971	347	397	82½c.
Total	.....	12,135	463	874,484	88,198	54,805	.....

Gas Wells and Their Production

Table VI shows the condition of all the gas fields in Ontario. All information is given except the total open flow of the fields; this is withheld because it is the confidential information of each gas company. Any one seeking information regarding the natural gas fields in Ontario can find in this table information useful to him in searching for gas in Ontario. Similar tables have been published since 1921 and are available to the public for examination. A detailed study of the different fields along with comparisons over past years is given for the benefit of those who have not these reports with which to make comparisons.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1948

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Brant	Brantford	2					886		150	$35.00
	Onondaga	16	3				6,583	60	1,235	325.00
	Tuscarora	42	7		2	47	44,222	86	43,696	1,537.00
Elgin	Aldborough	7		4	7	4,254	1,172	715	30,387	
	Bayham	34	7	1	2	263	27,254	170	4,453	2,289.00
	Bayham (Brownsville)	7					20,100		1,000	625.00
	Dunwich			2					16,429	
	Malahide	16					8,175	430	1,347	400.00
	Yarmouth	5					2,691	430	1,200	400.00
Essex	Gosfield South	27					15,777		583	920.00
	Malden	5		1	2	470		400	800	
	Mersea	3					2,150	288		
	Tilbury North			1					50	
	Tilbury West	2			2	800	430	494	3,311	1,588.00
Haldimand	Canborough	169	1	4	9	460		92	2,791	1,450.00
	Dunn	113	1	7	7	313		227	4,694	1,832.00
	Moulton	109	1	1	6	265		134	2,133	1,231.00
	North Cayuga	244	10	7	7	183		135	12,379	4,745.00
	Oneida	136	2	9	16	899		111	2,647	952.00
	Rainham	278	32	2	6	364	1,655,962	140	9,818	4,288.00
	Seneca	133	6	1	4	142		64	5,897	2,080.00
	Sherbrooke	16						160	100	25.00
	South Cayuga	103	6	12	11	612		152	1,544	550.00
	Walpole	528	38	5	5	229		177	21,207	13,391.00
Huron	Tuckersmith			1						

Kent	Camden								545	
	Camden gore	16		3	1	106	256,521	522	8,220	
	Chatham	23	2	1			379,705	479	7,332	
	Chatham gore								275	
	Dover	14		4	1	600	134,780	162	11,516	3,889.00
	Orford								2,137	
	Raleigh	19	3	1			52,420	256	4,470	185.00
	Raleigh (Declute)	38					475,964	255	3,137	425.00
	Romney	129	4	3	1	130	470,601	146	14,749	11,946.00
	Tilbury East	110	5				1,211,680	132	9,020	1,050.00
	Zone	44		2	2	182	1,488,010	421	8,900	
Lambton	Brooke								358	
	Dawn	26	5	2			343,157	326	14,495	
	Enniskillen	4		3			7,841		9,119	339.00
	Euphemia								4,422	
	Moore	8		6	5	6,500	339,838	835	34,036	6,410.00
	Plympton								8,610	
	Sarnia				1	1		50		
	Sombra	6	3	6	1	200	550,597	835	24,758	9,328.00
	Warwick			1					9,391	
Lincoln	Caistor	96	5	1	8	225	76,944	84	8,939	3,587.00
	Gainsborough	10	2				2,989	67	760	255.00
Middlesex	Ekfrid								3,978	
	Metcalfe								3,782	
	Mosa			2					7,703	
Norfolk	Charlotteville	15					16,950	200		
	Houghton	7		2	3	370	13,662	480	8,000	2,000.00
	Middleton	33	9	1	3	203	30,270	181	100	25.00
	North Walsingham	25		5	3	239	25,400	317		
	South Walsingham	22			2	161	36,800	353	805	350.00
	Townsend	61	2				61,827	223	958	1,304.00
	Windham	22	2				16,236	229	250	150.00
	Woodhouse	124		9	14	1,439	212,825	200	12,962	830.00

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1948—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Oxford	Dereham (Brownsville)	7	3	.....	3	886	24,221	350	1,000	625.00
	South Norwich	1	.....	.....	.....	.....	1,595	.....	200	100.00
Welland	Bertie	196	4	5	9	307	175,979	71	24,405	8,581.00
	Crowland	49	1	3	11	537	70,945	28	4,718	985.00
	Humberstone	106	3	2	[1]12	103	58,916	54	2,056	788.00
	Stamford	5	.....	.....	.....	.....	4,421	76	100	100.00
	Thorold	20	.....	3	9	550	51,096	125	2,654	1,611.00
	Wainfleet	41	1	3	1	23	43,448	44	3,980	814.00
	Willoughby	62	1	5	5	75	66,683	73	2,458	1,330.00
Wentworth	Binbrook	45	1	.....	.....	.....	28,006	49	200	200.00
	Glanford	10	.....	.....	.....	.....	8,200	42	.....	.....
Surface wells	Howard and Harwich	55	.....	.....	.....	.....	6,500	.....	.....	.....
Private wells	.....	341	.....	.....	.....	.....	60,000	.....	.....	.....
Used by gas companies (not detailed), various fields	.....	.....	.....	.....	.....	.....	.....	.....	177,176	263,602.00
Total	.....	3,785	170	131	181	22,138	8,590,429	.....	610,515	$359,472.00

[1]6 storage wells.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1949

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	27					17,006	160	583	$920
	Malden	5						395	3,000	
	Mersea	3						285		
Kent	Camden gore	16					162,581	504	8,822	
	Chatham	23					272,893	436	3,221	
	Chatham gore								275	
	Dover	14					100,431	173	2,411	1,200
	Orford								4,200	
	Raleigh (Declute)	38					355,370	250	4,313	615
	Raleigh	19		1			1,896,370	249		
	Romney	128	2	1	1	343		146	8,897	11,996
	Tilbury East	109	1					134	8,807	900
	Zone	48		3	4	1,118	681,940	416	8,665	
Lambton	Brooke						112,863		5,072	
	Dawn	26						306	17,976	
	Enniskillen	4						150	7,826	340
	Euphemia			1					3,080	
	Moore	14		10	6	59,061	1,402,106	830	11,201	
	Plympton			2						
	Sarnia			1						
	Sombra	7	2	3	1	615	283,955	830		
	Warwick								3,445	
Middlesex	Adelaide								18,182	
	Caradoc								7,104	
	Ekfrid								5,344	
	Lobo								14,767	
	Metcalfe			1					8,606	

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1949—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
MIDDLESEX:							
Caradoc	3,002	25	.....	2,459	.....	7,211	U
Delaware	1,116	5	.....	175	.....	.....	U
Ekfrid	1,804	76	.....	4,985	.....	.....	U
Lobo	1,875	1	.....	82	.....	4,500	U
Mosa	1,395	2	.....	77	.....	.....	U
North Dorchester[1]	2,857	177	.....	5,512	.....	5,380	E
Westminster	10,484	218	.....	13,680	.....	413	U and K
NORFOLK:							
Charlotteville[1]	3,840	251	5	14,829	715	4,553	77½c.
Houghton	1,733	48	.....	1,996	.....	.....	T
Middleton[1]	2,651	220	2	13,839	478	9,409	77½c.
North Walsingham[1]	2,203	22	1	1,181	427	4,184	77½c.
South Walsingham[1]	1,876	89	4	4,103	525	1,198	77½c.
Townsend[1]	4,095	106	.....	3,465	.....	489	77½c.
Windham[1]	3,958	94	1	5,931	326	1,382	77½c.
Woodhouse[1]	2,643	317	10	20,017	1,936	2,977	77½c.
OXFORD:							
Dereham[1]	3,379	37	.....	2,239	.....	.....	80½c. (M.B. 80c.)
East Oxford[1]	2,033	15	.....	688	.....	.....	G
North Oxford[1]	1,175	5	.....	117	.....	.....	G
South Norwich	2,318	52	.....	5,111	.....	.....	80½c. (M.B. 80c.)
West Oxford[1]	2,211	58	.....	3,592	.....	.....	G
WATERLOO:							
North Dumfries[1]	3,850	95	.....	2,066	.....	.....	G
Waterloo[1]	11,157	10	.....	661	.....	.....	G
WELLAND:							
Bertie	4,616	993	39	75,822	6,802	.....	F
Crowland	9,601	81	15	3,430	1,948	.....	F
Humberstone	3,620	500	19	35,744	2,988	48	F
Pelham	3,435	68	2	2,820	200	.....	L and 92½c.
Wainfleet[1]	3,130	240	11	15,340	2,034	5,243	82½c.
Willoughby	931	50	17	3,120	1,834	.....	$1.05
WENTWORTH:							
Ancaster[1]	5,170	305	.....	19,779	.....	.....	87½c. (M.B. 92c.)
Barton[1]	3,252	41	.....	1,947	.....	.....	77½c.
Binbrook[1]	1,250	118	15	7,038	2,585	.....	77½c.
Glanford[1]	1,767	177	2	10,625	386	494	77½c.
Total	264,458	14,301	482	944,030	[3]89,058	[4]108,560	.....

[1]These townships are liable to the surcharge discussed on page 11.
[2]M.B.—Minimum monthly bill.
[3]Included in this figure is 4,181 M cu. ft. used in drilling.
[4]Included in this figure is 69,747 M cu. ft. used in tobacco-curing and 2,740 M cu. ft. used in drilling.

Gas Wells and Their Production

Table VI is a tabulation of the available information relating to the gas wells and fields in Ontario. Similar tables have been published since 1922 and are available to the public for examination. This information will be found useful to any one studying the productivity of the various gas fields of Ontario. The names of the formations and all other information regarding the gas fields may be had on application. A general discussion of the year's additions to the gas fields will be found on pages 5 to 9.

TABLE VI—GAS WELLS AND THEIR PRODUCTION, 1949—*Continued*

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Welland	Bertie	219	5	7	28	823		72	25,777	10,079
	Crowland	45	5	3	4	50		26	4,993	763
	Humberstone	112	5	4	11	350		54	2,330	1,050
	Pelham			1			455,461			
	Stamford	5						75	100	86
	Thorold	24		3	7	547		125	2,016	1,447
	Wainfleet	38	4	1	1	10		42	3,610	680
	Willoughby	66			4	63		72	2,199	960
York	Markham			1						
Surface wells	Howard and Harwich	55					6,500			
Private wells		375					80,000			
Held by companies (not detailed), various fields									167,081	288,154
Total		3,812	173	120	172	71,094	8,024,213		541,605	$361,019

	Mosa	4	.....	2	4	1,555		765	10,281	.....
Elgin	Aldborough	11	.....	.....	4	591	1,553	695	12,074	.....
	Dunwich	3	.....	4	3	695		765	16,187	.....
	Bayham	33	2	.....	1	121		250	4,000	1,800
	Malahide	16	.....	2	.....	.....	22,339	350	1,200	400
	Yarmouth	5	.....	1	.....	.....		350	1,200	400
	Southwold	.....	.....	2	.....	.....	.....	.....	.....	.....
	Bayham (Brownsville)	5	2	.....	.....	.....		340	1,000	625
Oxford	Dereham (Brownsville)	9	3	.....	5	405	66,849	340	1,000	625
	South Norwich	1	.....	.....	.....	.....		345	200	100
Norfolk	Charlotteville	15	.....	1	.....	.....		225	.....	.....
	Houghton	7	.....	.....	.....	.....		300	8,000	2,000
	Middleton	32	2	4	1	280		199	.....	.....
	North Walsingham	29	.....	4	4	260	372,165	296	.....	.....
	South Walsingham	22	.....	.....	.....	.....		319	805	300
	Townsend	61	.....	.....	.....	.....		224	692	1,289
	Windham	24	.....	1	2	140		224	250	150
	Woodhouse	132	1	12	9	307		192	13,336	3,574
Brant	Brantford	2	.....	.....	.....	.....		35	150	50
	Onondaga	11	5	.....	.....	.....	49,615	60	700	100
	Tuscarora	28	14	.....	.....	.....		85	43,696	1,537
Wentworth	Binbrook	35	10	.....	.....	.....		49	287	215
	Glanford	10	1	1	1	35		39	.....	.....
Haldimand	Canborough	155	18	3	4	115		115	2,500	985
	Dunn	113	16	3	16	1,331		186	2,418	627
	Moulton	116	2	6	9	292		144	2,817	1,006
	North Cayuga	238	7	1	1	11		129	10,106	4,200
	Oneida	120	20	10	4	137	1,684,218	122	2,600	578
	Rainham	282	12	.....	1	20		139	11,202	3,672
	Seneca	126	19	5	2	18		61	3,873	2,417
	Sherbrooke	15	1	.....	.....	.....		148	.....	.....
	South Cayuga	116	1	5	14	1,140		158	1,484	525
	Walpole	534	4	7	15	545		177	17,195	11,075
Lincoln	Caistor	92	8	2	4	114		73	8,239	3,454
	Gainsborough	10	1	1	1	12		58	210	125

TABLE VI—GAS CONSUMPTION IN TOWNSHIPS, 1950—*Continued*

County and township	Population	Number of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
MIDDLESEX:							
Caradoc	3,002	32	.....	2,925	.....	6,114	U
Delaware	1,116	6	.....	271	.....	2,152	U
Ekfrid	1,804	80	.....	6,446	.....	.....	U
Lobo	1,875	1	.....	123	.....	8,002	U
Mosa	1,395	2	.....	92	.....	.....	U
North Dorchester[1]	2,857	195	.....	7,613	.....	3,584	E
Westminster	10,484	234	.....	16,313	.....	1,067	U and K
NORFOLK:							
Charlotteville[1]	3,840	274	5	16,613	927	6,442	77½c.
Houghton	1,733	48	.....	1,575	.....	.....	T
Middleton[1]	2,651	236	2	16,526	394	12,215	77½c.
North Walsingham[1]	2,203	24	1	1,637	789	5,940	77½c.
South Walsingham[1]	1,876	109	4	4,590	508	850	77½c.
Townsend[1]	4,095	112	1	3,880	144	1,504	77½c.
Windham[1]	3,958	101	1	6,642	477	2,091	77½c.
Woodhouse[1]	2,643	336	10	22,420	2,114	2,527	77½c.
OXFORD:							
Dereham[1]	3,379	44	.....	3,500	.....	.....	80½c. (M.B.[2] 80c.)
East Oxford[1]	2,033	15	.....	811	.....	.....	G
North Oxford[1]	1,175	3	.....	125	.....	.....	G
South Norwich[1]	2,318	51	.....	4,958	.....	.....	80½c. (M.B.[2] 80c.)
West Oxford[1]	2,211	53	.....	3,782	.....	.....	G
WATERLOO:							
North Dumfries[1]	3,850	98	.....	2,454	.....	.....	G
Waterloo[1]	11,157	12	.....	801	.....	.....	G
WELLAND:							
Bertie	4,616	1,066	38	87,058	7,438	24	F
Crowland	9,601	79	15	4,206	2,134	.....	F
Humberstone	3,620	471	24	36,145	3,332	.....	F
Pelham	3,435	74	1	3,067	200	.....	L and 92½c.
Wainfleet[1]	3,130	251	11	18,838	1,758	5,634	82½c.
Willoughby	931	52	17	3,168	1,882	.....	$1.05
WENTWORTH:							
Ancaster[1]	5,170	317	.....	22,381	.....	.....	87½c. (M.B.[2] 92c.)
Barton[1]	3,252	45	.....	2,068	.....	.....	77½c.
Binbrook[1]	1,250	122	10	8,430	2,329	.....	77½c.
Glanford[1]	1,767	182	2	10,867	384	434	77½c.
Total	264,458	14,733	472	1,047,570	95,892	[3]107,511	

[1]These townships are liable to the surcharge mentioned in a previous report (Vol. LIX, pt. 3).

[2]M.B.—Minimum monthly bill.

[3]Included in this figure is 74,891 M cu. ft. used in tobacco curing and 2,896 M cu. ft. used in drilling.

Gas Wells and Their Production

Table VII gives information on every gas field in Ontario. This table has been published every year since 1922, and the development of these fields may easily be followed.

TABLE VII—GAS WELLS AND THEIR PRODUCTION, 1950

County	Township	Number of producing wells	Number of abandoned wells	Wells drilled			Production	Rock pressure, lb. per sq. in.	Acres under lease	Rental paid
				Number dry	Number producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	27					14,866	150	583	$910
	Malden	5						395	3,000	
	Mersea	3	1		1	3		385		
	Tilbury West	3						494	600	
Kent	Camden gore	17		2	1	259	95,646	531	16,965	
	Chatham	24		1	1	200	167,267	439	9,394	
	Chatham gore	1			1	1,085			12,475	
	Dover	14					139,121	203	13,610	1,025
	Orford			1					6,855	
	Raleigh (Declute)	38					231,950	268	4,313	615
	Raleigh	19					1,746,782	233	201	36
	Romney	128	2		1	300		146	10,391	11,996
	Tilbury East	106	3					137	8,560	900
	Zone	49			1	222	439,299	411	7,733	
Lambton	Brooke						4,959		17,139	
	Dawn	26		2				321	25,216	
	Enniskillen	4						150	7,926	340
	Moore	17		9	3	17,100	2,212,905	820	55,336	
	Sarnia								4,500	
	Sombra	9		3	2	900	157,756	810	54,556	
	Warwick								3,203	
Middlesex	Adelaide								12,337	
	Caradoc								3,649	
	Ekfrid								5,344	
	Lobo								20,818	
	Metcalfe		1	1					14,827	

	Mosa	9			5	1,464			13,665	
Elgin	Aldborough	15		2	4	1,930	36,422	703	7,310	
	Dunwich	6		6	3	1,371			11,295	
	Bayham	32	1					230	4,000	2,184
	Malahide	16					27,762	340	1,200	
	Yarmouth	5						340	1,200	
	Bayham (Brownsville)	5						335	750	736
Oxford	Dereham (Brownsville)	10		1	1	15	43,542	330	750	736
	South Norwich	2		2	1	30		335	2,297	1,100
Norfolk	Charlotteville	19		1	4	259		214	1,000	
	Houghton	7						250	8,000	
	Middleton	35		1	3	384		208		
	North Walsingham	32		4	3	577		293		
	South Walsingham	22					384,580	335	865	400
	Townsend	62		1	1	40		212	743	824
	Windham	26		4	2	203		196	250	150
	Woodhouse	138		5	6	555		190	13,336	5,200
Brant	Brantford	2						33	150	27
	Onondaga	11					46,849	52	700	225
	Tuscarora	27	1					78	43,696	1,537
Wentworth	Binbrook	30	5					50	87	
	Glanford	8	2					34		
Haldimand	Canborough	153	4	2	2	82		88	2,200	860
	Dunn	136	3	8	26	2,275		175	2,518	737
	Moulton	124	1	5	9	273		133	2,817	981
	North Cayuga	231	13	2	6	192		134	13,206	6,695
	Oneida	116	6	2	2	30		102	2,151	659
	Rainham	278	4				1,584,476	131	12,737	7,532
	Seneca	118	9	1	1	20		58	4,373	2,155
	Sherbrooke	19		1	4	339		173	410	50
	South Cayuga	121	6	5	11	521		163	1,579	400
	Walpole	516	24	11	6	279		173	16,897	12,054
Lincoln	Caistor	96	2	2	6	470		85	8,039	3,668
	Gainsborough	10						56	60	25

TABLE VII—GAS WELLS AND THEIR PRODUCTION, 1950—*Continued*

County	Township	Number of producing wells	Number of abandoned wells	Wells drilled			Production	Rock pressure, lb. per sq. in.	Acres under lease	Rental paid
				Number dry	Number producing	Open flow				
						M cu. ft.	M cu. ft.			
Welland	Bertie	233	6	6	20	1,535		120	25,106	$10,417
	Crowland	47		2	2	18		32	5,143	913
	Humberstone	125		4	13	220		50	2,159	970
	Stamford	5		1			548,806	50	100	76
	Thorold	29	1	1	6	364		130	1,856	1,439
	Wainfleet	38		1				59	3,440	719
	Willoughby	83	1	3	18	209		76	3,223	1,687
Surface wells	Howard and Harwich	55					6,500			
Private wells		396					120,000			
Held by companies (not detailed), various fields									207,037	333,362
Total		3,938	96	103	176	33,724	8,009,488		745,886	$414,340

Included in the above table is 1 re-opened well in Humberstone township.

Not included in the above table are 2 pool wells, 1 drilled by the Union Gas Company in their Dawn storage area, and the other by the Provincial Gas Company in their Humberstone storage area.

but just as many are in porous areas adjacent to faults. These are from 1,600 feet to 1,800 feet deep, and the original rock pressure was about 800 pounds. The Zone township field, which first produced in 1943, reached its peak in 1948 when it produced 1,488,010 M cubic feet. Its production in 1951 of 226,453 M cubic feet could be increased if necessary. The fields in Moore township are mainly in reefs and are very large producers. There are 22 producing wells and in 1951 their production was 2,396 M cubic feet, over 100 M cubic feet per well. When compared with greater Haldimand field, where 1,940 wells produced 867 M cubic feet per well, the production of these newer fields appears in a very creditable light.

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1951

County	Field	Quantity
		M. cu. ft.
Essex	Kingsville	1,986,211
	Tilbury	
Kent	Dover	180,231
	Electric	44,806
	Declute	268,281
	Chatham and Camden gore	226,453
	Zone	261,070
	Dawn	942
Lambton	Moore (Kimball-Payne)	2,396,834
	Becher	36,859
Middlesex and Elgin	Mosald	184,810
Elgin	Bayham and Malahide	25,583
Haldimand		
Lincoln	Haldimand	1,682,314
Wentworth		
Brant	Brant	22,047
Norfolk	Norfolk	400,383
Oxford	Brownsville	50,119
Welland	Welland	549,399
Wells in surface drift	Harwich and Howard	6,500
Private wells		120,000
Total produced		8,442,842
Retail value		$9,962,553
		M. cu. ft.
Gas distributed other than natural gas produced in Ontario:		
Mixed still gas		$1,616,421
Imported mixed gas		
Imported mixed gas and natural gas from U.S.A.		3,682,039
Oil gas		94,773
Propane gas		23,766
Total of other gases		5,416,999
Total of all gases distributed		13,859,841

Table II gives information of each gas field in Ontario by townships. The table can be found in each report since the year 1921. Referring to the year 1921, the total number of producing wells at the end of that year was 1,915, whereas in 1951 the total was 3,951, an increase of 2,036 wells. In 1921, dry wells drilled numbered 21 and producing wells 115, with an open flow of 18,716 M cubic feet. In 1951 dry holes drilled numbered 113 and producing wells 146, with an open flow of 41,937 M cubic feet. If five wells in Moore township with a phenomenal open flow of 25,985 M cubic feet were excluded, the average open flow in 1921 would be 162.7 M cubic feet and in 1951, 113.1 M cubic feet. The percentage of dry holes to total wells in 1921 was 15.4 percent and in 1951, 43.7 percent.

TABLE II—GAS WELLS AND THEIR PRODUCTION, 1951

County and township	Producing	Abandoned	Wells drilled			Production	Rock pressure
			Producing	Dry	Open flow		
					M cu. ft.	M cu. ft.	lb. per sq. in.
ESSEX:							
Gosfield South	22	5					150
Malden	5			2		11,866	395
Mersea	3						300
Tilbury West	3						445
KENT:							
Camden gore	17			1		69,430	530
Chatham	24					157,023	415
Chatham gore	2		1	4	750		745
Dover	12	2				225,037	150
Orford				1			
Raleigh (Declute)	32	6				268,281	250
Raleigh	19						218
Romney	125	3				1,974,345	147
Tilbury East	106						140
Zone	49					261,070	400
LAMBTON:							
Dawn	24	3	1	7	590	942	340
Enniskillen	3	1					225
Moore	22		5	16	25,985	2,396,834	937
Plympton				1			
Sombra	13		4	17	7,485	36,859	795
MIDDLESEX:							
Mosa	9					184,810	690
ELGIN:							
Aldborough	15						650
Dunwich	6						715
Bayham	32						210
Malahide	16					25,583	320
Yarmouth	5						320
Bayham (Brownsville)	5						335
OXFORD:						50,119	
Dereham (Brownsville)	6	4		1			340
South Norwich	6		4		184		520
NORFOLK:							
Charlotteville	19			3			247
Houghton	7						240
Middleton	37		2	1	125		204
North Walsingham	37		5	5	655	400,383	315
South Walsingham	24		2	2	159		308
Townsend	61	1		1			220
Windham	32		6	3	610		233
Woodhouse	144	3	9	14	934		195
BRANT:							
Brantford		2					...
Onondaga	7	4				22,047	55
Tuscarora	25	2		2			80

TABLE II—GAS WELLS AND THEIR PRODUCTION, 1951—*Continued*

County and township	Producing	Abandoned	Wells drilled: Producing	Wells drilled: Dry	Wells drilled: Open flow	Production	Rock pressure
					M cu. ft.	M cu. ft.	lb. per sq. in.
WENTWORTH:							
Binbrook	29	1	.....	.....	.....		55
Glanford	8	.....	.....	.....	.....		37
HALDIMAND:							
Canborough	148	6	1	1	27		84
Dunn	165	.....	29	5	1,482		165
Moulton	122	13	11	.....	708		143
North Cayuga	216	16	1	1	35		134
Oneida	118	2	4	2	218	1,682,314	93
Rainham	249	30	1	.....	15		130
Seneca	111	8	1	1	15		63
Sherbrooke	20	.....	1	2	40		165
South Cayuga	123	3	3	.....	95		158
Walpole	504	16	4	3	91		163
LINCOLN:							
Caistor	99	2	5	1	232		69
Gainsborough	8	2	.....	.....	.....		52
WELLAND:							
Bertie	250	6	23	9	466		105
Crowland	48	1	2	.....	40		25
Humberstone	131	8	12	3	416		51
Pelham	.....	.....	.....	2	.....	549,399	.....
Stamford	5	.....	.....	.....	.....		50
Thorold	30	.....	1	3	30		120
Wainfleet	37	6	5	1	329		60
Willoughby	82	4	3	.....	221		70
SURFACE WELLS:							
Howard and Harwich	55	.....	.....	2	.....	6,500	.....
PRIVATE WELLS	419	.....	.....	.....	.....	120,000	.....
Total	3,951	160	146	117	41,937	8,442,842	.....

Included in the table are 2 re-opened wells in Humberstone township, Welland county, and 2 re-opened wells in South Cayuga township, Haldimand county.

The columns, "Acres under lease" and "Rentals paid," formerly included in this table, have been omitted this year. These figures are not available by townships, and it is impossible to obtain an accurate break-down. The totals for the province are:

Acres under lease	834,325
Rentals paid	$480,896

Distribution

Table III gives a summary of the distribution of all gases produced, manufactured, and imported over a period of five years. The consumption of all gases in Ontario is greater than in any year since 1917. Included in the total for 1951 is 5,416,999 M cubic feet of gases other than natural gas. The details of this are given at the bottom of Table I and in previous reports.

TABLE III—SUMMARY OF GAS DISTRIBUTION, 1947-51

	1947	1948	1949	1950	1951
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Total distribution to customers	10,252,370	9,422,845	9,025,107	10,460,830	11,206,441
Used by companies for all purposes	334,142	306,085	403,055	457,912	603,300
Used by private well owners	66,500	66,500	86,500	126,500	126,500
Leakage in transmission lines	251,985	162,541	456,048	515,353	527,877
Leakage in distribution plants	373,457	359,661	364,219	314,242	245,503
Leakage in rural lines	24,384	35,162	33,379	34,348	35,949
Used in manufacturing gas plant (Hamilton)	65,625	.....	.....	.....	.....
Natural and still gas to storage	.....	1,162,932	1,748,065	1,499,560	1,114,271
Total amount distributed	11,368,472	11,515,726	11,916,373	13,408,745	13,859,841
Amount, other than natural gas produced in Ontario, included in totals (see Table I)	3,582,551	2,925,297	3,892,160	5,399,257	5,416,499

TABLE IV—NATURAL GAS RATES, 1951

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
A[1]	Dominion Natural Gas Co.	Minimum bill	$1.02
		Up to 10 M cu. ft.	$1.02½ per M cu. ft.
		Over 10 M cu. ft.	77c. per M cu. ft.
B[1]	Dominion Natural Gas Co.		
	October to April	Up to 10 M cu. ft.	72½c. per M cu. ft.
		From 10 M to 20 M cu. ft.	77½c. per M cu. ft.
		Over 20 M cu. ft.	87½c. per M cu. ft.
	May to September	.....	97½c. per M cu. ft.
C[1]	Dominion Natural Gas Co.		
	October to April	Up to 10 M cu. ft.	67½c. per M cu. ft.
		From 10 M to 20 M cu. ft.	72½c. per M cu. ft.
		Over 20 M cu. ft.	82½c. per M cu. ft.
	May to September	.....	92½c. per M cu. ft.
D[1]	Dominion Natural Gas Co.		
	October to April	Up to 10 M cu. ft.	57½c. per M cu. ft.
		From 10 M to 20 M cu. ft.	62½c. per M cu. ft.
		Over 20 M cu. ft.	72½c. per M cu. ft.
	May to September	.....	87½c. per M cu. ft.
E[1]	Dominion Natural Gas Co.	Minimum bill	77c.
	October to April	Up to 10 M cu. ft.	77½c. per M cu. ft.
		From 10 M to 20 M cu. ft.	82½c. per M cu. ft.
		Over 20 M cu. ft.	92½c. per M cu. ft.
	May to September	.....	$1.02½ per M cu. ft.
F	Provincial Gas Co.	Minimum bill	$1.00
		1 M cu. ft. and over	$1.00 per M cu. ft.
	Where imported mixed gas is used.	.....	Same as above plus pro rata share of duty.
	Summer consumers	Minimum bill	$1.30
		1 M cu. ft. and over	$1.30 per M cu. ft.
G[1]	Dominion Natural Gas Co.	Minimum bill	97c.
		Up to 10 M cu. ft.	97½c. per M cu. ft.
		From 10 M to 25 M cu ft.	82½c. per M cu. ft.
		Over 25 M cu. ft.	92½c. per M cu. ft.

[1]These classifications are liable to a surcharge mentioned in a previous report (Vol. LIX, pt. 3).

TABLE III—SUMMARY OF GAS DISTRIBUTION, 1948–52

	1948	1949	1950	1951	1952
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Total distribution to customers	9,422,845	9,025,107	10,460,830	11,206,441	11,682,773
Used by companies for all purposes	306,085	403,055	457,912	603,300	477,253
Used by private well owners	66,500	86,500	126,500	126,500	126,500
Leakage in transmission lines	162,541	456,048	515,353	527,877	207,733
Leakage in distribution plants	359,661	364,219	314,242	245,503	183,970
Leakage in rural lines	35,162	33,379	34,348	35,949	36,525
Used in gas-manufacturing plant (Hamilton)	.....	.....	.....	.....	64,816
Natural and still gas to storage	1,162,932	1,748,065	1,499,560	1,114,271	1,748,624
Total amount distributed	11,515,726	11,916,373	13,408,745	13,859,841	14,528,194
Amount other than natural gas produced in Ontario included in totals (see Table I)	2,925,297	3,892,160	5,399,257	5,416,499	6,226,004

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1952

County	Field	Quantity
		M cu. ft.
Essex	Kingsville and Leamington	17,183
	Tilbury	1,623,281
Kent	Dover	110,853
	Electric	11,416
	Declute	289,395
	Chatham and Camden gore	87,577
	Zone	115,100
	Dawn	744
Lambton	Moore (Kimball-Payne)	2,651,432
	Becher	44,707
Middlesex and Elgin	Mosald	298,246
Elgin	Bayham and Malahide	20,429
Haldimand		
Lincoln	Haldimand	1,594,783
Wentworth		
Brant	Brant	21,519
Norfolk	Norfolk	546,282
Oxford	Brownsville	21,661
	Norwich	34,554
Welland	Welland	686,528
Wells in surface drift	Harwich and Howard	6,500
Private wells		120,000
Total produced		8,302,190
Retail value		$9,946,024
		M cu. ft.
Gas distributed other than natural gas produced in Ontario:		
Still gas		193,655
Imported mixed gas		482,102
Natural gas imported from U.S.A. (Texas panhandle)		5,500,281
Oil gas		41,194
Propane gas		8,772
Total of other gases		6,226,004
Total of all gases distributed		14,528,194

enlarged, but new wells of small capacity are being drilled in areas that are ... to have a thinner "pay." The Norfolk field is gradually expanding to the south-west into Walsingham township. The Moore field shows an increase in production

TABLE II—GAS WELLS AND THEIR PRODUCTION, 1952—*Continued*

County and township	Wells as at December 31, 1952			New wells drilled 1952			Production	Rock pressure
	Producing	Idle	Abandoned	Dry	Producers	Open flow		
						M cu. ft.	M cu ft.	lb. per sq. in.
NORFOLK:								
Charlotteville	25			3	6	335		217
Houghton	7							350
Middleton	41			2	4	279	517,872	200
North Walsingham	45			5	8	919	546,282	306
South Walsingham	24							289
Townsend	57	2	2					202
Windham	39	1		3	8	1,133		263
Woodhouse	135	5	6	5	2	317		194
BRANT:							18,812	
Onondaga	3	4					21,519	55
Tuscarora	22		3					106
WENTWORTH:								
Binbrook	28	1 1	7 4		4	57		52
Glanford	8		1					36
HALDIMAND:								
Canborough	139		3 12	1	1 3	36 38		86
Dunn	180	1	3 1	8 5	14 16	412 844		170
Moulton	125	1	7 9	4 5	18 13	724 352		143
North Cayuga	204	1 3	25 13		4	99		129
Oneida	121		2 7	2 4	1 8	28 335	1,313,761	90
Rainham	232	3 13	17 7		5 3	235 58	1,594,783	127
Seneca	102	1 4	5 5		1	5		61
Sherbrooke	24	1	1	1 1	1 2	12 105		163
South Cayuga	120	1	2	2	2	45		155
Walpole	495	5 8	28 7	4 4	5 6	206 177		160
LINCOLN:								
Caistor	102		3 2	2 1	9 5	170 105		77
Gainsborough	6	1	1					62
Louth				1				
WELLAND:								
Bertie	238	7 6	3 14	1 6	8 8	157 142		100
Crowland	50		2	1 3	3 4	82 35		25
Humberstone	119	20 24	9 1	4 4	16 21	956 1,874	596 771	60
Pelham	2			1 4	2	46	686,528	153
Stamford	5							45
Thorold	29		2	3 2	3 1	67 3		110
Wainfleet	35	3 4	5 1	7 4	3 3	48 44		58
Willoughby	86		2	2	6	69		70
SURFACE WELLS:								
Harwich and Howard	55						6500 6,500	
PRIVATE WELLS	447						120000 120,000	
Total	3,846	174	126	122	165	92,722	8,302,190	

The columns "Acres under lease" and "Rentals paid," formerly included in this table have been omitted. These figures are not available by townships, and it is impossible to obtain an accurate break-down. The totals for the province are:

Acres under lease	931,765
Rentals paid	$577,097

drilled two wells to the salt beds at approximately 2,000 feet. The Sun Oil Company, Limited, also used the same drilling rig to drill two wells to the salt beds These wells will be used by the Sun Oil company to introduce liquid petroleum gases into underground storage. After the wells were drilled, fresh water was poured underground. This dissolved the salt, which was pumped out as brine, and left a cavity that will be filled with liquid petroleum gases, propane or butane under pressure.

Gravimetric exploration was continued in 1952 by Imperial Oil, Limited and the Union Gas company. New fields were found in Dawn, Enniskillen, and Moore townships, Lambton county, and a well in Harwich township, Ken

TABLE II—GAS WELLS AND THEIR PRODUCTION, 1952

County and township	Wells as at December 31, 1952			New wells drilled 1952			Production	Rock pressure
	Producing	Idle	Abandoned	Dry	Producers	Open flow		
						M cu. ft.	M cu ft.	lb. per sq. in.
ESSEX:								
Gosfield South	16	4	3	1			15,183	165
Malden		5		1				395
Mersea	3						2,000	285
Tilbury West		3						445
KENT:								
Camden gore	15	2					2,377	586
Chatham	21		2				85,200	422
Chatham gore		3		1				745
Dover	12						122,269	137
Harwich		2		6	1	450		768
Raleigh (Declute)	28	3	7				289,395	235
Raleigh	17	1	1					253
Romney	119	5	5		2	1,230	1,623,281	127
Tilbury East	105	1						141
Zone	49						115,100	414
LAMBTON:								
Bosanquet				1				
Brooke				6	1			
Dawn	12	12	1	10	1	6,014	744	399
Enniskillen	1	2	3	10	1	353		500
Euphemia				1				
Moore	18	20	8	7	6	51,475	2,651,432	774
Plympton				3				
Sarnia				4	3			
Sombra	2	17	14	8	2	22,010	44,707	775
Warwick		2		4	2			
MIDDLESEX:								
Mosa	10	2		5	3	830		738
ELGIN:							298,246	
Aldborough	20	5		2	10	2,902		695
Dunwich	1	5						704
Bayham	26	6						165
Malahide	3	12	2		1	17	20,429	320
Yarmouth		5						320
Bayham (Brownsville)	5							335
OXFORD:							21,661	
Dereham (Brownsville)	6							340
South Norwich	7		1	1	2	75	34,554	400
West Oxford				3				

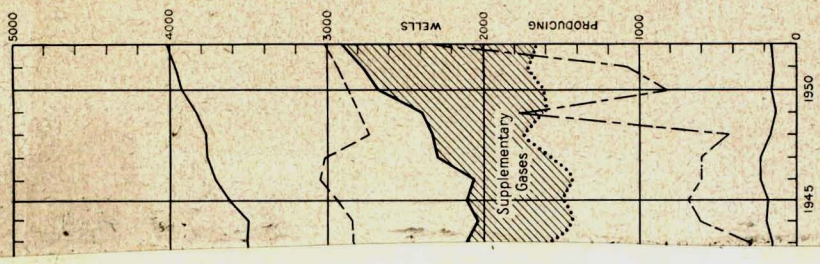


TABLE II - NATURAL GAS PRODUCTION BY FIELDS - 1954

County	Field	Producing Formation 1953	Quantity in Mcf.
Brant	Brant	Clinton and Medina 18,810	9,460
Elgin	Bayham	Clinton and Medina 16,929	10,000
	Malahide	Clinton and Medina	929
Essex	Kingsville and Leamington	Guelph 18,874	13,729
Haldimand, Lincoln, Wentworth	Haldimand	Clinton and Medina 1,313,761	1,131,389
Kent	Camden Gore	Salina 11,295	56,582
	Chatham	Salina-Guelph 86,495	57,605
	Declute	Guelph 232,262	226,884
	Dover	Trenton 79,643	95,668
	Harwich	Clinton and Medina	2,515
	Tilbury	Guelph 1,726,891	1,865,522
	Zone	Salina-Guelph 99,165	140,268
Lambton	Becher	Salina-Guelph 102,948	88,289
	Bickford	Guelph	240
	Colinville	Guelph	278,428
	Dawn	Salina-Guelph 712	1,227
	Duthill	Guelph	2,857
	Enniskillen	Guelph	323
	Kimball	Salina 4,247,472	2,976,367
	Payne	Guelph	861,108
	Seckerton	Guelph	267,959
	Sombra	Guelph	201,288
	Waubuno	Guelph	696
Middlesex and Elgin	Mosald	Salina 585,371	547,673
Norfolk	Norfolk	Clinton and Medina 517,872	616,747
Oxford	Brownsville	Clinton and Medina 19,676	17,616
	South Norwich	Clinton and Medina 34,032	35,065
Welland	Welland	Clinton and Medina 596,717	509,384
TOTAL GAS PRODUCED		Private 125,500 / 9,835,469	10,015,818
Average Retail Value		11,694,595	$ 11,758,549

Imports of natural gas from the United States will greatly increase in 1955, to supply the Metropolitan Toronto area.

In addition to the plan to bring Alberta gas to Ontario, there is also an application by the Union Gas Company to import additional quantities of Panhandle gas for development of the Ontario market.

TABLE IV - DISTRIBUTION OF SUPPLEMENTAL GAS - 1954

Type of Gas	Quantity in Mcf.
1. Imported mixed gas	717,737
2. Natural gas imported from U.S.A. - at Windsor	5,444,523
- at Niagara	532,540
3. Oil gas	3,409
4. Propane gas	33
Total of supplemental gas	6,698,242

Section 5 - Transmission Lines -

The only major transmission line constructed in Ontario during 1954 was that from Lewiston to Toronto.

It was built as a result of a purchase contract between Consumers' Gas Company of Toronto and producers in Texas and Louisiana and a transmission contract between Consumers' and the Tennessee Gas Transmission Company to deliver the gas to the Canadian Border.

The line is of 20 inch diameter. and runs a distance of 80 miles from a point on the Niagara River, 3 miles north of the Lewiston Bridge, around Lake Ontario and Hamilton to Sheridan, on the Halton-Peel county line.

The route is shown on the map in (Figure 3.)

The part of the line between Lewiston and the Peel-Halton boundary is owned by Trans-Canada Pipe Lines Limited. The engineering was done by Canadian Bechtel Ltd. and the actual installation of the line was carried out by F. E. Shaw Ltd. of Sarnia, Ontario, at a total cost of approximately $5,300,000. Niagara Gas Transmission Limited, a wholly-owned subsidiary of Consumers' Gas Company of Toronto, operate the line under lease from Trans-Canada.

The line is of welded steel, coated, wrapped, and cathodically protected. Connections were made to the Provincial Gas Company for supplying Niagara Falls and Welland, and to the Grimsby Natural Gas Company Limited.

Construction was started on June 15, 1954 and completed on schedule on November 1st, 1954.

The installation of the remainder of the system, which involved laying 21 miles of 20 inch line from Sheridan on the Queen Elizabeth Highway to Booth and Eastern Avenues, Toronto, was done by the Consumers' Gas Company of Toronto at a total cost of approximately $2,200,000.

Natural gas started to flow into its Toronto distribution system on November 8th, 1954.

Other transmission pipe line activity in the Province consisted of the laying of 116,700 feet of new line pipe.

TABLE III - GAS WELLS AND THEIR PRODUCTION - 1954--Continued

County	Township	Total Wells as of December, 1954		Production in Mcf.	Average Shut-in well head pressure lbs. per sq. in.
		Producing	Idle		
Wentworth	Binbrook	13	1		50
	Glanford	4	.....		39
Lincoln	Caistor	103	.....		68
	Gainsborough	4	1		58
Haldimand	Canborough	111	3		88
	Dunn	180	4		140
	Moulton	149	1	1,131,389	125
	North Cayuga	157	2		183
	Oneida	76	6		86
	Seneca	67	3		65
	Sherbrooke	25	.....		145
	Rainham	202	17		147
	South Cayuga	113	4		129
	Walpole	448	9		153
Welland	Wainfleet	35	2		70
	Bertie	241	13		80
	Crowland	60	2		40
	Humberstone	152	5		75
	Stamford	5	-	509,384	30
	Thorold	23	6		76
	Willoughby	88	6		70
	Pelham	2	-		90
Halton	Esquesing	.....	1	.....	400
Huron	Hay	.....	2	.....	410
Total		3,211	212	10,015,818	

It has been found impossible to keep a record of such leaseholds with any great accuracy, and the column formerly shown in Table III has been discontinued. However, in 1954 oil and gas leases were acquired in south-western Ontario covering about 525,000 acres, of which, 225,000 acres were under the waters of the Great Lakes. As of year's end, it is estimated that oil and gas leases in south-western Ontario covered about 3 1/2 million acres. In addition, in the early part of 1954, exploratory permits for oil and gas were issued or re-issued covering 1 1/2 million acres in the Hudson Bay Lowlands.

With regard to Table III, note that the number of active "commercial" wells shows a decline, despite the completion of 160 new wells. Details of the drilling activities are given in Part III of this Report. More than 90 percent of the new wells were drilled in the four counties of Haldimand, Lambton, Norfolk and Welland.

Section 4 - Supplemental Gas -

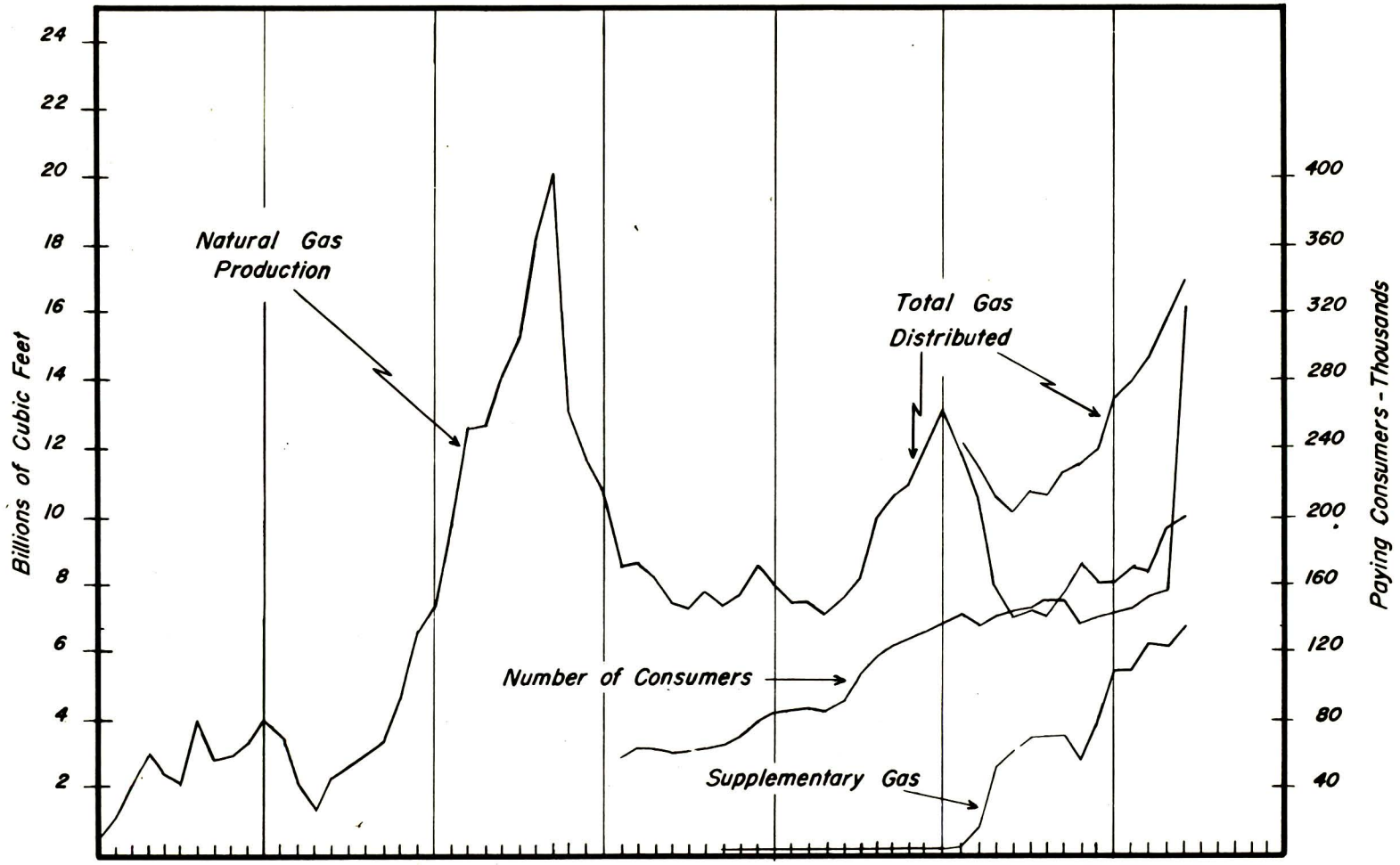
In addition to the natural gas produced in Ontario, gas from other sources supplied 40.1 percent of the total quantity distributed by natural gas utilities. These sources are itemized in Table IV.

The increasing use of supplemental gas is shown on the graph in (Figure 2).

TABLE III - GAS WELLS AND THEIR PRODUCTION - 1954

County	Township	Total Wells as of December, 1954		Production in Mcf.	Average Shut-in well head pressure lbs. per sq. in.
		Producing	Idle		
Essex	Gosfield South	16	4	10,559	175
	Malden		5		395
	Mersea	3		3,170	273
	Tilbury West		3		465
Kent	Camden Gore	15	2	56,582	585
	Chatham	21		57,605	443
	Chatham Gore		3		742
	Dover	10	2	95,668	144
	Harwich	2		2,515	801
	Howard		1		1,222
	Raleigh (Declute)	27	3	226,884	227
	Raleigh	15	0	1,131,389	253
	Romney	109	7		142
	Tilbury East	97	2		130
	Zone	49		140,268	398
Lambton	Dawn	22	7	1,227	464
	Enniskillen		6	323	857
	Moore	18	20	4,384,558	740
	Sombra	9	17	292,674	806
	Warwick		2		784
Middlesex	Ekfrid		1	547,673	568
	Mosa	15	3		495
Elgin	Aldborough	22	5		450
	Dunwich	1	5		683
	Bayham	27	5	10,000	150
	Malahide	2	13	929	320
	Yarmouth		5		320
	Bayham (Brownsville)	5		17,616	325
Oxford	Dereham (Brownsville)	6			340
	South Norwich	9		35,065	415
Brant	Onondaga	3		9,460	53
	Tuscarora	17			66
Norfolk	Charlotteville	41		616,747	327
	Houghton	7			275
	Middleton	52			227
	North Walsingham	73			344
	South Walsingham	23			323
	Townsend	57	2		194
	Windham	49			304
	Woodhouse	131	1		180

FIGURE No. 2



The Development of the Natural Gas Industry in Ontario from 1890 to 19[illegible]

TABLE XVI - DRILLING SUMMARY 1954--Continued

COUNTY TOWNSHIP	Dry Holes			Oil Wells				Gas Wells				Total Wells	
	E.	D.	Footage	E.	D.	Footage	I.P.	E.	D.	Footage	O.F.	No.	Footage
KENT													
Camden	-	-	-	-	1	1,700	5	-	-	-	-	1	1,700
Chatham	1	-	1,968	-	-	-	-	-	-	-	-	1	1,968
Dover E.	1	-	3,846	-	-	-	-	-	-	-	-	1	3,846
Howard	-	-	-	-	-	-	-	1	-	1,637	1,500 M.	1	1,637
Orford	2	-	1,236	-	-	-	-	-	-	-	-	2	1,236
Romney	-	-	-	-	-	-	-	-	3	3,679	6,160 M.	3	3,679
Tilbury E.	2	-	2,952	-	-	-	-	-	1	1,411	80 M.	3	4,363
LAMBTON													
Bosanquet	1	-	3,916	-	-	-	-	-	-	-	-	1	3,916
Brooke	8	-	16,678	-	-	-	-	-	-	-	-	8	16,678
Dawn	2	1	5,938	-	-	-	-	1	4	9,302	93,700 M.	8	15,240
Enniskillen	6	-	11,717	-	10	4,207	5	2	2	8,039	63,650 M.	20	23,963
Euphemia	-	-	-	-	1	360	1	-	-	-	-	1	360
Moore	23	6	72,222	1	-	572	25	-	6	15,053	58,650 M.	36	87,847
Plympton	2	-	5,014	-	-	-	-	-	1	464	5 M.	3	5,478
Sarnia	1	-	2,585	-	-	-	-	-	-	-	-	1	2,585
Sombra	4	1	11,219	-	-	-	-	2	6	16,163	50,200 M.	13	27,382
Warwick	5	1	11,682	-	-	-	-	-	-	-	-	6	11,682
LINCOLN													
Caistor	-	-	-	-	-	-	-	-	1	380	15 M.	1	380
Grantham	1	-	705	-	-	-	-	-	-	-	-	1	705
MIDDLESEX													
Adelaide	3	-	6,037	-	-	-	-	-	-	-	-	3	6,037
Metcalfe	5	-	6,765	-	-	-	-	-	-	-	-	5	6,765
Mosa	-	-	-	-	-	-	-	-	4	6,013	1,050 M.	4	6,013
Westminster	1	-	1,552	-	-	-	-	-	-	-	-	1	1,552
Williams E.	1	-	404	-	-	-	-	-	-	-	-	1	404
NORFOLK													
Charlotteville	-	3	3,623	-	-	-	-	-	10	12,680	663 M.	13	16,303
Middleton	-	9	11,147	-	-	-	-	-	6	7,429	599 M.	15	18,576
North Walsingham	2	4	8,293	-	-	-	-	-	12	15,821	1,216 M.	18	24,114
South Walsingham	-	1	1,488	-	-	-	-	-	1	1,468	23 M.	2	2,956
Windham	1	10	12,274	-	-	-	-	-	10	11,090	1,464 M.	21	23,364
Woodhouse	-	1	1,016	-	-	-	-	-	1	1,000	50 M.	2	2,016
OXFORD													
West Oxford	1	-	747	-	-	-	-	-	-	-	-	1	747
Zorra E.	1	-	3,786	-	-	-	-	-	-	-	-	1	3,786
PEEL													
Toronto	1	-	1,536	-	-	-	-	-	-	-	-	1	1,536
PERTH													
Elma	1	-	2,900	-	-	-	-	-	-	-	-	1	2,900
Logan	2	-	4,863	-	-	-	-	-	-	-	-	2	4,863
WELLAND													
Bertie	-	1	815	-	-	-	-	-	10	8,110	196 M.	11	8,925
Crowland	1	1	1,068	-	-	-	-	-	9	5,833	269 M.	11	6,901
Humberstone	-	4	3,085	-	-	-	-	-	16	12,476	742 M.	20	15,561
Willoughby	1	1	1,127	-	-	-	-	1	3	2,550	56 M.	6	3,677
WELLINGTON													
Luther W.	1	-	2,156	-	-	-	-	-	-	-	-	1	2,156
Grand Totals	100	69	273,615	2	43	21,048	386	10	150	183,137	282,072	374	477,800

NOTE: E = Exploratory
D = Development

(a) Exploratory drilling, or wildcatting, increased about 30 percent over 1953. This increased activity was applied to Salina-Guelph and Trenton exploration. Twelve of the 112 exploratory wells were successful, and the 10 gas discoveries are listed below.

The two oil discoveries are not considered important. By American Association of Petroleum Geologists standards they should be classified as development wells, and are discussed in (b) on Development Drilling.

The locations of these discoveries are shown on the map in Figure 1, Part I.

Part III

Drilling and Exploration in 1954

Section 1 - Leasing

The prospective regions for the production of oil and gas in Ontario are shown in Figure 4.

During the year, leases were acquired and exploratory permits were issued for oil and gas covering approximately 2,055,000 acres, dispersed as follows: 1,530,000 acres in the Hudson Bay Lowlands; 225,000 acres under the waters of Lakes St. Clair and Huron and 300,000 acres on land in Southwestern Ontario. It is estimated that at year's end, the total acreage under lease or permit, was about 5 million acres.

Section 2 - Exploration

Gravity meter surveys remained the only geophysical method used for exploration, and totalled 25 crew months. A few structure tests were made to the Dundee, using small cable-tool drilling rigs.

Section 3 - Drilling

Drilling activity remained at a high level, with an impressive total of 374 completions having a total footage of 477,800 feet. These were dispersed and classified as shown on Table XVI, Drilling Summary, which also shows result and footages. For classification by target formation, see Table XVIII.

TABLE XVI - DRILLING SUMMARY 1954

COUNTY TOWNSHIP	Dry Holes			Oil Wells				Gas Wells				Total Wells	
	E.	D.	Footage	E.	D.	Footage	I.P.	E.	D.	Footage	O.F.	No.	Footage
BRANT													
Tuscarora	-	2	1,322	-	-	-	-	1	-	650	23 M.	3	1,972
BRUCE													
Eastnor	2	-	1,830	-	-	-	-	-	-	-	-	2	1,830
ELGIN													
Aldborough	8	5	11,113	1	31	14,209	350	-	-	-	-	45	25,322
Southwold	1	-	1,300	-	-	-	-	-	-	-	-	1	1,300
HALDIMAND													
Canborough	-	1	656	-	-	-	-	-	1	668	4 M.	2	1,324
Dunn	-	2	1,649	-	-	-	-	-	7	5,728	237 M.	9	7,377
Moulton	-	7	5,288	-	-	-	-	-	14	11,552	317 M.	21	16,840
North Cayuga	-	-	-	-	-	-	-	-	4	2,898	81 M.	4	2,898
Oneida	-	3	1,940	-	-	-	-	-	-	-	-	3	1,940
Rainham	-	1	883	-	-	-	-	-	5	4,442	81 M.	6	5,325
South Cayuga	-	1	708	-	-	-	-	-	1	711	50 M.	2	1,419
Walpole	-	3	2,795	-	-	-	-	-	11	9,961	341 M.	14	12,756
HALTON													
Esquesing	-	-	-	-	-	-	-	1	-	1,910	100 M.	1	1,910
Nassagaweya	1	-	2,112	-	-	-	-	-	-	-	-	1	2,112
HURON													
Colborne	1	-	2,074	-	-	-	-	-	-	-	-	1	2,074
Grey	1	-	1,481	-	-	-	-	-	-	-	-	1	1,481
Hay	1	-	1,970	-	-	-	-	1	1	4,019	550 M.	3	5,989
McKillop	1	-	1,630	-	-	-	-	-	-	-	-	1	1,630
Stanley	1	-	3,495	-	-	-	-	-	-	-	-	1	3,495
Tuckersmith	1	-	1,810	-	-	-	-	-	-	-	-	1	1,810
Wawanosh E.	1	-	3,199	-	-	-	-	-	-	-	-	1	3,199

Chapter II: Natural Gas Consumption by Towns, Cities, and Townships

The Harkness Files
Volume XII
Natural Gas Statistics

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Dominion Natural Gas Co

	Propane	Gas Produced	Gas Purchased	Leakage	Sales	Free Gas	Company Use	Total Distributed	
	—	88.783	98.367	22,108	163.791	1.030	221	187,150	✓
	—	81,471	98.554	7.643	170.754	1.411	217	180 025	✓
	—	114, 851	123.480	7,575	227.544	1.889	1.323	238.331	✓
	297	142.448	130.278	6,864	261.859	2,617	1.683	273,023	✓
	8.087	213.903	157.417	9.986	359.585	5.022	4,814	379.407	✓
	23.234	220.536	147.128	6,459	372.985	5.830	5.624	390.898	✓
	Dec/41 35,509	260.838	175.252	41.043	417.205	6.472	6,879	471,599	✓
	Jan/42, 45912	268.148	173.060	47.000	425.876	6.566	7.678	487.120	✓
	Dec/41 18.083	227.302	170.227	50.072	357.276	5.055	3.209	415,612	✓
	889	209.607	165.837	54,157	315.886	3,680	2,610	376,333	✓
	—	144.356	117.710	32,185	227445	1,614	822	262,066	✓
	—	129.694	123,353	29.524	221.559	1.470	494	253.047	✓
	—	65.176	118.848	22,444	160.193	1.210	177	184,024	✓
	—	51.988	122.621	9,890	163.429	1.158	132	174,609	✓
	—	59.376	159.554	68	216.885	1.875	238	218.930	X
	—	91.210	203.008	6.923	283.284	2.817	1.194	294.218	✓
	—	163.420	232.592	27.808	415.160?	5.763	2.897	396,012	XX
	—	227.652	278.369	22.745	473,178	6.586	3,512	506,021	✓
	—	252.677	293.264	27.724	507.727	6.967	3,523	545.941	✓
	Jan/41 —	219.756	292.677	46.640	457.037	5.923	2.823	512,433	✓
	Dec/40 —	190 135	322.917	47.993	457.048	5.456	2.555	513,052	✓
	—	180 446	261.686	55,657	380.524	3.932	2,013	442,126	✓
		141.841	168.401	36,122	271.689	2.041	390	310.242	✓
		128.569	134.834	33,645	227.950	1,600	208	263.403	✓
		83.315	132.006	14.831	199.122	1.281	87	215.321	✓
		108.179	136.252	18.054	224.655	1.555	167	244.431	✓
		92.046	201.188	4.389	295.268?	2.097	258	293,234	X
		167.879	245.508	226	407.730	4.125	1.306	413. 387	✓
		191.441	353.886	20.091	516.229	6.398	2,609	545.327	✓
		198.095	349.702	17.336	520.897	6.902	2.662	547.797	✓
		220.477	419.101	24.862	602.764	8.302	3.650	639.578	✓
	Jan/40 —	206.875	428.272	55.454	569.449	6.746	3,498	635.147	✓
	Dec/39 *	111 887	157.208	68.515	353.297	3.713	1.459	426,984	✓
	Nov X	86.577	138 992	53.728	320.171	3,199	1.216	378.314	✓

Dominion Natural Gas Co.

	Propane M.Cu.ft.	Gas Produced	Gas Purchased	Leakage	Sales	Free Gas	Company Use	Total Distributed
Union Gas	2 487 } to hand 9th							
	6826							
Union Gas	26 431							
Propane	24 083							
Union Gas	25 372							
Jan 45 Propane	30 277							
Dec/44	21 706	246.558	105,997	44,327	310,642	4,650	5232	364,851
	5,208	212,524	105,319	34,752	283,942	3,028	3014	324,736
	1987	186,107	98,558	39,208	242,977	1,761	1490	285,436
	467	130,180	98,421	31,823	195,381	1,251	146	228,601
	—	85,900	93,931	23,228	155,451	1,015	137	179,831
	—	85,714	86,782	11,668	159,760	959	109	172,496
	—	113,590	100,537	8,183	203,677	1,498	769	214,127
May	190	151,058	98,916	3,450	247,544	3,240	2830	250,164 X
April	14,991	220,240	109,464	15,292	318,594	5534	5275	344,695
Mar	25,797	202,131	128,084	16,674	326,558	5,678	7,102	356,012
Feb	26,096	228,713	122,935	27,042	338,097	5,722	6,883	377,744
Jan/44	14,904	279,208	114,792	28,599	366,679	6,318	7,308	408,904
Dec/43	8,269	234,662	110,125	27,435	316,818	4,509	4,294	353,056
	718	230,850	116,288	31,105	310,297	3,476	2,978	347,856
	621	188,509	97,309	30,655	252,843	1,844	1,097	286,439
	—	136,196	98,259	34,145	198,607	1,236	467	234,455
	—	81,158	104,710	27,435	157,294	999	140	185,868
	—	77,916	93,357	12,838	157,167	1,053	215	171,273
	—	117,779	110,796	2,635	227,545	2,144	1,521	228,575 X
	716	197,552	114,417	7,649	296,783	3,899	4,354	312,685
	6,622	230,520	122,565	25,938	322,164	5,180	6,425	359,707
	14,359	231,570	116,462	29,385	320,186	5,659	7,161	362,391
	25,829	228,294	130,295	21,411	349,438	6,523	7,046	384,418
Jan/43	7,948	246,931	136,053	9,437	368,019	6,458	7,018	390,932
Dec/42	5,602	232,351	150,433	49,123	330,764	4,849	3,650	388,386
	1,325	185,360	128,749	20,510	289,660	3,443	1,821	315,434
	—	164,562	111,117	31,062	241,108	1,965	1,544	275,679
	—	123,543	105,462	23,455	203,420	1,246	884	229,005

UNION GAS Co of Canada and its SUBSIDIARIES

Volume of Gas Sal

(All consum

	12 month period ended 31st March 1937			12 month period ended 31st March 1938			12 month period ended 31st March 1939			12 month p 31st Ma	
	Domestic and Commercial	Industrial	Total	Domestic and Commercial	Industrial	Total	Domestic and Commercial	Industrial	Total	Domestic and Commercial	In
Windsor City	1,250,180	273,048	1,523,228	1,410,687	314,257	1,724,944	1,369,741	300,720	1,670,461	1,475,531	
London City	1,287,653	80,428	1,368,081	1,652,427	88,304	1,740,731	1,584,852	103,420	1,688,272	1,766,034	
Chatham City	400,275	17,171	417,446	445,766	15,002	460,768	438,930	26,989	465,919	492,394	
Sarnia City	298,504	36,907	335,411	314,207	41,873	356,080	309,855	33,470	343,325	328,181	
Towns - Essex	38,808	3,190	41,998	43,147	4,729	47,876	41,363	5,486	46,849	44,593	
Belle River	10,125	548	10,673	13,065	534	13,599	13,273	551	13,824	14,301	
Wallaceburg	99,284	382,189	481,473	111,584	403,080	514,664	104,872	409,061	513,933	117,656	
Petrolia	67,569	1,132	68,701	71,782	1,167	72,949	65,119	1,078	66,197	68,173	
Merlin	12,141	2,243	14,384	15,351	2,131	17,482	14,888	2,506	17,394	16,362	
Tilbury	49,789	1,561	51,350	52,643	721	53,364	47,572	594	48,166	50,068	
Comber	13,880	3,618	17,498	15,745	3,538	19,283	14,284	621	14,905	15,303	
Blenheim	52,847	3,849	56,696	56,670	3,424	60,094	55,958	2,880	58,838	60,078	
Ridgetown	52,539	1,435	53,974	58,057	1,700	59,757	57,439	1,370	58,809	62,515	
Dresden	41,594	627	42,221	45,398	549	45,947	45,434	556	45,990	49,662	
Sombra-Pt.Lambton	11,225	79	11,304	11,064	86	11,150	10,010	193	10,203	10,994	
Courtright	6,077	224	6,301	6,793	-	6,793	7,365	-	7,365	7,496	
Brigden	8,973	436	9,409	9,596	414	10,010	9,844	88	9,932	11,547	
Wyoming	9,063	124	9,187	9,404	517	9,921	9,284	528	9,812	9,539	
Inwood	3,919	-	3,919	4,509	234	4,743	4,436	813	5,249	4,506	
Alvinston	10,392	459	10,851	12,838	-	12,838	13,331	-	13,331	15,274	
Thamesville	20,828	2,994	23,822	23,741	2,989	26,730	23,536	2,887	26,423	26,124	
Bothwell	10,377	115	10,492	12,783	111	12,894	13,332	-	13,332	14,983	
Florence	4,315	83	4,398	4,836	305	5,141	4,239	387	4,626	5,072	
Glencoe	-	-	-	-	-	-	13,679	-	13,679	23,936	
Appin	1,402	-	1,402	2,514	-	2,514	2,581	-	2,581	2,972	
Mt. Brydges	3,476	-	3,476	10,905	788	11,693	11,876	825	12,701	12,563	
Byron	5,934	-	5,934	10,003	-	10,003	10,835	-	10,835	12,114	
Townships - Union	193,029	15,307	208,336	200,774	26,360	227,134	198,283	21,004	219,287	216,378	
Windsor	27,712	3,956	31,668	29,539	3,686	33,225	29,817	4,494	34,311	33,267	
Volume of sales to non-affiliated gas distributing companies:											
Dominion Natural Gas Company, Limited											
Central Pipe Line Company											
	3,991,910	831,723	4,823,633	4,655,828	916,499	5,572,327	4,526,028	920,521	5,446,549	4,967,616	1,

es to Consumers (Exclusive of Haldimand Division)
1st April - 31st March inclusive

tions shown are in thousands of cubic feet)

eriod ended rch 1940		12 month period ended 31st March 1941			12 month period ended 31st March 1942			12 month period ended 31st March 1943			12 month period ended 31st March 1944			12 month period ended 31st March 1945		
dustrial	Total	Domestic and Commercial	Industrial	Total	Domestic and Commercial	Industrial	Total	Domestic and Commercial	Industrial	Total	Domestic and Commercial	Industrial	Total	Domestic and Commercial	Industrial	Total
342,513	1,818,044	1,583,656	518,505	2,102,161	1,486,801	683,785	2,170,586	1,255,556	838,025	2,093,581	1,284,549	825,149	2,109,698	1,290,118	688,427	1,978,545
144,027	1,910,061	1,925,750	169,067	2,094,817	1,724,800	177,838	1,902,638	862,758	130,121	992,879	699,760	129,044	828,804	724,852	128,928	853,780
33,941	526,335	510,803	36,281	547,084	460,772	36,700	497,472	417,258	32,020	449,278	444,429	30,575	475,004	445,989	29,806	475,795
31,581	359,762	350,756	42,669	393,425	328,566	51,615	380,181	309,998	58,162	368,160	350,380	61,892	412,272	343,651	55,934	399,585
6,520	51,113	46,378	6,574	52,952	45,821	5,347	51,168	45,533	4,777	50,310	50,599	3,936	54,535	50,905	3,751	54,656
551	14,852	15,287	560	15,847	15,108	521	15,629	16,146	460	16,606	18,623	477	19,100	19,119	481	19,600
481,103	598,759	125,781	470,143	595,924	121,823	506,169	627,992	125,041	429,139	554,180	134,116	342,087	476,203	140,616	223,955	364,571
1,263	69,436	69,487	1,489	70,976	59,779	2,154	61,933	58,938	2,726	61,664	65,150	3,764	68,914	65,685	3,711	69,396
1,499	17,861	16,447	1,797	18,244	14,869	1,740	16,609	15,587	1,540	17,127	16,292	509	16,801	17,051	181	17,232
484	50,552	53,003	494	53,497	52,303	533	52,836	55,785	540	56,325	60,952	464	61,416	63,986	491	64,477
709	16,012	15,200	923	16,123	14,572	1,129	15,701	13,817	980	14,797	15,505	764	16,269	16,836	968	17,804
3,503	63,581	61,362	3,396	64,758	55,191	2,861	58,052	55,713	1,537	57,250	59,296	1,294	60,590	59,777	1,349	61,126
1,584	64,099	65,913	1,419	67,332	59,527	1,413	60,940	61,404	1,818	63,222	67,270	1,910	69,180	65,499	1,940	67,439
1,567	51,229	49,148	1,537	50,685	44,529	1,281	45,810	45,651	1,246	46,897	49,718	1,917	51,635	52,511	2,581	55,092
-	10,994	11,952	-	11,952	10,599	-	10,599	10,729	-	10,729	12,061	-	12,061	12,646	-	12,646
-	7,496	7,632	-	7,632	7,278	-	7,278	8,523	-	8,523	10,335	-	10,335	11,013	-	11,013
22	11,569	12,102	-	12,102	10,871	-	10,871	10,909	111	11,020	12,531	965	13,496	12,773	769	13,542
600	10,139	9,712	629	10,341	8,475	722	9,197	8,872	729	9,601	10,069	813	10,882	10,139	658	10,797
864	5,370	4,616	939	5,555	3,899	271	4,170	4,425	-	4,425	4,956	-	4,956	5,077	-	5,077
-	15,274	16,342	-	16,342	13,827	-	13,827	12,589	-	12,589	13,306	-	13,306	14,004	-	14,004
2,819	28,943	26,454	3,258	29,712	23,707	2,488	26,195	20,094	2,027	22,121	21,507	1,361	22,868	23,164	1,291	24,455
-	14,983	15,730	-	15,730	13,441	-	13,441	11,716	-	11,716	13,786	-	13,786	15,863	-	15,863
491	5,563	5,774	611	6,385	5,294	639	5,933	5,568	616	6,184	6,016	652	6,668	6,543	559	7,102
221	24,157	27,049	708	27,757	24,026	704	24,730	19,538	591	20,129	21,432	567	21,999	22,528	563	23,091
-	2,972	3,195	-	3,195	2,722	-	2,722	2,046	-	2,046	2,291	-	2,291	2,343	-	2,343
223	12,786	13,084	184	13,268	11,063	211	11,274	6,617	131	6,748	7,146	-	7,146	7,538	-	7,538
425	12,539	12,611	495	13,106	11,202	535	11,737	5,349	400	5,749	5,162	446	5,608	4,907	348	5,255
27,352	243,730	227,266	27,258	254,524	218,105	24,815	242,920	229,274	28,855	258,129	246,132	33,558	279,690	254,404	34,026	288,430
4,748	38,015	36,596	4,883	41,479	36,353	5,521	41,874	37,406	5,226	42,632	42,358	5,154	47,512	44,056	4,473	48,529
				25,649			4,472			2,427			6,061			58,270 8,198
088,610	6,056,226	5,319,086	1,293,819	6,638,554	4,885,323	1,508,992	6,398,787	3,732,840	1,541,777	5,277,044	3,745,727	1,447,298	5,199,086	3,803,593	1,185,190	5,055,251

CONSUMERS GAS CO.

YEAR	GAS OUTPUT M. CU. FT.	NUMBER OF CONSUMERS	POPULATION SERVED	RATIO CONSUMERS TO POPULATION	PRICE OF GAS: M. CU. FT.
1853	9,868	641	40,000	1:62	$3.00
1863	31,228	1,370	47,500	1:35	3.00
1873	71,838	2,050	62,647	1:30	2.50
1883	220,542	5,386	94,891	1:18	1.75
1893	586,892	17,702	188,333	1:11	1.05
1903	1,126,547	33,677	230,000	1:7	.80
1913	3,492,087	91,284	460,000	1:5	.70
1923	5,452,409	137,182	575,000	1:4	.90
1933	6,001,800	167,016	664,000	1:4	.80
1936	5,852,768	165,402	651,000	1:4	.80

TABLE II—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921–1936

Year	Retail rate, cents per M cu. ft.	No. of pay consumers	Total quantity used	Quantity used per consumer	Capital invested in all natural gas operations	No. of men employed	Wages paid
			M cu. ft.	M cu. ft.			
1921	47	58,609	5,937,316	101.3	$17,328,757	632	$592,606
1922	47	63,29	6,028,947	95.3	17,769,664	692	539,072
1923	50	62,352	6,210,459	99.6	25,570,972	603	633,365
1924	55	61,100	5,933,595	97.1	24,781,723	727	639,167
1925	56	62,338	5,300,424	85.6	26,111,387	692	625,826
1926	57	63,695	5,595,521	87.8	30,500,874	860	842,305
1927	60	66,818	5,210,315	78	31,987,879	1,123	1,148,339
1928	60	70,259	5,699,553	71.2	36,601,828	1,209	1,497,999
1929	58	80,991	6,336,873	78.2	35,162,736	1,323	1,529,367
1930	64	84,135	6,332,519	75.2	36,162,268	1,328	1,545,648
1931	62	86,050	5,607,744	65.1	42,921,142	1,241	1,383,286
1932	63	86,631	5,409,154	62.2	45,982,719	893	1,059,643
1933	63	84,933	5,102,340	60	51,766,592	958	958,336
1934	62	89,990	5,262,631	58.5	41,934,395	931	1,010,979
1935	60	118,719	5,553,902	46.8–52	42,975,846	1,273	1,219,520
1936	60	118,117	6,956,453	59.3	45,197,240	1,336	1,354,611
1937	60	125,537	7,767,359	62.8	49,059,740	1,501	1,668,188

In 1914 and 1915 the Glenwood Natural Gas Company built a purifier in the Tilbury gas field at a cost of about $190,000, which gave satisfaction for a short time. The process used was as follows: The gas was allowed to bubble through a solution of aqueous ammonia which took the hydrogen sulphide out of the gas and changed the solution into ammonium sulphide and polysulphides. The hydrogen sulphide was driven out of the ammonia solution by heating and washing. This last process caused such rapid corrosion in the heat interchanging system that at the end of a year the plant was found to be useless and they were forced to abandon the scheme or else rebuild it in cast iron which was too expensive. Lately, a new scheme has been developed and the Union Natural Gas Company has had a company carry out tests at Port Alma which are understood to be practical and very successful. This process is much the same excepting that soda ash is used instead of ammonia. The sulphur content has been reduced at a moderate cost from 350 grains to about ten grains per hundred cubic feet. It can be entirely eliminated if necessary by either of the above processes.

It is hoped that in the near future the gas from this important field may be freed from this most objectionable odour.

Specific Gravity or Density of Gases in Ontario

It has been stated by different authorities on natural gas that as a gas field diminishes in volume and rock pressure, the gas becomes "richer" or denser; apparently due to the law of diffusion of gases, i.e., the lighter gases will escape from the minute pores of the rocks more readily than the heavier gases, "the viscosity of a gas or the measure of difficulty with which it flows through an orifice of any kind is supposed to vary directly with the square of its density.[1] On page 28 will be found a table which shows to what extent the volume of gas decreased, and on pages 14 to 18 is shown the decline in rock pressure in the Haldimand field.

In the year 1914 the samples were taken from the known gas fields of Ontario and a complete analysis made.[2] This highly technical work afforded an opportunity after a lapse of nine years for comparison with present conditions. Samples were taken on the edges and centre of gas fields for the purpose of determining whether or not the specific gravity of the gas was affected by the proximity of edge water.

The previously recommended method of sampling[3] was used and found to be thoroughly reliable for all gases, excepting those containing hydrogen sulphide. Great care must be taken to have the container completely filled with water and some means must be taken to protect the rubber tube while in transit from being cut or damaged against the sharp edge of the tin. It was found advisable to put some pressure in the container when sealing at the well. Where there is reason to believe that hydrogen sulphide is present in a gas it was found best to use a dry glass container and allow the gas to flow through it slowly for at least twenty minutes, then close in the usual way. When water was used in the container, sufficient adhered to the sides to so alter the hydrogen sulphide that no reaction was noticed on the iodine.

All samples were first tested for oxygen. Those found to contain any oxygen were discarded and new samples taken; in every such case the con-

[1]Ont. Dept. of Mines, Vol. XXIII. The chemical analysis of natural gases found in Ontario, p. 32.

[2]Opus cit.

[3]Opus cit., p. 4.

tainer or tube was found to be defective, and in consequence none of the samples used in this report contain any oxygen.

It must be borne in mind that the work done in 1914 was a technical work to discover variations in the gases in different fields and in different formations. Wells were chosen on account of the formation penetrated and not as in this case for their location in each field. Therefore, in taking the averages used in the following comparisons there is a possibility of error. The same applies to the chemical analysis. Present samples were taken from the main transmission line which is a mixture of all the wells, whereas the averages of 1914 samples are from a limited number of wells.

The analysis and specific gravity of gases in 1923 were made by Professors J. W. Bain and E. G. R. Ardagh of the University of Toronto, who made the analysis in the same way in 1914. The calculated specific gravity of 1914 and B.T.U. of 1914 and 1923 samples were made by the writer.

TABLE I.—SPECIFIC GRAVITY OF ONTARIO GASES

County	Township	Lot	Con.	Number of well	Formation	Specific gravity, 1923	Average specific gravity	
							1914	1923
Kent	Romney	190	N.T.R.	2–Dawson	Salina or Guelph	0.700		
"	"	179	N.T.R.	221–Union	"	0.709		
"	Tilbury E.	13	M.R.S.	5–McCord	"	0.658	0.637	0.692
"	Raleigh	4	XII	2–Houstor	"	0.702		
"	Dover W.	2	III	No. 13	Trenton	0.615	.....	0.615
Lambton	Dawn	24	VII	No. 1	Niagara	0.682	new field	.....
"	Enniskillen	pt 19	II	No. 6	"	0.673	0.640	0.673
"	"	"	"	No. 7	Trenton	0.690	.....	0.690
"	Sarnia	8	VII	2–Hancock	Onondaga (Corniferous)	0.885	new field	.....
Elgin	Bayham	15	III	1–Teall	Medina	0.653	0.628	0.653
Norfolk	Woodhouse		Port Dover	1–Company	White Medina	0.669	0.665	0.669
"	"		"	1–Kelly	Red Medina	0.660	.....	.....
Haldimand	Rainham	25	I	1–Austin	Clinton	0.655		
"	Canboro	7	Dochstead-er Tract	1–Jardine	White Medina	0.659	0.647	0.657
Welland	Willoughby	2	IV	No. 61	Trenton	0.605	0.588	0.605
"	Bertie	35	III	1–Zavitts	White Medina	0.649	0.643	0.649
Peel	Caledon E.	3	IV	No. 2	(Lorraine) (Hudson River)	0.635	new field	.....
Grey	St. Vincent	24	VII	2–Doran	Trenton	0.752	new field	.....

Without exception it will be seen that in all gas fields there is an increase in the density of the natural gases of Ontario and every formation shows this increase.

TABLE II.—*Continued*

Townships	Population	No. of consumers		Quantity used in 1921, M. cu. ft.			Rate, cents per M. cu. ft.
		Free	Pay	Free	Pay	Industrial	
Haldimand County—							
Canborough	997	46	76	7,551	6,783	.....	42½
Moulton	1,609	34	87	6,116	7,861	.....	25&60
Seneca	1,742	67	136	10,634	11,699	.....	30&45
North Cayuga	1,423	15	35	2,776	3,856	.....	35
South Cayuga	591	28	59	5,737	4,616	.....	42½
Rainham	1,731	105	272	21,366	29,705	.....	25
Sherbrooke	316	1	26	250	2,661	.....	40&50
Dunn	788	27	115	2,814	12,188	.....	20&42
Walpole	3,311	46	297	8,481	29,265	1,131	26&45
Oneida	1,377	10	69	1,331	7,399	.....	40&50
Welland County—							
Wainfleet	2,582	42	117	7,027	6,655	.....	35&70
Humberstone	2,304	58	158	11,709	6,885	.....	50
Bertie	3,305	85	1,041	17,071	38,044	485	60
Pelham	2,600	5	136	1,110	9,000	.....	57
Thorold	2,885	1	153	169	9,161	.....	50&70
Willoughby	917	38	53	7,904	1,824	.....	50&70
Crowland	3,826	29	58	5,179	3,956	.....	50
Stamford	4,000	.....	239	.....	8,222	.....	50&70
Lincoln County—							
Caistor	1,300	32	28	5,041	4,880	.....	25&42½
Gainsboro	2,117	1	42	50	2,314	224	35&75
Grimsby	2,879	41	140	12,147	8,310	.....	75
Louth	2,312		10		710	.....	57
Grantham	3,456	1	17	881	1,200	.....	57
Wentworth County—							
Binbrook	1,260	37	86	6,799	13,049	.....	25&42½
Glanford	1,409	9	84	1,452	9,356	.....	25&42½
Barton	10,165	.....	923	.....	73,614	.....	40
Flamboro West	2,423	.....	34	.....	1,258	.....	70
Ancaster	4,058	.....	1	.....	1,326	.....	25
Total	.....	758	4,492	143,595	315,797	1,840	.....

These two tables of gas consumption in the cities, towns and townships of Ontario is not given as correct in detail. In procuring the data for the same, it was found difficult to segregate gas users in one township from those in an adjoining one, or in a group of townships, the gas companies not finding it necessary to keep a separate ledger for each township. Again, many houses and small gas engines may be supplied with gas passing through the same meter, and on account of the relatively small consumption, this gas has been classed as for domestic use. The number of consumers is probably correct, but the quantity of gas consumed may in some cases not be so. This applies more particularly to country and village users. In cities and large towns separate ledgers are usually kept, and more precise figures are available. The tables, however, approximate the true situation and show where most gas is used, and also how the price affects the quantity consumed. It will be noted that the total gas consumed as shown in the tables is not the same as the total quantity of gas produced in 1921. This is explained by the fact that no private wells are included and no leakage.

TABLE III.—CLASSIFICATION BY INDUSTRIES OF NATURAL GAS USED IN ONTARIO FOR INDUSTRIAL PURPOSES IN 1921 (1)

Municipality.	Factory Heating, Incinerator.	Gas Engines and Power	Soldering, Hardening metals, Tempering, Annealing	Enamelling	Laundries, Tailors, Cleaners,	Printing	Packing, Canning	Heating glue wax, water, etc.	Bakers, Confectioners, Restaurants	Dairies	Laboratories	Glass Mfg., Tobacco Curing	Clay Workers, Lime kilns	Greenhouses	Total (M. cu. ft.)
Aylmer		273							96						369
Belle River		658	67						367						1,092
Belmont		161							101						262
Blenheim		263				70			241				2		576
Brantford		1,042	2,014	883	100	106		78	1,005				90		5,318
Bridgeburg								123							123
Caledonia	3,591	432							911						4,934
Chatham		7,984	9,150	2,045		1,914	1,093		5,060	3,798			16,091		47,135
Chatham district		7,880				110			958				13,802		22,750
Coatsworth		332											11,214		11,546
Comber		1,020							380				2,148		3,548
Courtright		1,236													1,236
Delhi		1,264													1,264
Dresden		16,112							612						16,724
Dundas		194	679												873
Dunnville		9,574	3,111							1,277					13,962
Dutton		723							503						1,226
Essex	334	7,785							1,583		168		5,176		15,046
Fort Erie		51													51
Galt		93	1,705	145				694							2,637
Hamilton		82	(3) 28,598	7	63		355	1,793	331	7,887	108		22,354		61,578
Highgate		20													20
Ingersoll		1,387	112				297	150	4,166						6,112
Jarvis		2,129													2,129
Kingsville		39,133	379		1,457	63	401		1,621	652		(4) 48,861		15,246	107,802
Muirkirk		100													100
Niagara Falls			519					52							561
Oil Springs		1,806													1,806
Paris		80						295							375
Petrolia		1,545			353				1,349				911		4,158
Port Colborne				9,133											9,133
Port Dover		607	91			448							8,171	470	9,787
Prairie Siding		869													869

Putman		218													218
Ridgetown		1,595	2,818		231				1,052	86			8,761		12,543
Ridgeway		182													182
Rodney		148													148
Sarnia district		3,947												233	4,180
Sarnia		4,505	1,308		331	241			1,558	1,038					8,981
Selkirk		1,131													1,131
Simcoe		51					7,065	2,273		368					9,757
St. Catharines			2,395												2,395
St. George		94													94
Shedden-Fingal		3,465													3,465
Stevensville		303													303
Thorold												62,418			62,418
Tilbury		14,472					147		835				198	92	15,744
Tillsonburg		576	338					14	2,276						3,204
Wallaceburg		72,277	1,181			207			2,276			133,746	3		209,690
Walkerville	(2) 1,287		3,439	236				139	1,149			132			6,382
Welland					592	113									705
Wellandport	118	87								19					224
West Lorne	126	380					70								576
Wallacetown		579													579
Windsor			2,858	1,906	21	226	332	2,713	5,475	94	243				13,868
Woodstock			843		491	520		186							5,036
All Gas Companies		140,816													140,816
Total (M. cu. ft.)	5,456	349,650	61,605	14,355	3,639	4,018	9,760	8,500	36,640	15,219	912	245,025	86,921	16,041	857,741

(1) The quantities are in thousand cubic feet. (2) Incinerator. (3) Annealing—14,412 M. cu. ft. (4) Tobacco Curing.

Ratio of price to Gas consumed

At the various rate hearings during the year 1921, it was stated several times that the rates charged for gas had very little to do with conserving gas. A glance at Tables I and II will show at once that it has very much to do with conserving gas. For instance:

Place	No. Consumers	Rate cents	Amount used, M. cu. ft.	Average per Consumer M. cu. ft.
4 Townships in Kent County	168	Free	54,934	321
[illegible]	1537	35 and 17	245,284	160
Dutton	269	30	34,424	128
Dundas	1041	70	38,377	37

These places have been taken at random. Averaging all places where rates are equal may give a slightly different result.[1] The comparison is only made to show that careless use of gas does exist, and that the steps taken to curtail needless consumption of gas are justified. Surely there is no need of anyone using 321,000 cu. ft. of gas when his neighbour has the same result from 160,000 cu. ft.

When the price of gas is advanced beyond fifty cents apparently other fuels come into competition for heating purposes, but where the price of gas is below fifty cents it is undoubtedly used for all purposes. The degree of care used in conserving gas will be seen to decrease in direct proportion with the decrease in price.

There is also a rate above or below which profits decrease. One company puts this maximum rate at eighty cents.

It has often been stated that electricity is a cheaper and better fuel for cooking than natural gas. A glance at the number of consumers, rate, and amount of gas used in Niagara Falls, where electricity is cheapest, should be sufficient to convince the most skeptical that this is not correct.

It is of considerable interest to know for what particular purposes natural gas is used, in industrial or manufacturing operations. There are certain trade and even agricultural operations for which gas is so convenient and advantageous a fuel, as compared with any other, that it is difficult to deny them the use of gas if it can at all be spared. Table III classifies by industries the industrial uses of gas in 1921.

[1]Ont. Dept. of Mines, Vol. XXX, Pt. 5, p. 13.

TABLE I.—CONSUMPTION OF NATURAL GAS IN TOWNS AND CITIES, 1921.

City, Town or Village	Popu-[1] lation	No. of consumers		Amount used in 1921 M. cu. ft.			Distance from gas field, miles	Rate, cents. per M. cu. ft.
		Free	Pay	Free	Pay	Industrial		
Aylmer	2,094	.....	742	.....	45,539	369	12	60&75
Bridgeburg	2,401	3	974	499	60,876	174	8	50&75
Fort Erie	1,546							
Belmont	.....	.....	140	.....	6,492	.....	94	75
Blenheim	1,565	.....	516	.....	68,027	576	20	45
Belle River	608	.....	149	.....	17,306	1,092	29¾	45
Brantford	29,440	.....	4,537	.....	152,544	5,318	141	80
Chippawa	1,137	4	72	500	2,642	.....	3	40
Caledonia	1,223	.....	426	.....	50,753	4,934	6½	40&45
Courtright	448	.....	217	.....	25,389	1,236	53¼	45
Chatham	13,256	.....	3,600	.....	564,182	47,135	22	45
Cayuga	784	.....	209	.....	27,456	.....	.....	45
Dunnville	3,224	5	916	373	109,136	13,962	12	42&45
Dundas	4,978	.....	1,041	.....	38,377	873	172	70
Delhi	733	.....	246	.....	20,764	1,264	26	45
Dresden and Tupperville	1,339	.....	527	.....	61,034	16,724	30	45
Dutton	813	.....	269	.....	34,424	1,226	52	30
Essex	1,588	.....	412	.....	55,544	15,046	33	45
Fonthill	600	.....	150	.....	8,933	.....	25	70
Galt	13,216	.....	1,572	.....	73,002	2,637	147	80
Hamilton	114,151	.....	21,146	.....	55,846	61,578	166	.....
East Hamilton	.....	.....	413	.....	16,828	.....	27	75
Highgate	394	.....	124	.....	18,802	20	32	20
Hagersville	1,169	.....	365	.....	33,712	.....	13¼	50
Hepworth	317	.....	20	.....	1,250	.....	½	50
Ingersoll	5,150	1	1,225	124	99,342	6,112	100	80
Jarvis	485	.....	240	.....	31,688	2,129	9	43
Kingsville	1,783	.....	576	.....	80,284	107,802	30	40
Leamington	3,675	.....	1,135	.....	182,959	.....	20	40
Niagara Falls	14,764	.....	2,878	.....	132,782	561	11	50&70
Oil Springs	490	15	140	1,000	7,912	1,806	1	75
Petrolia	3,148	.....	820	.....	107,982	4,158	60	50
Paris	4,368	1	641	171	31,363	375	129	80
Rodney	756	.....	240	.....	32,754	148	40	28
Ridgetown	1,855	.....	637	.....	74,106	12,543	28	45
Sarnia	16,135	.....	3,950	.....	522,924	13,161	55¼	40&50
Simcoe	3,953	.....	1,501	.....	206,508	9,757	20	45
St. Catharines	19,881	.....	3,414	.....	161,810	2,395	35	75
Thorold	4,825	.....	445	.....	24,565	62,418	30	75
Merritton	2,542							
Tilbury	1,673	.....	402	.....	47,532	15,744	13½	35
Tecumseh	978	.....	133	.....	15,448	.....	50	45
Tillsonburg	2,974	.....	930	.....	76,507	3,204	14	47
Vienna	288	.....	131	.....	13,198	.....	.....	45&65
Welland	8,654	3	1,959	282	91,826	705	3	50&70
Sandwich	4,415	.....	470	.....	60,786	.....	43¼	40&50
Ford	5,870	.....	440	.....	56,907	.....	43¼	40&50
Walkerville	7,059	.....	1,403	.....	174,972	6,482	43¼	40&50
Windsor	38,591	.....	7,209	.....	918,593	13,768	43¼	40&50
Wallaceburg	4,006	.....	1,100	.....	139,627	209,690	27½	40&50
Wheatley	378	.....	142	.....	18,868	.....	3	25
Woodstock	9,935	1	2,150	117	112,316	5,036	108	80
West Lorne	755	.....	208	.....	30,306	576	45	28
Port Colborne	3,415	.....	1,241	.....	102,838	9,133	.....	50
Humberstone	1,524							
Port Rowan	672	.....	250	.....	21,366	.....	3	52
Port Dover	1,462	.....	474	.....	52,929	9,787	29	45
All Gas Companies for power purposes	.....	.....	.....	.....	.....	140,816	.....	.....
Total	.....	33	75,263	3,066	5,677,365	812,470	.....	.....

[1]From Dominion Bureau of Statistics, 1921 Census.

TABLE II.—CONSUMPTION OF NATURAL GAS IN TOWNSHIPS, 1921.

Townships	Population	No. of consumers		Quantity used in 1921, M. cu. ft.			Rate, cents per M. cu. ft.
		Free	Pay	Free	Pay	Industrial	
Essex County—							
Gosfield North	1,977	4	117	147	16,310	.....	36&89
Gosfield South	2,427	.....	415	.....	57,851	.....	36&89
Maidstone	2,225						
Rochester	1,911						
Sandwich South	1,391	12	471	2,291	59,838	.....	45
Sandwich West	3,519						
Sandwich East	2,348						
Mersea	3,356	.....	132	.....	17,540	.....	30
Tilbury North	1,699	2	181	364	22,560	3,548	45
Tilbury, West	1,533						
Lambton County—							
Enniskillen	3,063						
Moore	3,320	.....	667	.....	77,861	.....	45
Sombra	2,865						
Sarnia	2,583	1	11	21	1,800	.....	45
Euphemia	1,543	.....	20	.....	6,667	.....	25
Kent County—							
Raleigh	4,343						
Dover	4,345						
Tilbury East	3,197	168	1,537	54,934	245,284	35,165	17&35
Romney	1,563						
Harwich	4,124						
Orford	1,814	17	688	6,979	112,026	100	17, 25
Howard	2,507						& 45
Chatham	5,272	2	33	565	3,480	.....	45
Camden	2,021	.....	8	.....	960	.....	45
Elgin County—							
Aldboro	2,906	5	28	429	3,324	.....	25
Dunwich	2,581	3	122	302	14,623	579	40
Southwold	3,211	1	163	52	26,203	3,465	505
Malahide	2,748	.....	65	.....	5,428	.....	35&7
Bayham	3,438	8	356	1,337	33,291	.....	35, 42, 47&65
Middlesex County—							
Westminster	5,258	.....	247	.....	24,134	.....	66&70
Dorchester North	3,104	.....	137	.....	12,199	480	60&70
Norfolk County—							
Houghton	1,165	.....	15	.....	966		47
Middleton	2,057	7	7	2,143	418	.....	42
Walsingham	2,553	9	98	1,126	7,940	.....	52
Charlotteville	2,492	6		1,322			45
Windham	2,950	3	114	586	9,796	.....	45
Woodhouse	1,669	17		2,385			45
Brant County—							
Onondaga	1,134	10	206	1,572	12,560	.....	45&80
Dumfries South	2,391	.....	140	.....	7,288	94	80
Oxford County—							
West Oxford	.....	.....	7	.....	341	.....	80

TABLE IX.—GAS CONSUMPTION IN TOWNS, 1922.

	Population	No. of Consumers		Amount of gas used M. cu. ft.			Distance from gas fields. Miles	Rate per M. cu. ft.
		Pay	Free	Pay	Free	Industrial		
Aylmer	2,251	700	....	39,475	.....	.....	12	.60–.75
Bridgeburg and Fort Erie	2,163 / 1,556	937	6	63,325	1,990	121	8	.50–.75
Belmont	.....	106	....	4,187	.....	.....	9	.75
Blenheim	1,580	539	3	68,813	1,556	933	20	.40–.50
Belle River	580	165	2	19,572	199	757	29	.45
Brantford	31,362	4,312	....	117,789	.....	5,800	141	.80
Chippawa	1,029	62	....	2,120	.....	.....	3	.40
Caledonia	1,335	453	....	49,295	.....	2,213	6½	.45
Chatham	15,084	3,600	....	593,757	.....	9,673	22	.50–.70
Cayuga	767	207	....	26,437	.....	.....	6.	.45
Comber	.....	150	....	20,309	.....	.....	19	.45
Crystal Beach	.....	630	....	11,129	.....	.....	..	1.00
Dunnville	3,583	950	6	108,200	900	27,655	12	.45
Dundas	5,100	1,040	....	35,646	.....	621	172	.70
Delhi	706	250	....	22,103	.....	1,488	4	.60
Dresden and Tupperville	1,456	587	....	62,472	.....	2,647	30	.45–.50
Dutton	845	265	3	29,969	197	1,028	52	.55
Essex	1,591	455	....	56,610	.....	5,814	33	.45–.50
Fonthill	739	.....	.....	.....	.....	.....	25	.70
Galt	13,332	1,434	....	53,736	.....	2,495	147	.80
Hamilton	118,243	22,680	....	572,431	.....	29,756	166	.....
Hagersville	1,273	369	....	35,997	.....	.....	13½	.50
Highgate	417	123	1	16,209	27	56	32	.45
Hepworth	330	25	....	953	.....	.....	½	.50
Ingersoll	5,253	1,190	....	82,366	.....	3,215	100	.80
Jarvis	480	184	....	24,030	.....	1,138	9	.45
Kingsville	2,010	557	....	82,759	.....	44,905	30	.40
Leamington	3,864	1,175	....	180,694	.....		20	.40
Lynedoch	.....	40	....	3,400	.....	.....	.....	.45
Niagara Falls	15,895	2,549	....	135,138	.....	271	11	.50–.70
Oil Springs	491	150	....	9,489	.....	289	1	.75
Petrolia	2,911	800	....	108,039	.....	2,287	60	.50–.70
Paris	4,400	570	....	25,945	.....	670	129	.80
Port Colborne and Humberstone	3,123 / 1,455	1,500	....	103,116	.....	2,985	5	.50
Port Dover	1,380	470	....	55,071	.....	1,157	5	.45
Port Rowan	637	245	....	20,216	.....	.....	.....	.60
Port Burwell	.....	237	....	15,422	.....	.....	3	.65
Rodney	756	241	1	30,685	49	548	40	.50
Ridgetown	2,267	630	3	79,140	2,076	3,282	28	.45–.50
Sarnia	14,905	4,010	....	460,019	.....	4,987	55½	.50–.70
Simcoe	3,951	1,318	....	193,499	.....	13,373	20	.45
St. Catharines	2,961	3,420	....	173,523	.....	3,980	35	.75
St. George	.....	225	....	7,988	.....	25	148	.80
St. Williams	.....	99	....	7,024	.....	.....	1	.60
Selkirk	.....	137	....	18,097	.....	.....	2	.25–.30
Smithville	.....	156	....	13,786	.....	.....	7	.75
Thorold and Merritton	5,243 / 2,589	483	....	25,792	.....	20,103	35	.75
Tilbury	1,851	402	2	51,428	301	8,994	13½	.45–.50
Tecumseh	1,019	145	....	19,069	.....	.....	50	.45
Tillsonburg	3,027	922	....	79,140	.....	2,318	14	.50
Vienna	302	120	....	10,698	.....	.....	.....	.45–.65
Welland	8,880	1,911	3	93,198	197	583	3	.50.–70
Walkerville	7,303	1,395	....	172,134	.....	3,424	43¼	.50
Sandwich	4,922	443	....	55,751	.....	.....	43¼	.50
Ford	5,113	438	....	55,122	.....	.....	43¼	.50
Windsor	38,530	7,189	....	893,029	.....	11,697	43¼	.50
Wallaceburg	3,921	1,014	....	136,458	.....	183,454	27½	.50
Wheatley	641	221	....	31,572	.....	.....	3	.40
Woodstock	10,164	2,046	....	94,892	.....	4,282	108	.80
West Lorne	803	215	3	28,722	147	.....	45	.50
Wellandport	.....	38	1	1,284	325	.....	10	.75
Miscellaneous manufacturing purposes	.....	.....	....	.....	.....	53,896	.....	.....
Total	366,369	76,924	34	5,588,275	7,964	462,920	.....	.....

TABLE X.—GAS CONSUMPTION IN TOWNSHIPS, 1922.

Township	Population	No. of Consumers		Amount used, M. cu. ft.			Rate cents per M. cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX—							
Gosfield, N	2,067	143	4	9,602	62	.....	.40
Gosfield, S	2,291	282	2	34,511	91	.....	.40
Maidstone	2,181	53	3	7,728	584	.....	.45
Rochester	2,009	166	6	24,207	1,247	.....	.45
Sandwich, S	1,481	44	.....	6,416	.....	.....	.45
Sandwich, W	2,764	20	.....	2,915	.....	.....	.45
Sandwich, E	1,300	211	2	30,775	230	.....	.45
Mersea	3,974	264	2	44,310	788	.....	.40
Tilbury, N	1,814	20	1	2,916	88	.....	.45
Tilbury, W	1,545	18	.....	2,624	.....	.....	.45
LAMBTON—							
Enniskillen	2,815	68	.....	9,919	.....	.....	.45–.30
Moore	3,412	440	.....	64,164	.....	2,091	.45–.35
Sombra	2,689	130	.....	18,958	.....	2,677	.45–.30
Sarnia	2,289	14	3	2,237	577	5,033	.45–.30
Euphemia	1,360	20	.....	2,623	.....	3,447	.25
Dawn	2,499	3	.....	437	.....	.....	.45
KENT—							
Raleigh	3,625	724	50	107,861	11,728	1,384	.35–.15
Tilbury, E	3,057	274	92	39,995	35,746	7,538	.35–.15
Romney	1,521	106	34	14,075	10,229		.35–.20
Harwich	4,665	450	6	64,021	1,540	13,071	.45–.15
Orford	1,868	82	1	13,557	106		.45–.15
Howard	2,777	151	2	22,470	520		.45–.20
Chatham	5,130	80	1	11,666	244		.45–.30
Camden	2,074	20	.....	2,916	.....	12,401	.45–.30
Dover	3,885	233	2	33,848	293		.35–.25
ELGIN—							
Aldboro	2,991	21	1	2,735	434	849	.25
Dunwich	2,678	125	2	12,035	58	623	.30
Southwold	3,553	248	2	20,761	82	2,829	.35
Malahide	2,782	61	.....	2,640	.....	.....	.35
Bayham	3,230	132	11	11,421	1,836	.....	.45–.65
MIDDLESEX—							
Westminster	5,846	234	1	22,140	150	124	.70
Dorchester, N	3,049	155	.....	13,121	.....	.....	.70
NORFOLK—							
Houghton	1,253	15	.....	892	.....	.....	.45
Middleton	1,996	7	7	379	1,239	.....	.45
Walsingham, S	2,814	.....	9	.....	1,512	.....	.45
Charlotteville	2,536	71	9	6,146	1,557	.....	.45
Windham	3,258	14	.....	1,904	.....	.....	.45
Woodhouse	2,128	154	20	22,792	3,458	.....	.45
Townsend	3,748	35	.....	4,973	.....	.....	.45
BRANT—							
Onondaga	1,017	28	36	3,080	4,739	.....	.80
Dumfries, S	2,577	134	.....	6,035	.....	.....	.80
Brantford	.....	169	.....	10,160	.....	.....	.80
OXFORD—							
Oxford West	1,767	.....	.....	.....	.....	.....	.80
HALDIMAND—							
Canboro	900	82	56	8,183	10,679	.....	.45
Moulton	1,626	129	42	9,842	8,544	.....	.40

TABLE X.—GAS CONSUMPTION IN TOWNSHIPS, 1922—*Continued.*

Township	Population	No. of Consumers		Amount used, M cu. ft.			Rate cents per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND.—*Continued.*							
Seneca	1,576	174	71	18,222	12,671	.....	.45
Cayuga North	1,334	102	25	11,881	4,225	.....	.45
Cayuga South	571	67	29	4,579	5,577	.....	.45
Rainham	1,689	146	43	21,369	9,614	1,106	.30
Sherbrooke	272	27	10	2,313	2,520	.....	.40–.50
Dunn	818	134	21	15,334	2,206	.....	.20–.40
Walpole	3,018	242	50	31,627	10,355	.....	.45
Oneida	1,215	67	9	9,353	1,664	.....	.40–.50
WELLAND—							
Wainfleet	2,433	118	48	6,972	12,113	250	.40–.75
Humberstone	1,948	127	49	8,076	12,904	.....	.50
Bertie	3,201	563	78	33,870	22,208	114	.60
Pelham	2,392	.....	.....	.....	.....	.....	.60
Thorold	3,536	5	1	296	225	.....	.60
Willoughby	873	23	4	1,439	550	.....	.70
Crowland	3,465	55	25	3,343	5,839	.....	.50
Stamford	5,031	.....	3	.....	910	.....	.50–.70
LINCOLN—							
Caistor	1,235	61	50	5,702	4,718	.....	.45
Gainsboro	2,086	12	20	.....	.....	.....	.50
Grimsby	3,267	.....	.....	.....	.....	.....	.75
Louth	2,518	5	.....	317	.....	.....	.60
Grantham	3,977	19	.....	1,290	.....	.....	.60
WENTWORTH—							
Binbrook	1,127	68	53	9,753	9,400	.....	.40
Glanford	1,405	107	10	15,642	1,908	.....	.40
Barton	7,435	966	2	70,651	300	.....	.40
Ancaster	4,349	51	.....	4,263	.....	.....	.40
Saltfleet	4,672	16	.....	2,821	.....	.....	.40
Used by Gas Companies for drilling and power purposes	.....	.....	.....	.....	.....	143,619	.....
Total	180,184	8,985	1,008	1,013,103	218,268	197,102	.....

TABLE XI.—GAS WELLS IN ONTARIO BY TOWNSHIPS.

County	Township	Production	Rock Pressure	Acreage under Lease	Rentals Paid	No. of Wells Producing	No. of Wells Abandoned	Wells Drilled		
								No. Dry	No. Producing	Open Flow Pressure
		M. cu. ft.	Lbs.		$					
Essex	Tilbury West			1,000	500			1		
	Gosfield, S.						1			
	Mersea					4		2		
Kent	Romney					97	4	1		
		5,484,618	272	24,866	45,758					
	Tilbury East					137	13		4	832
	Raleigh					24	2			
	Dover West	322,984	500	4,146	400	9		3	1	463
Lambton	Sarnia		100	5,000	300	16		3	1	35
	Enniskillen		100	300	150	3				
	Dawn	56,295	852	15,427	3,000	5		4	3	570
	Euphemia		425	7,000	600	6				
Elgin	Bayham		215			55	1			
	Malahide	166,714	525	9,360	4,235	2			1	156
	Dunwich						1			
Middlesex	Dorchester N	5,071	90	12,000	800	3				
Norfolk	Houghton		480			3				
	Middleton		350			19			2	112
	Walsingham N.		493			6				
	Walsingham S.	434,147	330	7,086	6,533	14	1			
	Windham		248			5				
	Charlotteville		395			16			2	115
	Woodhouse		280			65	1		3	236
Haldimand	Walpole		169			161	7	2	12	1,718
	Rainham		132			120	6			
	Cayuga North		238			52	1	1	6	1,024
	Cayuga South		148			59	3			
	Oneida		159			30	1	3	8	1,125
	Seneca		122			163	14	9	15	1,240
	Canboro		111			164	6	2	6	271
	Dunn		223			17	2			
	Moulton		264			102	3	2	19	1,068
	Sherbrooke	1,616,916	181	143,103	86,213	12		1		

TABLE I.—GAS CONSUMPTION IN TOWNS AND CITIES, 1923

Town or city	Population	No. of consumers		Amount used, M cu. ft.			Distance from gas fields	Rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Aylmer	2,251	685	....	33,897	.....	.....	12	$0.90
Belle River	580	172	....	19,795	.....	434	29	.50
Belmont	340	91	....	3,725	.....	128	9	.85–1.00
Blenheim	1,580	557	....	67,310	.....	1,255	20	.45
Brantford	31,362	3,706	....	104,676	.....	5,920	141	.80
Bridgeburg and Fort Erie	3,699	945	....	71,351	.....	211	8	.70
Cainsville	400	50	....	2,770	.....	.....	4	.80
Caledonia	1,335	455	....	59,022	.....	.....	6½	.45–.50
Cayuga	767	220	....	26,405	.....	2,046	6	.45
Chatham	15,084	3,639	....	555,056	.....	5,230	22	.50–.70
Chippewa	1,078	191	2	9,385	400	.....	3	.70
Courtright	441	127	....	16,390	.....	726	49	.70
Delhi	733	249	....	21,173	.....	1,385	4	.60
Dresden and Tupperville	1,456	525	....	62,211	.....	1,309	30	.30–.50
Dundas	5,100	1,007	3	35,939	191	1,547	172	.70
Dunnville	3,605	914	8	111,336	1,300	25,350	12	.30–.35
Dutton	845	258	....	31,052	.....	1,253	52	.55
Essex	1,591	448	....	62,629	.....	1,705	33	.50–.85
Fonthill	772	180	....	8,269	.....	.....	25	.95–1.20
Ford	5,724	436	....	54,797	.....	.....	45	.50
Galt	3,332	1,284	....	50,543	.....	2,897	147	.80
Hagersville	1,273	376	....	38,349	.....	.....	13½	.50
Hamilton	122,234	21,808	63	603,846	.....	27,761	147	.75–1.00
Hepworth	332	20	....	668	.....	.....	½	.50
Highgate	414	123	1	15,690	50	.....	32	.50
Humberstone	1,455	400	....	32,858	.....	.....	4	.50–.70
Ingersoll	5,253	1,144	....	78,581	.....	1,483	100	.80
Jarvis	480	183	....	26,802	.....	2,429	9	.45
Kingsville	2,010	616	....	90,218	.....	16,212	30	.50
Leamington	3,669	1,200	....	193,187	.....	53,130	20	.50
Lyndoch	151	43	....	4,035	.....	.....	0	.45
Niagara Falls	15,895	2,107	....	117,896	.....	199	11	.70–.75
Oil Springs	491	147	....	9,091	.....	299	1	.75
Paris	4,400	510	....	24,023	.....	1,537	129	.80
Petrolia	9,911	826	....	118,175	.....	1,464	60	.50–.70
Port Burwell	549	226	....	14,047	.....	.....	3	.80
Port Colborne	3,625	882	....	72,374	.....	.....	5	.50–.70
Port Dover	1,573	494	....	60,567	.....	762	5	.45
Port Rowan	637	249	....	21,143	.....	.....	1	.60
Ridgetown	2,267	630	....	78,791	.....	2,072	28	.50
Ridgeway	500	150	....	7,756	.....	.....	1	.70
Rodney	756	245	....	31,860	.....	761	40	.50
St. Catharines	21,194	3,485	2	184,016	393	7,188	35	.75
St. George	569	129	....	5,802	.....	185	148	.80
St. Williams	219	96	....	6,999	.....	1,096	1	.60
Sandwich	5,010	443	....	55,677	.....	.....	44	.50
Sarnia	15,176	4,100	....	482,352	.....	7,176	69	.50–.70
Selkirk	.....	127	....	16,779	.....	2,164	0	.25–.40
Shedden and Fingal	.....	84	....	10,275	.....	1,606	63	.35–.60
Simcoe	4,049	1,505	....	226,864	.....	11,758	20	.45
Smithville	332	156	....	14,486	.....	.....	9	.75
Tecumseh	1,133	162	....	26,938	.....	.....	50	.52
Tilbury	1,981	451	....	52,873	.....	1,207	13½	.45–.85
Tillsonburg	3,086	939	....	82,001	.....	919	14	.50
Thorold and Merritton	7,624	503	1	29,227	210	48,825	35	.75
Vienna	284	96	....	5,316	.....	.....	.....	.80
Walkerville	7,703	1,390	....	173,195	.....	1,502	44½	.50
Wallaceburg	4,530	978	....	133,646	.....	99,979	27½	.50
Welland	8,636	1,950	....	102,658	.....	361	3	.70
West Lorne	818	219	3	29,879	234	2,028	45	.50
Wheatley	647	231	....	30,498	.....	4,112	12	.50
Windsor	42,122	7,175	....	888,793	.....	12,972	43¼	.50
Woodstock	10,196	1,953	....	68,348	.....	26,075	108	.80
Total	.....	74,690	20	5,674,310	2,778	557,145		

TABLE II.—GAS CONSUMPTION IN TOWNSHIPS, 1923

Township	Population	No. of consumers		Amount used, M cu. ft.			Rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, N.	2,190	127	4	14,407	256	.....	$0.40
Gosfield, S.	2,301	271	.....	38,935	.....	.....	.40
Maidstone	2,099	52	4	8,072	737	384	.25
Rochester	1,951	231	8	26,114	2,025	310	.25
Sandwich, S.	1,423	43	.....	7,646	.....	.....	.25
Sandwich, W.	2,764	8	.....	1,486	.....	.....	.25
Sandwich, E.	1,090	331	2	48,731	326	637	.25
Mersea	3,835	276	4	41,019	1,045	.....	.40
Tilbury, N.	1,788	17	1	2,409	256	.....	.25
Tilbury, W.	1,543	159	.....	22,034	.....	2,111	.25
LAMBTON:							
Enniskillen	2,666	74	.....	7,980	.....	1,023	.30–.50
Moore	3,215	502	1	55,366	170	4,339	.35
Sombra	2,857	227	1	22,286	80	1,623	.30–.50
Sarnia	2,540	.....	9	.....	1,800	.....	.30–.50
Euphemia	1,385	19	6	3,322	1,200	3,249	.40
Dawn	2,317	30	3	4,214	570	.....	.25
KENT:							
Raleigh	3,671	777	31	134,659	9,680	.....	.15–.35
Dover	3,606	255	1	39,181	184	.....	.15–.25
Tilbury, E.	2,914	296	88	54,765	36,757	18,715	.15-.20-.35
Romney	1,500	99	39	18,412	14,132	.....	.15–.35
Harwich	4,372	400	12	80,663	3,217	.....	.15–.35
Orford	1,870	46	3	8,145	351	74	.25
Howard	2,768	220	5	35,797	1,123	.....	.20
Chatham	4,935	78	.....	9,391	.....	.....	.30
Camden	2,078	22	.....	723	.....	.....	.30
ELGIN:							
Aldborough	2,837	21	1	3,081	458	.....	.25–.50
Dunwich	2,522	121	1	13,617	39	692	.28–.55
Southwold	3,510	167	1	15,397	76	1,741	.35–.60
Malahide	2,955	59	.....	2,478	.....	.....	.35–.65
Bayham	3,112	158	26	13,449	4,300	70	.20
MIDDLESEX:							
Westminster	6,122	238	.....	24,342	.....	.....	.45-.70-.85
Dorchester, N.	3,056	126	1	11,565	79	.....	.70–.85
NORFOLK:							
Houghton	1,220	15	.....	840	.....	.....	.45
Middleton	2,037	7	.....	437	.....	.....	.45
Walsingham, S.	1,481	9	.....	1,600	.....	.....	.45
Charlotteville	2,512	73	.....	6,065	.....	.....	.45
Windham	3,005	14	.....	1,896	.....	.....	.45
Woodhouse	1,964	42	46	6,747	8,988	.....	.35
Townsend	3,695	35	.....	4,885	.....	.....	.45
BRANT:							
Onondaga	1,017	46	29	3,341	5,054	.....	.80
Dumfries, S.	2,532	6	.....	320	.....	.....	.80
Brantford	7,220	130	.....	7,076	.....	.....	.80
OXFORD:							
Oxford, W.	1,724	18	.....	1,738	.....	.....	.70
HALDIMAND:							
Canborough	902	70	58	5,762	12,695	109	.45
Moulton	1,628	157	57	12,464	8,160	2,291	.40–.50

TABLE II.—GAS CONSUMPTION IN TOWNSHIPS, 1923—*Continued*

Township	Population	No. of consumers		Amount used, M cu. ft.			Rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND—*Continued*							
Seneca	1,561	168	62	17,629	10,420	.....	$0.45
Cayuga, N	1,309	103	28	11,236	5,201	.....	.25-.45
Cayuga, S	509	67	25	5,637	5,748	.....	.25-.45
Rainham	1,690	158	47	21,767	8,671	96	.25
Sherbrooke	277	32	11	3,196	1,660	.....	.40-.50
Dunn	796	140	22	13,530	2,970	19,322	.20-.25
Walpole	3,042	233	45	32,325	9,498	474	.35
Oneida	1,287	50	9	5,669	2,032	.....	.45-.50
WELLAND:							
Wainfleet	2,357	94	51	5,424	8,703	211	.40-.70
Humberstone	2,047	143	48	11,323	8,343	3,000	.50-.70
Bertie	3,298	420	71	34,487	12,704	179	.70
Pelham	2,359	128	6	8,192	1,365	.....	.40
Thorold	3,368	5	1	340	210	42,925	.60
Willoughby	865	31	28	2,277	4,984	.....	.70
Crowland	3,748	59	28	4,190	5,703	.....	.70
Stamford	4,896	255	3	14,280	537	.....	.70
LINCOLN:							
Caistor	1,220	63	30	6,422	4,626	.....	.40
Gainsborough	2,091	50	1	1,192	25	.....	.50
Louth	2,548	6	.....	384	.....	.....	.40
Grantham	4,175	18	.....	1,122	.....	.....	.75
WENTWORTH:							
Binbrook	1,098	57	39	6,285	5,781	678	.40
Glanford	1,417	120	11	19,795	1,928	682	.25-.25-.40
Barton	7,658	917	.....	83,877	.....	.....	.35-.40
Ancaster	4,524	62	.....	4,785	.....	.....	.35-.80
Saltfleet	4,682	19	.....	1,774	.....	.....	.40
Total	.....	9,470	1,908	1,139,995	214,867	104,935	

SUMMARY	M cu. ft.
Total distributed	7,694,030
Leakage in distribution plants and rural lines	242,583
Leakage on transmission lines	151,993
Used by private consumers	25,945
Unassigned leakage on purchased gas	13,862
Total amount of gas produced	8,128,413

Comparison of Total Open Flow and Maximum Delivery

The general public has been continually led astray by reports of the open flow of gas wells being given in cubic feet. It is only human nature on the part of the operator, if he is successful in drilling a large gas or oil well, to guess at the open flow, or if he does measure the open flow, to spread the news of his success and future hopes in superlatives and the open flow measurement of his well in maximum figures embellished with many ciphers. The result of such a report is that the public expect a greatly increased flow of gas. Gas is not sold by the cubic foot; the unit is one thousand cubic feet, and the impressive array of ciphers is at once reduced by three.

Actual measurements of the total open flow of the Union Natural Gas Company's wells in the Tilbury field in 1923, show it to be 28,646 thousand cubic feet; and the average rock pressure was 305 pounds in August of that year. There is 305 pounds pressure behind that open flow, but against it is the friction in the hundreds of miles of transmission and distribution mains which holds back the flow of the gas. Of course, in the winter months the field pressure is very much lower, because the rock gives up the gas very slowly and the winter demand drains the rock adjacent to the bore hole thereby reducing its pressure. Field pressures, i.e., flowing pressure at the well head, vary from 50 pounds in winter to 265 pounds in summer. If good service is to be maintained, the maximum demand should not be exceeded by the maximum amount that a field will deliver.

On January 21, 1924, the temperature at Chatham registered eight degrees below zero, and on this date the Tilbury field produced 15,300 thousand cubic feet of gas. The pressures in the gas field for that date were fifty to eighty pounds. The average pressure in the following pipe lines was:—

Pipe line	Pressures					
	City limits			Field		
	High	Low	Average	High	Low	Average
Windsor	7	3	4½	80	67	72
Chatham	20	3	6	66	60	62
Sarnia	9	5	6½	54	50	52
Ridgetown	40	3	17	66	50	55

Comparing this maximum delivery of 15,300 thousand cubic feet in twenty-four hours with the total open flow of 28,646 thousand cubic feet in twenty-four hours, we find it to be 52 per cent.; but comparing the production for the year plus leakage of 3,483,800 thousand cubic feet, with total open flow for twenty-four hours, we find it just under 34 per cent., or one-third of the open flow. This is the fraction advocated by most natural gas engineers as safe practice for wet fields and nearly always used for purposes of estimating the production of a gas field from the open flow.

Again, compare the winter demand per consumer with the summer demand and the average for the year:—

Volume consumed, M cu. ft.	Date	Number of consumers	Consumer's daily demand, cu. ft.
3,552,617	Jan. 1 to Dec. 31, 1923	25,000	390 (average for year)
17,235	Jan. 1, 1924	25,000	689.4–14.4 = 675
3,411	Aug. 1, 1923	25,000	136.4–14.4 = 122

NOTE: Leakage amounts to 14.4 cubic feet per consumer per day.

This table shows that on the average for a year, only 65 per cent. of the capacity of the plant is used, and during the summer months 20 per cent. of its capacity. The overhead charges being the same for every month of the year, a high summer and a low winter rate is easily accounted for.

The open flow and rock pressure of the surface gas field near Ridgetown were measured during the months of January and June, fulfilling the promise made to the individual owners. This was done in the newly discovered surface gas field in Sarnia township, and samples of gas were taken in co-operation with the Mines Branch, Ottawa, for their report on helium in Canada. Further samples were collected at various places throughout Ontario.

The rock pressure and open flow of many wells were taken and kept for record where the owner had not the gauges and meters to do so. Samples of mineral water were also collected while wells were being drilled.

Inspector Burn was present to approve of the plugging of many of the wells abandoned throughout the year. Several cases of faulty casing and ineffective plugging were investigated, as well as certain neglected and flooded wells.

The use of gas in industries has now been greatly curtailed and is limited principally to fuel for gas engines and necessary operations such as soldering, certain classes of tempering, small enamelling ovens, and various small operations where fuel oil and coal cannot successfully be applied. It is, therefore, unnecessary to carry on the careful investigations made in past years, and only those industries where a relatively large quantity of gas is used were inspected.

An attempt was made to reduce the gas used for heating in large buildings, but it was found so difficult to fix any definite scale that the idea was given up. Apparently this has adjusted itself since the price of gas has been increased.

An inspection and measurement of all privately owned gas lines were made in order to have them conform to attainable standards for leakage, as some of these lines were known to be leaking excessively.

An investigation was made of the quantity of gas used and the cost of lifting water from gas wells as a start towards conservation of gas.

Many wells were visited while being drilled, and some success was achieved in collecting samples of drill cuttings. Some of the information gained will be discussed in a later report. W. S. Dyer[1] has noted the results of a careful study of the rocks at their outcrop, and as taken from wells while being drilled. Formations can be determined on the surface by their fossil content, but in drill cuttings from a gas or oil well these can only be recognized by chemical analysis and their general characteristics. It can, therefore, be seen that where a section is mainly limestone, there is much room for study before positive identification can be made.

An attempt is being made to keep maps of the gas and oil fields up to date, and also to interest the operators sufficiently to secure their co-operation. Although more correct information is being received, much is still to be done to attain a degree of accuracy.

Applications for information regarding the possibilities of finding oil or gas in certain districts have increased greatly. No record has been kept of these applications, but many localities have been investigated, and one apparently genuine seepage of petroleum examined.

Consumption of Gas in Cities, Towns, and Townships

The following table has been published for the past four years, but the accuracy of the records in 1921 and 1922 for the townships and villages is questionable owing to the fact that methods of keeping records had not been developed on a basis of legal subdivision but more with a view of grouping

[1]Gypsum in Ontario, Ont. Dept. Mines, Vol. XXXIV, pt. 2, 1925.

consumers on a basis of rates. Book-keeping methods were revised during the past year, and these records are now more dependable.

These tables form a most interesting comparison of the quantity of gas used at different rates. Of course one can only speculate whether or not the same service was rendered each year with a decreasing quantity of gas.

The distribution of gas by industries was noted in 1921, but in later years this was given only by municipalities. The distribution by industries was much the same excepting the tile and brick-making and lime-burning industry, which has been eliminated. The glass industry has also been greatly reduced.

TABLE I—GAS CONSUMPTION IN TOWNS AND CITIES, 1924

Town or city	Population	No. of consumers		Amount used, M cu. ft.			Distance from gas fields	Rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Aylmer	2,222	68	....	33,90	.....	.....	12	$0.95–1.15
Belle River	560	152	....	19,44	.....	1,333	29	.50– .85
Belmont	340	80	....	2,27	.....	.....	9	.85–1.00
Blenheim	1,553	515	2	67,54	512	87	20	.45– .85
Brantford	30,109	3,617	3	95,947	1,487	5,672	141	.80
Bartonville	100	79	....	4,31	.....	.....	18	.40
Binbrook	184	22	1	1,35	20	.....	6	.45
Bridgeburg and Fort Erie	4,028	926	5	64,939	934	.....	8	1.05–1.75
Brigden	586	140	....	17,13	.....	1,466	48	.45– .50
Cainsville	400	53	....	2,77	.....	.....	4	.80
Caledonia	1,32	48	....	56,29	.....	.....	6½	.50
Canfield	186	3	....	3,137	.....	.....	1½	.35
Cayuga	746	214	....	27,969	.....	.....	6	.45
Chatham	15,084	3,611	....	563,03	.....	4,565	22	.50
Chippawa	1,07	175	....	7,92	.....	.....	3	.70
Comber	60	147	....	19,20	.....	2,391	19	.55– .80
Courtright	441	12	....	17,99	.....	30	49	.55– .80
Crystal Beach	252	94	....	8,09	.....	.....	1	.75
Delhi	73	251	....	20,33	.....	1,151	4	.60
Dorchester	30	97	....	8,41	.....	.....	95	.75
Dresden and Tupperville	1,426	485	....	64,69	.....	1,02	30	.55– .80
Dundas	5,07	1,050	3	35,819	42	1,089	172	.70
Dunnville	3,60	966	2	113,76	23	19,444	12	.45
Dutton	82	262	1	29,81	3	959	52	.55
Echo Place	20	118	....	6,507	....	.....	3	.80
Eden	8	28	....	1,87	.....	.....	9	.45
Essex	1,59	44	....	63,44	....	4,18	33	.50– .85
Fairground	4	15	....	86	.....	.....	1	.50
Fenwick	16	94	....	6,04	.....	.....	18	.75
Fingal	46	53	....	6,56	.....	.....	71	.60
Fisherville	7	53	....	4,324	.....	699	2	.25– .30
Fonthill	77	175	1	8,51	3	.....	25	.95–1.20
Galt	13,22	1,129	1	46,34	29	2,889	147	.80
Hagersville	1,15	37	....	39,357	.....	.....	13½	.50
Hamilton	120,23	23,08	....	194,761	.....	158,42	47	.85
Hepworth	33	1	....	591	.....	.....	½	.60
Highgate	414	123	1	15,504	5	.....	32	.45
Ingersoll	5,00	1,044	2	63,965	29	1,642	100	.80
Jarvis	47	193	....	26,257	.....	739	9	.50
Kingsville	1,99	659	1	94,06	16	2,582	30	.40
Lambeth	475	94	....	6,867	.....	.....	84	.75
Leamington	3,969	1,224	....	204,501	.....	2,664	20	.50
Lyndoch	15	43	....	4,52	.....	.....	0	.45
Merlin	35	14	....	19,479	.....	1,559	2	.45
Niagara Falls	15,40	1,97	....	95,41	.....	.....	11	.70–1.15
Oil Springs	469	14	1	9,09	23	.....	1	.75
Paris	4,34	50	1	20,329	217	1,317	129	.80

TABLE I—GAS CONSUMPTION IN TOWNS AND CITIES, 1924—*Continued*

Town or city	Population	No. of consumers		Amount used, M cu. ft.			Distance from gas fields	Rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
Petrolia	2,836	815	....	113,049	.....	.....	60	$0.50– .75
Port Burwell	549	219	....	16,571	.....	.....	3	.65–1.05
Port Colborne and Humberstone	5,052	1,421	....	99 970	.....	1,000	5	.65
Port Dover	1,573	532	....	58,003	.....	862	5	.45
Port Rowan	637	248	....	21,135	.....	.....	1	.60
Ridgetown	1,947	627	2	82,814	,813	1,552	28	.55– .80
Ridgeway	700	246	....	15,290	.....	.....	1	.60– .70
Rodney	676	247	1	30,663	71	482	40	.50– .70
Ruthven	438	51	....	8,718	.....	.....	25	.40
St. Anne	190	30	....	1,432	.....	.....	9	.75
St. Catharines	21,194	3,583	2	178,273	436	5,013	35	.75
St. George	569	135	....	5,335	.....	281	148	.80
St. Williams	319	99	....	7,218	.....	936	1	.60
Sarnia	15,176	4,073	1	433,116	316	3,884	69	.50– .70
Selkirk	585	130	1	18,378	93	1,324	0	.25
Shedden	409	85	....	11,054	.....	1,100	63	.60
Shetland	80	20	....	3,252	.....	.....	2	.40
Smithville	532	163	....	10,640	.....	.....	9	.75
Sombra and Port Lambton	4,000	172	....	22,886	.....	590	45	.50– .70
Stevensville	423	86	....	7,347	.....	1,324	1	.65– .70
Straffordville	215	83	....	8,453	.....	.....	5	.45
Simcoe	4,049	1,438	3	201,321	518	11,667	20	.45
Tecumseh	1,133	184	....	25,656	.....	.....	50	.50– .85
Thorold and Merritton	7,624	573	....	29,737	.....	.....	35	.50– .75
Tilbury	1,981	392	....	51,236	.....	717	13½	.45– .85
Tillsonburg	3,086	940	1	65,505	75	1,231	14	.50– .85
Vienna	284	78	1	4,236	39	.....	½	.85–1.05
Vittoria	360	71	....	6,163	.....	.....	3	.45
Border Cities	60,625	8,268	....	1,071 526	.....	12,967	43¼	.55– .80
Wallaceburg	4,530	1,021	....	128,937	.....	94,321	27½	.50– .75
Wallacetown	254	63	1	5,713	23	744	60	.48– .70
Welland	8,648	1,896	3	94,875	168	.....	3	.75–1.05
Wellandport	141	35	....	1,136	.....	.....	6	.75
West Lorne	818	227	3	29,757	292	1,401	45	.50
Wheatley	647	234	....	30,690	.....	1,260	12	.40– .50
Woodstock	10,196	1,795	1	76,656	329	2,254	108	.80
Total	.....	76,268	45	5,202,031	9,288	361,884	.....	.....

TABLE II—GAS CONSUMPTION IN TOWNSHIPS, 1924

Township	Population	No. of consumers		Amount used, M cu. ft.			Rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, North	2,190	142	3	17,756	412	.....	$0.40– .50
Gosfield, South	2,301	236	....	35,950	200	29,412	.40– .50
Maidstone	2,099	67	3	8,181	783	1,073	.45
Rochester	1,951	187	8	23,685	2,167	755	.45
Sandwich, South	1,423	63	....	8,324	.....	983	.45
Sandwich, West	2,764	12	....	2,083	.....	.....	.45
Sandwich, East	1,090	133	2	20,978	357	.....	.45
Mersea	3,835	281	3	43,176	859	57,726	.40
Tilbury, North	1,788	17	1	2,426	274	71	.45
Tilbury, West	1,543	16	....	2,051	.....	.....	.45
LAMBTON:							
Enniskillen	2,666	75	....	9,003	.....	1,410	.45
Moore	3,215	312	1	40,008	178	1,970	.50– .70
Sombra	2,857	49	....	5,619	.....	933	.60– .75
Sarnia	2,540	.....	8	.....	1,600	.....	..... .45
Euphemia	1,385	.....	8	.....	2,000	.....	.....
Dawn	2,317	33	3	4,287	613	.....	.45
KENT:							
Raleigh	3,671	675	32	99,620	9,955	497	.45– .60
Tilbury, East	2,914	220	88	28,814	31,039	.....	.35
Romney	1,500	104	30	14,921	12,379	2,265	.35– .40
Harwich	4,372	486	12	69,034	3,507	.....	.45
Orford	1,870	26	3	7,248	434	.....	.45
Howard	2,768	188	5	30,955	1,278	.....	.45
Chatham	4,935	72	....	9,450	.....	775	.45
Camden	2,078	9	....	1,021	.....	.....	.55– .80
Dover	3,606	301	2	49,510	220	2,416	.35
ELGIN:							
Aldborough	2,837	22	1	3,984	581	.....	.50
Dunwich	2,522	57	1	7,239	57	.....	.55
Southwold	3,510	120	1	12,353	70	1,341	.60
Malahide	2,955	62	....	2,633	.....	.....	.65
Bayham	3,112	49	26	4,366	4,601	.....	.50
MIDDLESEX:							
Westminster	6,122	137	....	17,114	.....	.....	.75
Dorchester, North	3,056	27	1	2,076	76	.....	.75
NORFOLK:							
Middleton	2,037	12	4	208	1,348	.....	.60
Walsingham, South	1,481	7	7	219	1,517	.....	.35
Charlotteville	2,512	4	4	131	749	.....	.45
Windham	3,005	2	2	72	434	.....	.45
Woodhouse	1,964	165	13	15,906	2,561	.....	.45
Townsend	3,694	33	....	4,686	.....	.....	.45
Walsingham, North	1,424	4	4	422	912	.....	.45
BRANT:							
Onondaga	1,017	49	15	2,992	3,337	.....	.50– .70
Dumfries, South	2,532	6	....	418	.....	.....	.80
Brantford	7,220	12	....	427	.....	.....	.80
Burford	3,833	6	....	568	.....	.....	.80
OXFORD:							
Oxford, West	1,724	21	....	1,684	.....	.....	.80
Oxford, East	1,810	7	....	560	.....	.....	.80

TABLE II—GAS CONSUMPTION IN TOWNSHIPS, 1924—*Continued*

Township	Population	No. of consumers		Amount used, M cu. ft.			Rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	1,902	81	49	7,472	11,094	.....	$0.40– .45
Moulton	1,628	191	38	16,344	7,013	2,237	.35– .50
Seneca	1,561	132	54	14,510	9,831	3,300	.35– .50
Cayuga, North	1,309	57	23	7,076	4,669	.....	.45
Cayuga, South	509	63	25	4,756	5,752	.....	.45
Rainham	1,690	149	43	20,799	8,692	39	.25– .30
Sherbrooke	277	34	10	4,529	1,600	.....	.20– .40
Dunn	796	111	14	14,132	1,928	.....	.45
Walpole	3,042	299	43	40,779	8,286	546	.30
Oneida	1,287	53	16	7,261	3,036	.....	.50
LINCOLN:							
Caistor	1,220	61	23	6,191	2,617	225	.50
Gainsborough	2,091	.....	1	.....	100	.....	.75
Louth	2,548	8	....	513	.....	.....	.75
Grantham	4,175	17	1	1,098	223	.....	.75
WELLAND:							
Wainfleet	2,357	84	33	4,318	11,139	.....	.75
Humberstone	2,047	143	48	11,778	7,958	1,000	.75
Bertie	3,298	481	76	22,119	12,058	.....	.75–1.05
Pelham	2,359	32	5	2,055	1,109	.....	.95–1.20
Thorold	3,368	5	1	339	197	26,558	.35– .50
Willoughby	865	34	31	2,861	4,812	.....	.75
Crowland	3,758	61	28	4,307	5,315	.....	.75–1.05
Stamford	4,896	253	3	11,481	504	.....	.75–1.05
WENTWORTH:							
Binbrook	1,098	51	33	8,051	6,230	451	.50
Glanford	1,417	118	11	19,485	2,100	630	.35– .50
Barton	7,658	835	....	75,703	.....	12,794	.40– .50
Ancaster	4,524	39	....	4,144	.....	.....	.70
Saltfleet	4,682	19	....	2,066	.....	323	.50
Total	.....	7,917	900	926,325	200,761	149,730	.....

SUMMARY

	M cu. ft.
Total distributed	6,850,019
Used by gas companies for all purposes	65,186
Leakage on transmission lines	151,318
Leakage in distribution plants	226,758
Leakage on rural lines	77,633
Total amount of gas produced	7,370,914

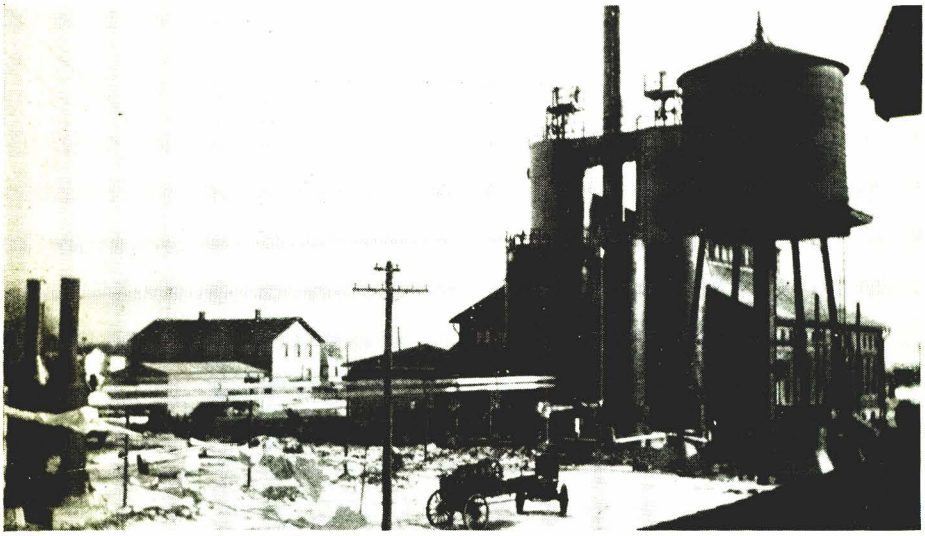
Purification of Natural Gas

As noted in a previous report[1] experimental processes for removing the objectionable hydrogen sulphide from the natural gas in southern Kent county (Tilbury field) were tried out by the Glenwood Natural Gas Company some years ago. The process was efficient, but the chemicals used had a very corrosive effect on the purification equipment and made the operation so costly that the scheme was abandoned after spending $190,000. The gas companies, therefore, had good reason to be diffident about recommencing their efforts, and eight years elapsed before a new attempt was made.

[1]Ont. Dept. Mines, Vol. XXXII, pt. 5, p. 11.

The Koppers Company of Pittsburgh, at the request of the Union Natural Gas Company of Canada, Limited, carried out experimental work at Port Alma, Ont., during the latter part of the year 1923. The Kopper process was developed for the purification of coke oven gas and has been used successfully for some time. The problem was to apply this process to natural gas under high pressure, and carrying a higher pressure of hydrogen sulphide. Successful results were obtained, and the erection of a large scale plant was commenced at Port Alma in the summer of 1924. It was completed and put into operation on December 1, 1924.

The Kopper process consists of washing the gas with a solution of soda ash, whereby the hydrogen sulphide is converted into sodium sulphide. The gas passes up a large vertical tank, 9 feet in diameter and 30 feet high, and meets



View of purification plant, Port Alma. The stack (cut off in illustration) is 150 feet high.

soda ash that is sprayed from the top. It drains down over layers of perforated wooden trays, so arranged as to present a maximum surface for the solution to come in contact with the gas. The gas passes from the top of the tank to the gas mains with the sulphur content reduced from 350 grains per 100 cubic feet to so few grains that no trace can be detected by smell. The soda ash solution, now containing some sulphur compounds, is pumped to the top of a second tower similarly packed with wooden trays; air is blown up through the trays and coming in contact with the solution, revivifies the spent solution with the re-formation of hydrogen sulphide. The air and hydrogen sulphide then pass up a stack 150 feet high to the atmosphere. With the exception of the stack, everything in the plant is in duplicate.

The purified gas has given general satisfaction, and has again made possible the use of copper-coil heaters, open room heaters, and open-top stoves. The disagreeable odour of hydrogen sulphide in the gas that escapes from minute leaks in piping in houses and public buildings has been eliminated, and complaints of injury to paint on houses, and of corrosion of telephone lines, stoves, and stove-pipes should be heard no more. Finally, three- to five-tenths of one

on lot 13, concession III. Senator Michener states that he has determined the presence of both oil and gas in different sections of this township, by means of a divining rod. He is now drilling to confirm this discovery.

Another well that is being drilled for gas and oil on lot 20, concession III, Logan township, Perth county, by the Mitchell Oil Producing Syndicate was located by means of a divining rod, the property of Frederick Heitbohmer of Stratford. Mr. Heitbohmer stated that oil and gas would be encountered at 1,800 feet depth.

There are now three individuals or groups searching, by means of divining rods, for oil and gas in Ontario, but neither of these have been found in commercial quantities.

Analysis of Gas Consumption

Tables III and IV give details which show everything of interest concerning the gas consumed in Ontario. By comparing these tables with those published in previous years, the history of prices and quantity consumed can be traced from year to year. It will be found of interest to note the changes in the ratio of gas used to the price charged from year to year.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1925

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Aylmer	2,300	675	....	30,412	.....	.....	16	$0.90-1.10
Bartonville	100	78	....	3,397	.....	.....	18	.50
Belle River	600	158	....	16,769	.....	695	29	.50- .85
Belmont	340	60	....	1,806	.....	.....	9	.85-1.00
Binbrook	100	13	....	2,319	.....	.....	1	.25
Blenheim	1,560	517	1	55,034	136	995	20	.50- .75
Brantford	30,190	3,309	3	84,505	1,606	6,013	140	.80
Bridgeburg and Fort Erie	4,112	974	5	34,307	866	94	8	1.00-1.50
Brigden	300	152	....	12,548	.....	1,655	30	.45- .50
Cainsville	400	52	....	2,444	.....	.....	4	.80
Caledonia	1,326	487	....	56,496	.....	.....	6½	.50- .60
Canfield	186	30	....	3,094	.....	.....	1	.35- .40
Cayuga	740	210	1	23,681	67	336	6	.50
Chatham	15,100	3,521	....	465,515	.....	4,814	22	.50- .75
Chippawa	1,078	183	....	3,436	.....	.....	5	1.00-1.50
Comber	608	146	....	16,833	.....	1,685	19	.50- .75
Courtland	400	31	....	279	.....	.....	3	.60
Courtright	441	124	1	14,617	238	258	49	.50- .75
Crystal Beach	252	99	....	8,278	.....	.....	1	1.00-1.50
Delhi	750	245	....	19,360	.....	1,061	4	.60
Dorchester	360	98	....	7,850	.....	.....	95	.60- .85
Dresden and Tupperville	1,450	481	1	52,538	77	607	30	.50- .75
Dundas	5,070	1,021	2	34,220	213	817	172	.70
Dunnville	3,605	968	7	114,570	1,030	14,284	7	.45- .50
Dutton	825	257	2	27,584	59	1,004	52	.55- .80
Echo Place	200	121	....	5,687	.....	.....	3	.80
Eden	88	28	....	1,995	.....	.....	11	.45
Essex	1,590	447	1	62,868	81	4,447	33	.50- .85
Fairground	40	14	....	659	.....	.....	1	.50
Fenwick	164	86	....	5,885	.....	.....	18	.75
Fingal	460	54	1	4,924	77	1,013	71	.55- .80
Fisherville	72	49	....	4,863	.....	591	2	.50
Fonthill	740	175	....	8,267	.....	.....	25	.95-1.20
Galt	13,222	967	1	40,069	234	3,989	147	.80
Grimsby	1,901	13	....	520	.....	.....	14	1.20

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1925—*Continued*

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Hagersville	1,200	386	....	37,650	.....	.....	13½	.50
Hamilton	120,234	23,085	....	[1]52,343	.....	253,719	47	.60-1.00
Hamilton West	.....	94	....	176	.....	.....	47	.75
Hepworth	330	20	....	650	.....	.....	1	.60
Highgate	410	117	1	13,991	118	.....	32	.50- .75
Ingersoll	5,000	982	1	55,672	191	1,375	100	.80
Jarvis	500	194	....	23,388	.....	.....	9	.50
Kingsville	2,500	688	3	102,211	642	2,646	30	.40- .50
Lambeth	475	98	....	6,385	.....	.....	84	.60- .85
Lake Shore	.....	300	....	7,706	.....	.....	16	1.00
Leamington	4,000	1,312	....	230,089	.....	2,518	20	.50
Lyndoch	151	43	....	4,447	.....	.....	2	.45
Mabee	82	9	....	679	.....	.....	14	.45
Merlin	350	145	1	18,030	296	1,095	2	.40- .65
Nelles	55	25	....	1,980	.....	.....	1	.50
Niagara Falls	15,400	2,193	....	35,770	.....	1,206	11	.65-1.00
Oil Springs	500	140	....	8,722	.....	.....	2	.75
Paris	4,345	479	....	17,538	191	1,471	129	.80
Petrolia	2,836	731	1	99,173	.....	1,202	60	.55- .80
Port Burwell	700	217	....	16,341	.....	.....	3	.60
Port Colborne and Humberstone	5,500	1,515	1	82,261	200	10,734	5	.80-1.00
Port Dover	1,575	532	....	57,590	.....	806	1	.45
Port Rowan	640	248	....	18,684	.....	.....	1	.60
Ridgetown	2,000	624	1	67,973	280	849	28	.50- .75
Ridgeway	700	255	....	14,823	.....	54	1	.65- .70
Rodney	676	248	2	26,563	606	497	40	.55- .80
Rosehill	.....	42	....	1,693	.....	.....	18	.65- .70
Ruthven	438	53	....	8,987	.....	.....	25	.40- .65
St. Ann	90	30	....	1,247	.....	.....	7	.90
St. Catharines	22,000	3,722	2	176,611	659	4,580	35	.75
St. George	569	127	....	4,992	.....	200	148	.80
St. Williams	319	102	....	6,658	.....	887	1	.60
Sarnia	15,176	4,178	....	377,212	.....	2,429	69	.50- .75
Selkirk	585	133	1	15,282	111	2,163	0	.50- .60
Shedden	409	89	....	8,105	.....	.....	63	.55- .80
Shetland	80	19	....	2,530	.....	.....	3	.40
Simcoe	4,000	1,463	3	210,728	371	13,656	20	.45
Smithville	332	170	....	9,045	.....	.....	6	.80
Sombra and Port Lambton	2,000	171	....	17,327	.....	696	45	.55- .80
Stevensville	423	81	....	6,995	.....	.....	1	.65- .70
Straffordville	215	84	....	8,822	.....	.....	6	.45
Tecumseh	1,200	208	....	25,304	.....	.....	50	.50- .75
Thorold	7,624	640	....	29,825	.....	.....	35	.75
Tilbury	2,000	384	1	43,404	234	589	717	.50- .75
Tillsonburg	3,086	951	1	69,633	165	1,096	16	.60- .85
Vienna	284	78	1	5,890	40	.....	1	.80-1.00
Vittoria	260	72	....	5,762	.....	.....	3	.45
Welland	8,646	2,059	3	88,320	205	.....	3	1.00-1.50
Wallaceburg	4,530	1,022	1	122,168	110	27,93[illegible]	27	.50- .75
Wallacetown	254	56	1	4,616	24	708	60	.55- .85
Wellandport	141	31	1	953	210	.....	3	.75
West Lorne	818	227	3	26,048	278	1,131	49	.55- .80
Wheatley	647	233	....	29,125	.....	833	12	.50- .75
Windsor (Border Cities)	60,625	9,015	....	973,953	.....	12,912	44½	.55- .80
Woodstock	10,196	1,677	1	67,686	352	1,972	110	.80
Total	.....	77,640	56	4,577,385	9,967	4,981,666	.....	.....

[1]Natural gas ceased to be used in Hamilton in March, 1925; it was mixed with manufactured gas during this period.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1925

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, North	2,190	158	4	20,770	347	.....	$0.40- .50
Gosfield, South	2,301	242	.....	37,042	.....	25,424	.40- .50
Maidstone	2,099	19	6	8,030	1,254	.....	.55- .80
Rochester	1,951	185	1	15,887	101	1,347	.55- .80
Sandwich, South	1,423	68	.....	7,609	.....	703	.55- .80
Sandwich, West	2,764	11	.....	1,687	.....	.....	.55- .80
Sandwich, East	1,090	150	2	20,056	310	.....	.55- .80
Mersea	3,835	282	2	42,654	617	60,163	.40
Tilbury, North	1,788	17	1	1,533	159	58	.50- .75
Tilbury, West	1,543	16	.....	1,185	.....	.....	.50- .75
LAMBTON:							
Enniskillen	2,666	70	.....	6,610	.....	1,115	.55- .80
Moore	3,215	300	.....	27,529	.....	2,288	.50- .75
Sombra	2,857	53	.....	4,270	.....	926	.50- .75
Sarnia	2,540	5	9	500	2,015	.....	.45
Euphemia	1,385	.....	8	.....	2,000	.....	.45
Dawn	2,317	35	4	3,351	816	.....	.40- .65
KENT:							
Raleigh	3,671	646	52	74,584	12,643	392	.35- .75
Tilbury, East	2,914	123	86	25,356	32,070	11,869	.40- .65
Romney	1,500	104	17	11,975	4,672	.....	.40- .65
Harwich	4,372	418	9	40,189	2,684	.....	.50- .75
Orford	1,870	26	3	4,806	418	.....	.50- .75
Howard	2,768	192	7	23,057	2,961	.....	.50- .75
Chatham	4,935	82	.....	9,097	.....	1,375	.50- .75
Camden	2,078	10	.....	715	.....	.....	.50- .75
Dover	3,606	389	1	45,240	160	1,660	.40- .65
ELGIN:							
Aldborough	2,837	27	.....	2,669	.....	.....	.55- .80
Dunwich	2,522	59	1	6,029	51	.....	.55- .80
Southwold	3,510	119	.....	9,671	.....	1,482	.55- .80
Malahide	2,953	60	.....	2,462	.....	.....	.60
Bayham	3,112	69	25	4,374	3,709	.....	.45
MIDDLESEX:							
Westminster	6,122	138	.....	15,437	.....	.....	.60- .85
Dorchester, North	3,056	27	1	1,792	14	.....	.60- .85
NORFOLK:							
Middleton	2,037	4	4	355	732	.....	.60
Walsingham, South	1,481	7	7	317	1,279	.....	.60
Walsingham, North	1,424	4	4	288	753	.....	.50
Charlotteville	2,512	4	4	193	728	.....	.45
Windham	3,005	2	2	180	357	.....	.45
Woodhouse	1,964	163	13	16,107	2,366	.....	.45
Townsend	3,694	34	.....	4,336	.....	.....	.45
BRANT:							
Onondaga	1,017	55	16	3,030	3,253	.....	.60
Dumfries, South	2,532	6	.....	212	.....	.....	.80
Brantford	7,220	12	.....	290	.....	.....	.60
Burford	3,833	4	.....	302	.....	.....	.60
OXFORD:							
Oxford, West	1,724	22	.....	1,448	.....	.....	.80
Oxford, East	1,810	7	.....	518	.....	.....	.80

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1925—*Continued*

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	902	83	43	7,069	8,543	432	.50
Moulton	1,628	194	47	14,360	9,721	.....	.50
Seneca	1,561	138	49	13,924	8,815	.....	.50
Cayuga, North	1,309	46	20	4,733	3,499	.....	.50
Cayuga, South	509	63	21	4,250	4,243	.....	.50
Rainham	1,690	150	29	16,611	5,515	52	.50
Sherbrooke	277	48	11	5,213	1,745	.....	.45- .50
Dunn	796	112	12	11,038	2,198	.....	.50
Walpole	3,042	291	51	31,709	9,147	1,215	.50
Oneida	1,287	66	13	7,718	2,418	.....	.50- .60
LINCOLN:							
Caistor	1,220	43	3	4,816	589	79	.50
Gainsborough	2,091	16	.....	1,261	.....	.....	.75
Grimsby	2,236						.75
Louth	2,548	9	.....	639	.....	.....	.75
Grantham	4,175	15	1	1,103	291	.....	.75
WELLAND:							
Wainfleet	2,357	60	34	2,802	6,397	.....	.40- .70
Humberstone	2,047	137	50	10,954	7,540	.....	1.00-1.50
Bertie	3,298	133	76	11,601	11,324	.....	1.00-1.50
Pelham	2,359	31	7	2,232	2,038	.....	.75
Thorold	3,369	5	1	330	209	13,786	.35- .50
Willoughby	865	32	29	2,687	4,356	.....	1.00-1.50
Crowland	3,748	66	28	4,704	5,504	.....	1.00-1.50
Stamford	4,896	268	3	3,844	456	.....	1.00-1.50
WENTWORTH:							
Binbrook	1,098	65	29	8,077	5,667	418	.50
Glanford	1,417	119	11	17,223	1,910	616	.50
Barton	7,658	1,044	.....	78,129	.....	14,424	.50
Ancaster	4,524	53	.....	3,898	.....	.....	.40- .70
Saltfleet	4,682	15	.....	1,715	.....	412	.50
Total	.....	7,783	857	776,382	178,594	140,774	.....

SUMMARY

	M cu. ft.
Total distribution	6,077,416
Used by private well owners	74,000
Used by companies for all purposes	64,586
Leakage on transmission lines	432,728
Leakage in distribution plants	544,260
Leakage on rural lines	64,284
Total amount of gas produced	7,257,274

Orifice Meters

An exhaustive study of the theory and use of orifice meters for measuring large volumes of gas at high pressure is being made at the present time. Tests are being carried out at many points on this continent and the work of the different makers of orifice meters correlated. The work to date is proving the merits of this instrument for the purpose that it was intended to fulfil, but it is pointing out conditions under which it will not register accurately and the simple means by which these conditions may be avoided. Many meters were nc rrectly installed in the past and did not register accurately.

The annual survey of the rock pressures and open flow of gas wells was undertaken during the summer months. Many of the small companies who had no one on their staffs experienced in the use of the open flow meter were instructed in its use. This meter and the pressure gauges were loaned to any one requiring them. The annual survey of the wells drilled into a gas horizon in the surface drift was made. This survey by the Department is the outcome of an agreement between a group of property owners residing between the towns of Ridgetown and Blenheim, who sell their surplus gas to the company that distributes gas in Ridgetown. The Commissioner of Natural Gas is named as an arbitrator between these owners, in order that each may be protected against the other allowing the pressure in his wells to decline to a point where water may enter and ruin the gas field. Under the agreement two of these wells were disconnected from the pipe line, and one was refused the privilege of selling gas.

A thorough inspection of all industries using gas was carried out, and many were found to be using more than was permitted. These cases were adjusted according to the needs of the industries, a new allotment being given where needed; this adjustment is necessary owing to the fluctuation in supply and demand in industry.

A few more samples of gas were collected and sent to the Mines Branch in Ottawa for analysis, particularly for their helium content.

One complaint of gas shortage was received from the village of Highgate; it was found that water had entered the pipes through a broken service line and frozen, thereby stopping the flow of gas. Temporary repairs relieved the situation.

Analysis of Gas Consumption

Tables II and III give details which show everything of interest concerning the gas consumed in Ontario. By comparing these tables with those published in previous years, the history of prices and quantity consumed can be traced from year to year. It will be found of interest to note the changes in the ratio of gas used to the price charged from year to year.

TABLE II—GAS CONSUMPTION IN TOWNS AND CITIES, 1926

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Aylmer	2,300	681	....	32,925	....	.....	16	$0.90–$1.10
Bartonville	300	49	....	2,102	....	.....	18	.60
Belle River	800	162	....	17,921	....	671	29	.55– .85
Belmont	350	60	....	749	....	.....	9	.90
Binbrook	100	13	....	2,300	....	.....	1	.25– .40
Blenheim	1,560	533	1	61,936	157	1,010	20	.50– .75
Brantford	30,190	3,351	5	89,736	1,853	7,775	140	.80
Bridgeburg and Fort Erie	4,221	955	5	33,579	3,279	.....	8	.70
Brigden	300	156	....	14,399	....	1,711	30	.50– .75
Cainsville	400	53	....	2,756	....	.....	4	.80
Caledonia	1,326	520	....	57,807	....	.....	7	.60
Canfield	200	30	....	3,168	....	.....	1	.40
Cayuga	752	207	1	22,525	62	438	6	.60
Chatham	15,600	3,550	....	533,046	....	.....	22	.50– .75
Chippawa	1,100	121	....	3,635	....	.....	5	.40– .70
Comber	608	144	....	16,590	....	1,687	19	.50– .75
Cottam	300	84	....	10,901	....	586	35	.40– .55
Courtland	400	45	....	2,839	....	107	3	.60– .85
Courtright	441	123	1	14,090	200	140	49	.50– .75
Crystal Beach	252	69	....	4,053	....	.....	1	.70
Delhi	750	246	....	20,013	....	1,056	4	.60
Dorchester	360	96	....	7,972	....	.....	95	.60– .75
Dresden and Tupperville	1,450	487	1	57,299	99	503	30	.50– .75
Dundas	5,000	1,016	2	36,930	565	1,174	172	.70
Dunnville	3,705	973	3	114,334	786	14,523	7	.40– .60
Dutton	825	243	3	28,744	106	701	52	.55– .70
Echo Place	200	122	....	6,466	....	.....	3	.80
Eden	88	26	....	1,822	....	.....	11	.60
Essex	1,600	473	1	66,266	114	4,758	33	.50– .85
Fairground	40	16	....	709	....	.....	1	.60
Fenwick	164	86	....	5,444	....	.....	18	.75
Fingal	460	46	1	4,424	82	992	71	.55– .70
Fisherville	72	54	....	6,668	....	455	2	.45– .50
Fonthill	740	191	....	8,576	....	.....	25	.95–1.20
Galt	13,222	974	1	42,389	242	4,615	147	.80
Grimsby	1,910	12	....	350	....	.....	14	1.25
Hagersville	1,200	391	....	39,617	....	.....	13½	.60
Hamilton	121,000	426	....	19,605	....	412,030	47	.75–1.00
Hamilton West	.....	114	....	2,220	....	.....	47	.75
Hepworth	330	20	....	650	....	.....	1	.60
Highgate	410	118	1	14,283	119	.....	32	.50– .65
Ingersoll	5,000	949	1	52,181	284	1,166	100	.80
Jarvis	500	194	....	23,702	....	.....	9	.60
Kingsville	3,500	711	1	113,113	298	3,396	30	.40– .55
Lake Shore	.....	293	....	6,789	....	.....	16	.70
Lambeth	475	94	....	5,697	....	.....	84	.60– .75
Leamington	4,200	1,387	....	222,541	....	3,768	20	.50
Lyndoch	151	42	....	3,414	....	1,756	2	.60
Mabee	82	10	....	757	....	.....	1	.60
Merlin	350	154	1	19,973	306	1,283	2	.50– .75
Nelles	55	25	....	2,411	....	444	1	.50
Niagara Falls	15,400	2,533	....	40,527	....	.....	11	.75
Oil Springs	500	116	....	8,952	....	.....	2	.75
Paris	4,345	472	1	18,798	192	1,523	129	.80
Petrolia	2,836	743	....	99,507	....	.....	60	.55– .80
Port Burwell	700	241	....	17,595	....	.....	3	.60
Port Colborne and Humberstone	5,500	1,501	....	78,756	....	9,274	5	.60– .95
Port Dover	1,575	521	....	51,414	....	632	1	.60
Port Rowan	640	254	....	19,843	....	.....	1	.60
Ridgetown	2,000	640	1	75,025	308	665	28	.50– .75
Ridgeway	700	205	....	11,906	....	.....	1	.70

TABLE II—GAS CONSUMPTION IN TOWNS AND CITIES, 1926—*Continued*

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Rodney	676	237	1	27,505	124	490	40	$0.55–$0.70
Ruthven	438	47	....	7,438	.....	.....	25	.40– .55
St. Ann	90	29	....	1,076	.....	.....	7	.90
St. Catharines	22,000	3,896	3	199,517	674	7,741	35	.60– .75
St. George	569	111	....	4,699	.....	173	148	.80
St. Williams	319	99	....	6, 71	.....	836	1	.60
Sarnia	15,176	4,203	1	388,386	1,102	.....	69	.55– .80
Selkirk	585	135	1	13,176	96	2,592	1	.60
Shedden	409	83	....	7,705	.....	.....	63	.55– .70
Shetland	80	19	....	1,555	.....	.....	3	.40
Simcoe	4,000	1,493	3	201,514	421	14,224	20	.60
Smithville	332	170	....	6,571	.....	.....	6	.80
Sombra and Port Lambton	2,000	191	....	17,896	.....	625	45	.55– .80
Stevensville	423	31	....	1,915	.....	.....	1	.70
Straffordville	215	81	....	8,197	.....	224	6	.60
Tecumseh	1,200	238	....	28,111	.....	.....	50	.55– .80
Thorold	7,624	703	....	34,939	.....	.....	35	.60– .75
Tilbury	2,000	411	1	46,033	194	499	17	.50– .75
Tillsonburg	3,086	940	1	82,320	322	1,815	16	.60– .85
Vienna	284	78	1	4,914	48	54	1	.60– .80
Vittoria	260	74	....	5,650	.....	.....	3	.60
Wallaceburg	4,530	1,043	1	133,414	197	108,735	27	.50– .75
Wallacetown	254	50	1	4,648	23	622	60	.55– .70
Welland	8,646	2,181	1	88,922	236	.....	3	.70
Wellandport	141	30	1	608	250	.....	3	.70– .75
West Lorne	818	222	3	25,567	211	660	49	.55– .70
Wheatley	647	236	....	26,213	.....	1,039	12	.50– .65
Windsor (Border Cities)	60,625	9,129	1	1,067,394	279	13,930	44½	.55– .80
Woodstock	10,196	1,579	1	68,735	317	2,423	110	.80
Total	.....	55,860	52	4,796,328	13,546	635,521	.....	.....

TABLE III—GAS CONSUMPTION IN TOWNSHIPS, 1926

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, North	2,190	125	4	15,966	543	.....	$0.40–$0.55
Gosfield, South	2,301	248	2	41,682	472	52,753	.40– .50
Maidstone	2,099	68	7	7,166	1,693	766	.55– .80
Rochester	1,951	194	7	18,811	2,197	1,133	.55– .80
Sandwich, South	1,423	78	.....	9,412	.....	757	.55– .80
Sandwich, West	2,764	12	.....	1,970	.....	.....	.55– .80
Sandwich, East	1,090	215	.....	25,723	.....	.....	.55– .80
Mersea	3,835	280	2	50,052	340	53,457	.40– .50
Tilbury, North	1,788	17	2	1,502	456	72	.50– .75
Tilbury, West	1,543	20	.....	1,455	.....	.....	.50– .75
LAMBTON:							
Enniskillen	2,666	68	.....	6,371	.....	986	.55– .80
Moore	3,215	318	.....	28,419	.....	2,346	.50– .75
Sombra	2,857	48	.....	5,130	.....	307	.50– .75
Sarnia	2,540	5	8	500	2,447	.....	.45
Euphemia	1,385	.....	8	.....	2,000	.....	.45
Dawn	2,317	37	4	4,251	1,115	.....	.40– .65
KENT:							
Raleigh	3,671	644	28	79,673	8,102	573	.40– .65
Tilbury, East	2,914	220	82	25,314	23,638	4,171	.40– .65
Romney	1,500	103	38	12,915	9,743	.....	.40– .65
Harwich	4,372	415	9	44,362	4,881	.....	.50– .65
Orford	1,870	21	3	3,742	296	.....	.50– .65
Howard	2,768	182	4	23,070	971	.....	.50– .65
Chatham	4,935	81	.....	9,776	.....	1,222	.50– .75
Camden	2,078	9	.....	669	.....	.....	.50– .75
Dover	3,606	382	1	48,648	146	1,515	.40– .65
ELGIN:							
Aldborough	2,837	27	1	2,958	408	.....	.55– .70
Dunwich	2,522	58	.....	6,191	.....	.....	.55– .70
Southwold	3,510	108	.....	9,720	.....	1,584	.55– .70
Malahide	2,953	49	3	2,009	412	.....	.80
Bayham	3,112	76	16	3,924	2,944	.....	.60– .80
MIDDLESEX:							
Westminster	6,122	127	.....	13,612	.....	.....	.60– .85
Dorchester, North	3,056	26	.....	1,693	.....	.....	.50– .85
NORFOLK:							
Middleton	2,037	5	6	476	1,013	.....	.60
Walsingham, South	1, 81	7	7	896	1,227	.....	.60
Walsingham, North	1,424	5	4	667	664	.....	.60
Charlotteville	2,512	4	4	483	691	.....	.60
Windham	3,005	2	3	208	395	.....	.60
Woodhouse	1,964	161	13	15,952	2,201	.....	.60
Townsend	3,694	32	.....	3,813	.....	.....	.60
BRANT:							
Onondaga	1,017	53	16	3,241	3,006	.....	.50– .80
Dumfries, South	2,532	7	.....	445	.....	.....	.80
Brantford	7,220	7	.....	327	.....	.....	.80
Burford	3,833	2	.....	385	.....	.....	.80
OXFORD:							
Oxford, West	1,810	18	.....	1,571	.....	.....	.80
Oxford, East	1,724	10	.....	668	.....	.....	.80
HALDIMAND:							
Canborough	902	83	43	6,837	8,303	.....	.40– .60
Moulton	1,628	137	45	10,505	8,935	.....	.30– .60
Seneca	1,561	132	52	13,202	8,188	.....	.60
Cayuga, North	1,309	51	20	4,503	3,804	.....	.40– .60
Cayuga, South	509	60	19	4,079	3,656	.....	.60

TABLE III—GAS CONSUMPTION IN TOWNSHIPS, 1926—*Continued*

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND—*Continued*							
Rainham	1,690	150	28	13,036	4,882	541	$0.50–$0.60
Sherbrooke	277	51	11	4,346	1,772	.....	.50– .60
Dunn	796	123	11	9,970	2,780	.....	.60
Walpole	3,042	287	51	28,073	8,583	926	.4[illegible]– .60
Oneida	1,287	66	11	6,733	2,154	.....	.40– .60
LINCOLN:							
Caistor	1,220	47	3	4,851	518	130	.60
Gainsborough	2,091	13	.....	391	.....	.....	.75
Grimsby	2,236						.75
Louth	2,548	9	.....	572	.....	.....	.75
Grantham	4,175	15	1	949	217	.....	.75
WELLAND:							
Wainfleet	2,357	119	37	6,822	6,8[illegible]2	.....	.40– .75
Humberstone	2,047	126	48	7,[illegible]74	8,010	.....	.70– .80
Bertie	3,298	113	68	6,912	11,705	.....	.70
Pelham	2,359	57	7	3,608	1,922	.....	.75
Thorold	3,369	5	1	390	217	3,615	.85
Willoughby	865	29	29	1,735	4,916	.....	.70
Crowland	3,748	59	23	4,635	4,688	.....	.70– .80
Stamford	4,896	173	3	4,742	513	.....	.70
WENTWORTH:							
Binbrook	1,098	72	23	8,688	4,062	847	.50
Glanford	1,417	121	10	17,173	1,645	629	.50
Barton	7,658	1,087	2	86,917	250	16,561	.60– .75
Ancaster	4 524	53	.....	4,290	.....	.....	.70
Saltfleet	4,682	23	.....	1,842	.....	26	.60
Total	.....	7,835	8[illegible]8	799,193	170,548	144,917	.....

SUMMARY	M cu. ft.
Total distribution	6,560,053
Used by private well owners	74,000
Used by companies for all purposes	41,735
Leakage on transmission lines	534,324
Leakage in distribution plants	305,921
Leakage on rural lines	41,482
Leakage or loss on purchased gas	218,981
Total amount of gas produced	7,776,496

Leakage

Tables IV, V, and VI show the leakage that is measured from both high and low pressure pipe lines. The high-pressure lines have been put so far as possible under the heading of transmission lines, and the lower pressure under distributing lines, rural and urban. The urban distributing plants, however, carry a lower pressure than the rural lines.

The gas that passes through the majority of transmission lines in Welland, Haldimand, and Norfolk counties has never yet been measured, mainly on account of the small percentage of the pipe line that lies outside the gas field. It is possible to measure the gas through these lines after they pass outside the gas fields, and an inquiry is now being made into the practicability of doing so. If the unmeasured leakage were added, it would probably increase the leakage total by at least 25 per cent.

TABLE IV—LEAKAGE IN DISTRIBUTION PLANTS, 1926

Cities and towns	Company	Equivalent miles of 3-inch pipe in distribution plants	Volume received	Volume delivered	Leakage for year		Average No. of consumers	Leakage per consumer	Pressure distribution plants, ounces per per sq. in.
					Actual	Allowable			
			M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.		cu. ft.	
Belle River	Union Natural Gas Co	3.25	20,291	18,590	1,701	650	162	10,500	6
Belmont	Ontario Salt Co	.67	1,695	969	726	134	60	12,100	6
Blenheim	Union Natural Gas Co	11.1	68,391	60,233	8,158	2,225	523	15,306	5
Brantford	Brantford Gas Co	91.53	115,807	99,412	16,395	18,306	3,261	5,013	4–5
Brigden	Union Natural Gas Co	3.4	18,261	16,108	2,153	680	156	13,801	5
Chatham	Chatham Gas Co	54.5	548,023	533,046	14,977	10,900	3,650	4,103	5
Comber	Union Natural Gas Co	2.75	19,378	18,275	1,103	550	144	7,659	6
Courtright	Union Natural Gas Co	2.8	14,753	14,447	306	575	123	2,488	5
Dresden	Union Natural Gas Co	12	65,143	58,595	6,548	2,400	487	13,445	4
Dundas	Dominion Natural Gas Co	11.83	46,640	38,887	7,753	2,366	1,034	7,498	4–5
Dunnville	Dominion Natural Gas Co	13.17	128,721	117,815	10,906	2,634	984	11,083	5
Eden	Dominion Natural Gas Co	.48	1,986	1,940	46	96	48	958	5
Essex	Union Natural Gas Co	7.4	74,005	71,121	2,884	1,475	473	6,097	5
Fenwick	United Gas Companies	2.9	8,541	6,667	1,874	418	98	19,122	5–6
Galt	Dominion Natural Gas Co	30.59	53,540	47,289	6,251	6,118	1,008	6,201	4–5
Hagersville	Dominion Natural Gas Co	7.24	49,620	39,617	10,003	1,448	389	25,714	5–6
Ingersoll	Dominion Natural Gas Co	22.14	54,921	51,923	2,998	4,428	913	3,283	5
Kingsville	Southern Ontario Gas Co	14.59	125,057	115,425	9,632	2,918	737	13,069	5–6
Leamington	Corp. Town of Leamington	25.47	256,177	226,309	29,868	5,094	1,316	22,696	6–10
Merlin	Union Natural Gas Co	2.85	25,126	22,931	2,195	575	154	14,253	6
Paris	Dominion Natural Gas Co	13.54	27,115	20,697	6,418	2,708	487	13,178	5
Petrolia	Petrolia Utilities, Ltd	26.5	110,878	99,507	11,371	5,300	740	15,366	6
Port Burwell	Dominion Natural Gas Co	3.83	13,569	11,224	2,345	766	141	16,631	5
Ridgetown	Union Natural Gas Co	19.7	87,575	78,072	9,503	3,540	640	14,848	5
St. Catharines	United Gas Companies	52.98	214,351	206,873	7,478	10,596	3,914	1,911	4
St. George	Dominion Natural Gas Co	2.11	5,785	4,766	1,019	422	113	9,017	5
Sarnia	Union Natural Gas Co	90	451,874	389,475	62,399	18,000	4,200	14,857	5
Shedden and Fingal	Southern Ontario Gas Co	5.15	13,102	12,585	517	1,030	130	3,977	6–7
Simcoe	Dominion Natural Gas Co	29.26	212,723	209,810	2,913	5,852	1,702	1,124	4–5
Sombra	Union Natural Gas Co	2	9,344	9,192	152	400	86	1,767	5
Straffordville	Dominion Natural Gas Co	1.34	9,286	8,421	865	268	81	10,679	5–6
Thorold	United Gas Companies	10.97	39,523	34,939	4,584	2,194	752	6,096	5
Tilbury	Union Natural Gas Co	8.5	50,106	47,012	3,094	1,700	411	7,528	5
Vienna	Dominion Natural Gas Co	1.04	1,926	1,278	648	208	17	38,117	6
Wallaceburg	Wallaceburg Gas Co	22	147,361	139,030	8,331	4,400	1,047	7,957	6
Windsor	Windsor Gas Co	151.5	1,120,297	1,081,603	38,694	30,300	8,430	4,590	4
Woodstock	Dominion Natural Gas Co	47.81	80,596	71,483	9,113	9,562	1,579	5,771	4–5
Total					305,921				

TABLE II—GAS CONSUMPTION IN TOWNS AND CITIES, 1927

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Aylmer	2,300	681	....	30,932	.....	.....	16	$0.90
Bartonville	300	54	....	2,352	.....	.....	18	.60
Belle River	800	179	....	15,961	.....	560	29	.55–.80
Belmont	350	93	....	1,875	.....	.....	9	.90
Binbrook	100	11	1	1,225	125	.....	1	.40
Blenheim	1,560	552	1	56,195	135	972	20	.50–.75
Brantford	30,190	3,361	5	99,229	1,371	7,638	140	.80
Bridgeburg and Fort Erie	4,221	1,027	5	55,828	1,439	212	8	1.00–1.30
Brigden	300	165	....	13,993	.....	1,691	30	.50– .75
Cainsville	400	57	....	2,565	.....	.....	4	.80
Caledonia	1,326	540	....	47,845	.....	.....	6½	.60
Canfield	200	30	....	3,640	.....	.....	1	.40
Cayuga	752	199	1	20,850	71	285	6	.60
Chatham	15,600	3,618	....	462,418	.....	4,135	22	.50– .75
Chippawa	1,100	122	....	7,706	.....	.....	5	.40–1.30
Comber	608	143	....	16,034	.....	1,090	19	.50– .75
Cottam	300	86	....	9,212	.....	574	32	.55
Courtland	400	45	....	3,439	.....	138	3	.60
Courtright	441	126	1	12,112	206	109	49	.50– .75
Crystal Beach	252	69	....	4,968	.....	.....	1	1.00–1.30
Delhi	750	259	....	21,094	.....	979	4	.60
Dorchester	360	98	....	7,820	.....	.....	95	.60– .75
Dresden	1,450	509	1	52,327	95	363	30	.50– .75
Dundas	5,000	1,050	1	40,670	18	1,630	172	.70
Dunnville	3,705	986	3	101,973	569	11,714	7	.40– .60
Dutton	825	249	3	25,384	142	614	52	.55– .70
Echo Place	200	126	....	5,643	.....	.....	3	.80
Eden	88	26	....	1,505	.....	.....	11	.60
Essex	1,600	481	1	58,422	90	3,789	33	.55– .80
Fairground	40	16	....	622	.....	.....	1	.60
Fenwick	164	95	....	5,644	.....	.....	18	.75
Fingal	460	47	1	3,785	78	984	71	.55– .70
Fisherville	72	41	....	5,052	.....	328	2	.45– .50
Fonthill	740	194	....	7,709	.....	.....	25	.95–1.20
Galt	13,222	1,047	1	41,587	203	4,973	147	.80
Hagersville	1,200	398	....	34,482	.....	.....	13¼	.60
Hamilton	121,000	992	2	29,392	445	47,555	47	.70–1.00
Hepworth	330	10	....	224	.....	.....	1	.75
Highgate	410	118	1	12,460	117	.....	32	.50– .65
Ingersoll	5,000	899	2	43,181	271	1,795	100	.80
Jarvis	500	195	....	20,306	.....	.....	9	.60
Kingsville	3,500	730	1	98,123	257	2,001	30	.50– .55
Lake Shore	.....	320	....	7,794	.....	.....	16	1.50
Lambeth	475	99	....	5,570	.....	.....	84	.60– .75
Leamington	4,200	1,437	....	206,023	.....	4,457	20	.50
Lynedoch	151	36	....	2,959	.....	9,950	2	.60
Mabee	82	.....	....	623	.....	.....	14	.60
Merlin	350	150	1	16,669	294	1,197	2	.50– .75
Merritton	.....	103	....	739	.....	.....	35	.75
Nelles Corners	55	26	....	2,864	.....	.....	1	.50
Niagara Falls	15,400	2,685	....	107,663	.....	1,570	11	1.00–1.30
Oil Springs	500	117	....	7,365	.....	154	2	.75
Paris	4,345	499	1	18,220	132	1,487	129	.80
Petrolia	2,836	758	1	80,562	133	331	60	.55– .80
Port Burwell	700	221	....	15,158	.....	.....	3	.60
Port Colborne & Humberstone	5,500	1,525	....	71,707	.....	7,774	5	.60– .80
Port Dover	1,575	531	....	47,399	.....	594	1	.60
Port Rowan	640	269	....	17,853	.....	.....	1	.60
Ridgetown	2,000	642	1	65,784	269	478	28	.50– .75
Ridgeway	700	205	....	14,028	.....	12	1	1.00–1.30
Rodney	676	246	1	24,574	161	512	40	.50– .65
Ruthven	438	51	....	7,901	.....	.....	25	.50– .65

TABLE II—GAS CONSUMPTION IN TOWNS AND CITIES, 1927—*Continued*

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
St. Anns	90	29	....	1,176	.....	.....	7	$0.90
St. Catharines	22,000	4,115	2	200,562	432	9,638	35	.75
St. George	569	103	....	3,953	.....	42	148	.80
St. Williams	319	93	....	6,740	.....	719	1	.60
Sarnia	15,176	4,304	2	343,859	1,136	.....	69	.55– .80
Selkirk	585	140	1	10,075	81	2,015	0	.60
Shedden	409	86	....	6,966	.....	.....	63	.55– .70
Shetland	80	19	....	709	.....	.....	3	.40
Simcoe	4,000	1,522	3	177,562	465	11,777	20	.60
Smithville	332	145	....	6,440	.....	.....	6	.80
Sombra and Port Lambton	2,000	189	....	17,720	.....	729	45	.50– .75
Stevensville	423	31	....	2,232	.....	.....	1	1.00
Straffordville	215	80	....	7,044	.....	551	6	.60
Tecumseh	1,200	241	....	11,670	.....	.....	50	.55– .80
Thorold	7,624	837	....	35,885	.....	.....	35	.75
Tilbury	2,000	463	1	44,627	134	1,045	15	.50– .75
Tillsonburg	3,086	1,019	1	79,908	343	2,530	16	.63
Vienna	284	77	1	3,724	47	.....	1	.60– .80
Vittoria	260	76	....	5,112	.....	.....	3	.60
Wallaceburg	4,530	1,069	1	123,796	125	209,350	27	.50– .75
Wallacetown	254	48	1	3,880	48	623	60	.55– .70
Welland	8,646	2,293	2	84,658	177	4,700	3	1.00–1.30
Wellandport	141	30	1	446	200	.....	3	.70– .75
West Lorne	818	221	3	22,764	291	636	49	.55 –.70
Wheatley	647	243	....	23,072	.....	1,063	12	.50– .65
Windsor (Border Cities)	60,625	10,019	....	977,140	.....	10,990	44½	.55– .80
Woodstock	10,196	1,526	1	63,368	380	2,064	110	.80
Total	.....	58,643	56	4,472,327	10,480	381,126	.....	.....

TABLE III—GAS CONSUMPTION IN TOWNSHIPS, 1927

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, North	2,190	88	3	9,769	435	237	$0.55
Gosfield, South	2,301	304	1	42,912	409	40,994	.55
Maidstone	2,099	74	7	6,460	1,470	712	.55– .80
Mersea	3,835	329	2	49,170	308	48,346	.40– .75
Rochester	1,951	197	6	17,329	1,362	1,028	.55– .80
Sandwich, East	1,090	218	1	14,041	384	.....	.55– .80
Sandwich, South	1,423	97	.....	10,620	.....	683	.55– .80
Sandwich, West	2,764	16	.....	2,041	.....	.....	.55– .80
Tilbury, North	1,788	28	1	1,647	142	91	.50– .75
Tilbury, West	1,543	19	.....	1,726	.....	.....	.50– .75
LAMBTON:							
Dawn	2,317	32	3	4,090	600	.....	.40– .65
Enniskillen	2,666	93	.....	6,227	.....	1,113	.55– .80
Euphemia	1,385	.....	8	.....	2,000	.....	.....
Moore	3,215	327	.....	25,197	.....	2,105	.50– .75
Sarnia	2,540	5	10	500	2,296	.....	.40
Sombra	2,857	48	.....	4,054	.....	695	.50– .75
KENT:							
Camden	2,078	10	.....	586	.....	.....	.50– .75
Chatham	4,935	64	.....	6,356	.....	1,659	.50– .75
Dover	3,606	403	1	45,642	131	1,887	.40– .65
Harwich	4,372	438	7	43,317	2,869	.....	.50– .75
Howard	2,768	180	5	19,383	2,489	.....	.50– .65
Orford	1,870	20	2	2,576	197	.....	.50– .65
Raleigh	3,671	679	27	72,869	7,248	173	.40– .65
Romney	1,500	104	37	10,571	8,881	.....	.40– .65
Tilbury, East	2,914	225	80	22,375	21,080	22,717	.40– .65
ELGIN:							
Aldborough	2,837	25	1	2,181	276	.....	.55– .80
Bayham	3,112	73	17	4,195	2,794	.....	.60– .80
Dunwich	2,522	58	.....	5,284	.....	.....	.55– .70
Malahide	2,953	55	3	2,287	429	.....	.60– .90
Southwold	3,510	108	.....	8,914	.....	1,642	.55– .70
MIDDLESEX:							
Dorchester, North	3,056	19	.....	1,759	.....	.....	.60– .85
Westminster	6,122	121	.....	14,428	.....	.....	.60– .85
NORFOLK:							
Charlotteville	2,512	6	4	408	662	.....	.60
Middleton	2,037	27	6	1,135	1,005	.....	.60
Townsend	3,694	32	.....	3,840	.....	.....	.60
Walsingham, North	1,424	5	4	329	608	.....	.60
Walsingham, South	1,481	7	7	476	1,086	.....	.60
Windham	3,005	2	2	268	421	.....	.60
Woodhouse	1,964	161	13	16,735	2,198	.....	.60
BRANT:							
Brantford	7,220	7	.....	302	.....	.....	.80
Burford	3,833	3	245	.....	.....	.....	.80
Dumfries, South	2,532	6	.....	163	.....	.....	.80
Onondaga	1,017	48	14	3,844	2,971	.....	.60– .80
OXFORD:							
Oxford, East	1,724	9	.....	720	.....	.....	.80
Oxford, West	1,810	18	.....	1,277	.....	.....	.80

TABLE III—GAS CONSUMPTION IN TOWNSHIPS, 1927—*Continued*

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	902	88	44	6,798	7,028	612	.40– .60
Cayuga, North	1,309	34	18	3,752	3,324	.....	.40– .60
Cayuga, South	509	59	17	3,852	2,899	.....	.60
Dunn	796	126	11	8,431	2,479	.....	.60
Moulton	1,628	155	37	11,351	7,220	.....	.30– .60
Oneida	1,287	66	10	6,275	1,659	.....	.60
Rainham	1,690	141	32	10,693	5,458	602	.50– .60
Seneca	1,561	130	52	12,576	9,528	.....	.60
Sherbrooke	277	52	12	3,648	1,338	.....	.35– .60
Walpole	3,042	301	53	26,014	8,808	1,024	.50– .60
LINCOLN:							
Caistor	1,220	62	2	5,903	351	398	.60
Grantham	4,175	15	1	855	212	.....	.75
Grimsby	2,236	12	.....	457	.....	.....	.75–1.00
Louth	2,548	10	.....	580	.....	.....	.75
WELLAND:							
Bertie	3,298	110	72	8,117	11,774	.....	.50–1.00
Crowland	3,748	82	22	4,424	4,050	.....	.75–1.00
Humberstone	2,047	125	41	8,613	6,551	.....	.75–1.00
Pelham	2,359	64	6	3,648	1,248	.....	.75
Stamford	4,896	171	4	8,037	649	.....	1.00
Thorold	3,369	20	1	1,039	200	988	.35– .80
Wainfleet	2,357	134	32	6,932	6,157	.....	.40– .75
Willoughby	865	29	32	2,088	5,133	.....	1.00
WENTWORTH:							
Ancaster	4,524	49	.....	5,067	.....	.....	.60– .70
Barton	7,658	1,135	.....	75,807	.....	31,714	.60
Binbrook	1,098	73	24	7,997	3,884	916	.60
Glanford	1,417	121	10	15,071	1,720	814	.60
Saltfleet	4,682	23	.....	1,715	.....	.....	.60– .75
Total	.....	8,175	805	737,988	156,421	161,150	.....

SUMMARY

	M cu. ft.
Total distribution	5,919,492
Used by private well owners	74,000
Used for companies for all purposes	453,481
Leakage on transmission lines	573,144
Leakage in distribution plants	333,141
Leakage on rural lines	51,692
Leakage or loss on purchased gas	9,304
Total gas distributed	7,414,254[1]

Gas Wells and Their Production

The following table shows the distribution of gas wells throughout the province for the year 1927, the gas produced by each field or group of small fields, the number of wells drilled and abandoned, the rock pressure in each field, the acreage under lease, and the rentals paid. These records have been kept annually since the year 1921, and past records are available in the reports for the several years.

[1]This includes 103,040 M cubic feet of imported manufactured gas.

Analysis of Gas Consumption

Tables II and III give details concerning the gas consumed in Ontario. By comparing these tables with those published in previous years, the history of prices and quantity consumed can be traced from year to year. It will be found of interest to note the changes in the ratio of gas used to the price charged from year to year.

TABLE II—GAS CONSUMPTION IN TOWNS AND CITIES, 1928

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Aylmer	2,300	690	....	31,343	.....	.....	16	$0.90
Bartonville	300	54	....	3,089	.....	.....	19	.60
Belle River	800	178	....	17,280	.....	571	29	.55–.80
Belmont	350	53	....	2,191	.....	.....	9	.95
Binbrook	100	10	1	1,144	150	.....	1	.25–.40
Blenheim	1,560	569	1	52,370	148	8,105	20	.50–.75
Brantford	30,190	3,384	6	117,773	1,040	7,728	140	.80
Bridgeburg and Fort Erie	4,221	1,115	5	58,296	3,657	.....	8	1.00–1.30
Brigden	300	157	....	14,446	.....	1,581	30	.50–.75
Cainsville	400	128	....	6,204	.....	.....	4	.80
Caledonia	1,326	540	....	47,240	.....	.....	7	.60
Canfield	200	52	....	4,057	.....	691	1	.40
Cayuga	752	206	1	20,901	60	384	6	.60
Chatham	15,600	3,894	....	489,601	.....	7,607	22	.50–.75
Chippawa	1,100	119	....	7,883	.....	.....	5	.40–1.00
Comber	608	135	....	16,866	.....	1,723	19	.50–.75
Cottam	300	87	3	9,600	228	687	35	.55
Courtland	400	50	....	4,033	.....	89	3	.60
Courtright	441	120	....	12,917	.....	89	49	.50–.75
Crystal Beach	252	67	....	5,891	.....	.....	1	1.30
Delhi	750	269	....	23,007	.....	852	4	.60
Dorchester	360	103	....	7,931	.....	.....	95	.60–.75
Dresden and Tupperville	1,450	511	....	55,393	.....	419	30	.50–.75
Dundas	5,000	1,092	3	52,556	23	3,724	172	.70
Dunnville	3,705	969	4	103,109	406	12,563	7	.40–.60
Dutton	825	248	2	25,827	212	752	52	.55–.70
Echo Place	200	58	....	2,787	.....	.....	3	.80
Eden	88	26	....	1,567	.....	.....	11	.60
Essex	1,600	498	....	60,439	.....	3,839	33	.55–.80
Fairground	40	14	....	666	.....	.....	1	.60
Fenwick	164	98	....	5,737	.....	.....	18	.75
Fingal	460	46	1	3,813	99	799	71	.55–.70
Fisherville	72	53	....	5,382	.....	276	2	.50
Fonthill	740	190	....	7,227	.....	.....	25	1.20–.95
Galt	13,222	1,081	1	45,640	216	5,007	147	.80
Hagersville	1,200	397	....	35,595	.....	.....	14	.60
Hamilton	121,000	2,875	3	54,597	519	501,566	47	.75–1.00
Hamilton West		160	....	5,438	.....	.....	47	.70
Hepworth	330	10	....	240	.....	.....	1	.75
Highgate	410	114	1	12,604	138	.....	32	.50–.65
Ingersoll	5,000	876	2	40,036	323	2,365	100	.80
Jarvis	500	196	....	21,549	.....	.....	9	.60
Kingsville	3,500	709	1	95,479	254	1,328	30	.50–.55
Lake Shore	.....	347	....	8,379	.....	.....	16	1.50
Lambeth	475	88	....	5,807	.....	.....	84	.60–.75
Leamington	4,200	1,455	....	200,356	.....	4,728	20	.50
Lynedoch	151	45	....	3,481	.....	3,914	2	.60
Mabee	82	11	....	737	.....	.....	1	.60

TABLE II—GAS CONSUMPTION IN TOWNS AND CITIES, 1928—*Continued*

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Merlin	350	148	....	16,755	.....	1,150	2	$.50–.75
Merritton	2,600	259	....	6,435	.....	.....	35	.75
Nelles Corners	55	26	....	3,022	.....	.....	1	.50
Niagara Falls	15,400	2,714	....	113,583	.....	.....	11	1.00–1.30
Oil Springs	500	111	....	6,994	.....	.....	2	.75
Paris	4,435	495	1	19,676	142	1,588	129	.80
Petrolia	2,836	769	....	87,433	.....	.....	60	.55–.80
Port Burwell	700	231	....	16,085	.....	.....	3	.60
Port Colborne and Humberstone	5,500	1,573	....	68,275	.....	3,750	5	.60–.95
Port Dover	1,575	542	....	51,890	.....	484	1	.60
Port Rowan	640	266	....	18,190	.....	.....	1	$0.60
Ridgetown	2,000	646	2	68,830	1,983	564	28	.50–.75
Ridgeway	700	204	....	14,892	.....	.....	1	1.00–1.30
Rodney	676	244	1	25,233	164	663	40	.55–.70
Ruthven	438	52	....	8,205	.....	.....	25	.55
St. Anns	90	29	....	1,018	.....	.....	7	.90
St. Catharines	22,000	4,345	2	212,998	517	11,623	35	.75
St. George	569	97	....	3,742	.....	55	148	.80
St. Williams	319	110	....	7,378	.....	966	1	.60
Sarnia	15,176	4,520	....	359,528	.....	.....	69	.55–.80
Selkirk	585	139	1	14,261	107	1,502	1	.60
Shedden	409	93	....	7,895	.....	.....	63	.55–.70
Simcoe	4,000	1,572	3	186,170	518	10,934	20	.60
Smithville	332	145	....	5,520	.....	.....	6	.80
Sombra and Port Lambton	2,000	175	....	16,886	.....	657	45	.55–.80
Stevensville	423	31	....	2,309	.....	.....	1	1.00
Straffordville	215	82	....	7,694	.....	409	6	.60
Thorold	7,624	886	....	36,837	.....	.....	35	.75
Tilbury	2,000	496	1	51,231	291	938	17	.50–.75
Tillsonburg	3,086	1,010	1	87,991	347	2,580	16	.63
Vienna	284	80	1	3,706	77	.....	1	.60–.80
Vittoria	260	86	....	5,611	.....	.....	3	.60
Wallaceburg	4,530	1,148	....	136,314	.....	102,987	27	.50–.75
Wallacetown	244	43	1	4,159	146	553	60	.55–.70
Welland	8,646	2,359	3	85,712	406	14,464	3	.45–1.30
Wellandport	141	17	1	334	25	.....	3	.75
West Lorne	818	216	3	23,605	284	734	49	.55–.70
Wheatley	647	242	....	24,253	.....	1,295	12	.50–.75
Windsor (Border Cities)	60,626	10,980	....	1,265,283	.....	29,952	45	.55–.80
Woodstock	10,196	1,569	1	70,215	270	2,025	110	.80
Total	.....	62,897	57	4,954,652	12,750	761,260	.....	.....

TABLE III—GAS CONSUMPTION IN TOWNSHIPS, 1928

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, North	2,190	99	2	10,296	226	192	$0.55
Gosfield, South	2,301	299	1	44,045	550	40,684	.50–.55
Maidstone	2,099	77	7	7,042	1,557	587	.55–.80
Mersea	3,835	334	2	49,970	308	41,313	.40–.55
Rochester	1,931	197	6	17,486	1,391	435	.55–.80
Sandwich, East	1,090	20	1	2,413	583	.....	.55–.80
Sandwich, South	1,423	111	.....	12,879	.....	404	.55–.80
Sandwich, West	2,764	21	.....	3,249	.....	.....	.55–.80
Tilbury, North	1,788	25	.....	2,000	.....	48	.50–.75
Tilbury, West	1,543	23	1	1,565	179	.....	.50–.75
LAMBTON:							
Dawn	2,317	44	3	3,921	692	.....	.40–.65
Enniskillen	2,666	79	.....	7,191	.....	1,116	.55–.80
Euphemia	1,385	.....	6	.....	1,200	.....	.....
Moore	3,215	329	.....	24,920	.....	1,554	.50–.75
Sarnia	2,540	14	11	1,183	2,369	.....	.40–.80
Sombra	2,857	60	.....	3,954	.....	531	.50–.75
KENT:							
Chatham	4,935	68	.....	5,256	.....	642	.50–.75
Dover	3,606	411	1	50,740	129	7,690	.50–.65
Harwich	4,372	447	9	48,339	2,853	10,736	.50–.75
Howard	2,768	179	3	19,166	443	.....	.50–.75
Orford	1,870	21	2	2,709	344	.....	.50–.65
Raleigh	3,671	638	23	78,552	8,202	985	.40–.65
Romney	1,500	101	39	11,231	13,170	6	.40–.65
Tilbury, East	2,914	251	79	25,425	21,550	26,731	.40–.65
ELGIN:							
Aldborough	2,837	25	2	1,984	429	.....	.55–.60
Bayham	3,112	65	16	3,557	3,096	349	.60–.80
Dunwich	2,522	56	.....	5,485	.....	.....	.55–.60
Malahide	2,953	55	3	2,332	488	.....	.60–.80
Southwold	3,510	106	.....	8,976	.....	1,186	.55–.70
MIDDLESEX:							
Dorchester, North	3,056	21	1	1,341	300	.....	.60–.95
Westminster	6,122	141	.....	16,132	.....	.....	.60–.75
NORFOLK:							
Charlotteville	2,512	6	6	574	975	.....	.60
Middleton	2,037	27	4	2,039	695	.....	.60
Townsend	3,694	33	.....	3,861	.....	.....	.60
Walsingham, North	1,424	5	4	558	655	.....	.60
Walsingham, South	1,481	7	7	687	710	.....	.60
Windham	3,005	2	2	216	425	.....	.60
Woodhouse	1,964	160	11	17,600	1,806	.....	.60
BRANT:							
Brantford	7,220	7	.....	241	.....	.....	.80
Burford	3,833	3	.....	204	.....	.....	.80
Dumfries, South	2,532	8	.....	205	.....	.....	.80
Onondaga	1,017	48	15	3,601	3,114	.....	.60–.70
OXFORD:							
Oxford, East	1,724	9	.....	614	.....	.....	.80
Oxford, West	1,810	45	.....	5,379	.....	.....	.80

TABLE III—GAS CONSUMPTION IN TOWNSHIPS, 1928—*Continued*

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	902	90	41	6,886	7,283	592	$0.40–.60
Cayuga, North	1,309	32	16	1,615	3,704	.....	.40–.60
Cayuga, South	509	63	16	3,602	2,946	.....	.60
Dunn	796	124	11	7,633	2,689	.....	.60
Moulton	1,628	132	36	9,228	6,864	.....	.50–.60
Oneida	1,287	69	13	6,304	1,681	.....	.50–.60
Rainham	1,690	144	28	11,488	5,113	880	.40–.60
Seneca	1,561	130	35	13,063	7,219	.....	.60
Sherbrooke	277	55	11	4,089	1,405	.....	.40–.60
Walpole	3,042	313	61	22,341	9,632	931	.40–.60
LINCOLN:							
Caistor	1,220	63	2	5,842	393	266	.50–.60
Grantham	4,175	14	1	695	254	.....	.75
Grimsby	2,236	12	.....	561	.....	.....	1.25
Louth	2,548	10	.....	511	.....	.....	.75
WELLAND:							
Bertie	3,298	102	72	7,570	13,434	.....	.50–1.00
Crowland	3,748	80	24	3,556	3,938	.....	.75–1.00
Humberstone	2,047	145	38	9,665	7,180	.....	.75–1.00
Pelham	2,359	61	2	3,586	200	.....	.75
Stamford	4,896	165	4	9,482	748	.....	1.00
Thorold	3,369	20	1	820	160	.....	.75–.80
Wainfleet	2,357	104	32	6,659	6,600	.....	.40–.80
Willoughby	865	27	30	1,971	5,498	.....	1.00
WENTWORTH:							
Ancaster	4,524	51	.....	6,026	.....	.....	.70–.80
Barton	7,658	467	.....	67,763	.....	.....	.60
Binbrook	1,098	74	26	8,129	4,640	959	.45–.60
Glanford	1,417	123	4	15,068	949	869	.60
Saltfleet	4,682	15	.....	1,600	.....	.....	.60–.75
Total	.....	7,362	771	744,871	160,969	139,686	.....

SUMMARY

	M cu. ft.
Total distribution to customers	6,774,188
Used by companies for all purposes	113,698
Used by private well-owners	74,000
Leakage on transmission lines	394,805
Leakage on distribution plants	346,717
Leakage on rural lines	33,954
Leakage or loss on purchased gas	12,017
Total amount of gas distributed	7,749,379

Gas Wells and Their Production

In Table IV is given a summary by townships and fields of the number of gas wells in Ontario, their production, and the number abandoned; the number of new wells drilled, with their open flow; and the rock pressure of each fie An attempt has been made in past years to record the total number of acres under lease and the rentals paid in the province, but so many private individuals hold leases, from whom no satisfactory report can be obtained, and who rarely pay any rentals, that only operating companies have been reported.

As previously stated, this plant is only put in operation when the natural gas supply fails to meet the demand. It was used on three very cold days in the latter part of November, 1929, when the main pipe line leading from the gas field to Windsor burst. The plant required one hour to be brought to a heat sufficient to generate gas; during this interval Windsor was supplied with natural gas from the reserve stored in the four hortonspheres. The proportion of "Dayton" gas mixed with natural gas ranged from 15 to 25 per cent. This plant was operated for fifteen days during the winter of 1929-30.

Exploratory Drilling

In the year 1929 very little exploratory drilling was done. The Union Natural Gas Company was successful in bringing in a producing well in the township of Raleigh, lot 147, Talbot Road North, by deepening an old well drilled fifteen or twenty years ago. More drilling will result from this. The Union Natural Gas Company has also extended its exploratory drilling from Dawn township east into Euphemia township, where it has completed a producing well in the old Shetland oil and gas field.

The Southern Ontario Gas Company drilled a deep test-hole in the Mosa oil field. It was carried through to the granite without success.

The Petrol Oil and Gas Company has been extending its drilling operations in the Tuscarora Indian Reserve, south of Brantford, and has been successful in bringing in a number of small gas wells.

Analysis of Gas Consumption

Tables II and III give details concerning the gas consumed in Ontario during 1929. By comparing these tables with those published in previous years, the history of prices and quantity consumed can be traced from year to year. It will be found of interest to note the changes in the ratio of gas used to the price charged from year to year.

TABLE II—GAS CONSUMPTION IN TOWNS AND CITIES, 1929

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M. cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Aylmer	2,321	680	....	31,554	.....	.....	16	$0.90
Bartonville	350	55	....	3,334	.....	.....	19	.60
Belle River	810	192	....	18,493	.....	566	29	.55–.80
Belmont	350	65	....	3,015	.....	.....	9	1.00
Binbrook	100	12	1	1,552	200	.....	1	.40
Blenheim	1,572	559	1	56,754	179	8,392	20	.50–.75
Brantford	30,350	3,815	5	133,723	1,273	8,772	140	.80
Bridgeburg and Fort Erie	5,173	1,233	4	63,400	1,915	.....	8	1.00–1.30
Brigden	300	148	....	14,677	.....	1,931	30	.50–.75
Burlington	3,300	47	....	308	.....	.....	48	.75
Cainsville	600	127	....	5,879	.....	.....	4	.80
Caledonia	2,000	551	....	48,320	.....	.....	7	.60
Canfield	150	64	....	6,209	.....	267	1	.40
Cayuga	790	215	1	21,871	59	587	6	.60
Chatham	16,970	4,102	....	522,846	.....	31,648	22	.50–.75
Chippawa	1,100	14	....	790	.....	.....	5	.40
Coatsworth	100	33	2	3,143	29	94	4	.50–.75
Comber	658	144	....	17,902	.....	1,516	19	.50–.75
Cottam	300	89	3	9,628	216	695	35	.55
Courtland	380	51	....	4,125	.....	112	3	.60
Courtright	450	132	....	13,033	.....	411	49	.50–.75
Crystal Beach	352	194	....	14,462	.....	.....	1	1.00–1.30
Delhi	840	275	....	24,063	.....	1,027	4	.60
Dorchester	477	109	....	8,297	.....	.....	95	.60–.80
Dresden and Tupperville	1,455	509	....	57,368	.....	875	30	.50–.75
Dundas	5,150	1,154	3	61,987	46	4,950	172	.70
Dunnville	3,296	988	3	104,667	445	12,681	7	.60
Dutton	835	261	3	26,153	130	990	52	.55–.80
Echo Place	300	61	....	2,967	.....	.....	3	.80
Eden	80	27	....	1,446	.....	.....	11	.60
Essex	1,600	502	....	65,978	.....	4,509	33	.55–.80
Fairground	40	12	....	633	.....	.....	1	.60
Fenwick	165	95	....	6,257	.....	.....	18	.75
Fingal	410	43	....	3,648	.....	758	71	.55–.80
Fisherville	102	52	....	4,954	.....	385	2	.50–.55
Fonthill	750	240	....	6,951	.....	.....	25	.95–1.20
Galt	13,250	1,395	1	54,836	229	6,126	147	.80
Grimsby	2,000	39	....	1,129	.....	.....	10	.85
Hagersville	1,290	415	....	35,854	.....	.....	14	.60
Hamilton	127,447	5,845	4	152,101	583	303,420	47	.75–1.00
Hamilton West		189	....	6,536	.....	.....	47	.70
Hepworth	300	5	2	75	32	.....	1	.75
Highgate	410	114	1	12,035	349	.....	32	.50–.75
Ingersoll	5,150	959	2	42,457	294	4,026	100	.80
Jarvis	460	198	....	20,452	.....	.....	9	.60
Kingsville	3,590	702	1	96,705	253	475	30	.50–.75
Lake Shore	.....	347	....	8,657	.....	.....	16	1.00–1.30
Lambeth	486	86	....	5,635	.....	.....	85	.60–.85
Leamington	4,300	1,455	....	212,903	.....	4,410	20	.55
Lynedoch	151	53	....	4,081	.....	4,566	2	.60
Mabee	82	10	....	729	.....	.....	1	.60
Merlin	386	145	1	16,853	2,026	1,144	2	.50–.75
Merritton	2,522	342	....	11,898	.....	.....	35	.75
Nelles Corners	100	26	....	2,458	.....	.....	1	.50
Niagara Falls	16,400	2,830	....	115,334	.....	24,473	11	1.00–1.10
Oil Springs	512	140	....	6,348	.....	.....	2	.75
Paris	4,368	604	1	22,536	121	1,905	129	.80
Petrolia	3,148	758	....	89,694	.....	.....	60	.55–.80
Port Burwell	650	228	....	15,707	.....	.....	3	.60

TABLE II—GAS CONSUMPTION IN TOWNS AND CITIES, 1929—*Continued*

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Port Colborne and Humberstone	5,661	1,737	6	83,108	688	3,257	5	.60–.95
Port Dover	1,650	575	....	52,612	.....	455	1	.60
Port Rowan	669	253	....	18,140	.....	.....	1	.60
Ridgetown	2,000	654	2	72,788	2,101	873	28	.50–.75
Ridgeway	864	216	....	16,068	.....	.....	1	1.00
Rodney	680	240	1	24,600	113	697	40	.55–.80
Ruthven	438	47	....	7,391	.....	.....	25	.55
St. Anns	92	23	....	947	.....	.....	7	.75
St. Catharines	24,000	4,369	2	233,239	601	13,547	35	.75
St. George	550	100	....	3,825	.....	29	148	.80
St. Williams	300	111	....	7,575	.....	1,075	1	.60
Sarnia	16,544	4,694	....	381,867	.....	.....	69	.55–.80
Selkirk	585	146	1	13,923	105	1,249	1	.60
Shedden	400	90	....	8,082	.....	.....	63	.55–.70
Simcoe	4,582	1,632	3	192,935	498	16,051	20	.60
Smithville	330	156	....	6,832	.....	.....	6	.75
Sombra and Port Lambton	2,000	159	....	16,331	.....	487	45	.55–.80
Stevensville	450	33	....	2,409	.....	.....	1	1.00
Straffordville	300	81	....	7,491	.....	671	6	.60
Thorold	4,932	937	....	39,533	.....	.....	35	.75
Tilbury	2,000	514	1	57,634	253	642	17	.50–.75
Tillsonburg	3,257	1,018	1	85,893	353	2,322	16	.63
Vienna	284	78	1	4,061	124	.....	1	.60–.80
Vittoria	280	81	....	5,456	.....	.....	3	.60
Wallaceburg	4,530	1,235	....	142,962	.....	379,078	27	.50–.75
Wallacetown	244	47	1	4,019	15	505	60	.55–.80
Welland	10,085	2,536	3	90,779	486	14,662	3	.45–1.30
Wellandport	140	11	1	276	25	.....	3	.75
West Lorne	818	214	3	22,131	205	749	49	.55–.80
Wheatley	700	242	....	23,889	.....	1,305	12	.50–.75
Windsor (Border Cities)	66,893	16,015	....	1,637,249	.....	58,620	45	.55–.80
Woodstock	10,195	1,776	1	77,914	360	3,607	110	.80
Total	.....	73,755	66	5,647,359	14,306	931,592	.....	.....

TABLE III—GAS CONSUMPTION IN TOWNSHIPS, 1929

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, North	2,190	102	3	10,813	273	185	$0.55
Gosfield, South	2,291	439	1	42,187	618	25,092	.50–.55
Maidstone	2,109	75	6	7,263	1,566	530	.55–.80
Mersea	3,825	455	2	49,099	382	26,682	.55
Rochester	1,941	201	7	17,871	1,457	854	.55–.80
Sandwich, East	1,090	24	1	2,979	541	.....	.55–.80
Sandwich, West	2,754	21	.....	3,204	.....	.....	.50–.75
Sandwich, South	1,433	104	.....	13,238	.....	377	.55–.80
Tilbury, North	1,788	28	.....	2,138	.....	79	.50–.75
Tilbury, West	1,563	23	1	2,126	151	.....	.50–.75
LAMBTON:							
Dawn	2,307	61	3	4,828	615	441	.40–.65
Enniskillen	2,656	78	.....	6,923	.....	1,308	.55–.80
Moore	3,251	289	.....	25,429	.....	888	.50–.75
Sarnia	2,560	3	10	600	2,189	.....	.40
Sombra	2,875	52	.....	4,332	.....	757	.50–.75
KENT:							
Camden	1,305	10	.....	719	.....	.....	.50.–75
Chatham	4,940	73	1	5,890	36	745	.50–.75
Dover	3,600	408	1	44,622	164	11,874	.50–.65
Harwich	4,327	428	9	53,101	2,824	163	.50–.75
Howard	2,768	176	2	20,298	428	.....	.50–.75
Orford	1,875	21	3	2,637	363	.....	.50–.75
Raleigh	3,676	580	21	68,782	6,577	2,405	.50–.65
Romney	1,510	70	38	8,112	11,474	.....	.50–.65
Tilbury, East	2,914	246	75	23,925	22,220	20,918	.50–.65
ELGIN:							
Aldborough	2,837	24	1	1,715	510	.....	.55–.80
Bayham	3,162	73	16	3,574	3,398	361	.60–.80
Dunwich	2,500	53	1	4,904	91	.....	.55–.80
Malahide	2,953	55	3	2,350	470	.....	.60–.90
Southwold	3,510	109	.....	8,779	.....	1,318	.55–.80
MIDDLESEX:							
Dorchester, North	3,056	14	1	1,095	300	.....	.60–.85
Westminster	6,175	147	.....	19,017	.....	.....	.60–.85
NORFOLK:							
Charlotteville	2,600	6	6	392	960	.....	.60
Middleton	2,150	33	4	2,297	730	.....	.60
Townsend	3,715	34	.....	3,819	.....	.....	.60
Walsingham, North	1,520	5	4	459	640	.....	.60
Walsingham, South	1,581	7	7	614	1,036	.....	.60
Windham	3,205	2	2	231	320	.....	.60
Woodhouse	2,050	162	10	17,758	1,760	.....	.60
BRANT:							
Brantford	7,220	7	.....	232	.....	.....	.80
Burford	3,833	2	.....	145	.....	.....	.80
Dumfries, South	2,532	10	.....	392	.....	.....	.80
Onondaga	1,017	52	13	4,294	2,731	.....	.60–.70
Tuscarora	800	1	.....	119	.....	.....	.25
OXFORD:							
Oxford, East	1,724	8	.....	434	.....	.....	.80
Oxford, West	1,810	51	.....	5,194	.....	.....	.80

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1930

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Alvinston	612	143	1	3,481	13	136	20	$0.55–.80
Aylmer	2,100	680	....	28,780	.....	.....	16	.90
Bartonville	350	85	....	3,582	.....	.....	19	.60
Belle River	810	172	....	17,298	.....	579	29	.55–.80
Belmont	350	70	....	3,022	.....	.....	9	1.00
Binbrook	100	19	....	1,487	.....	.....	1	.25–.40
Blenheim	1,572	567	2	61,547	332	1,083	20	.50–.75
Bothwell	653	107	....	2,892	.....	.....	14	.55–.80
Brantford	30,350	4,052	5	156,167	1,154	7,595	140	.80
Bridgeburg and Fort Erie	5,173	1,298	4	65,574	1,725	.....	8	1.00–1.30
Brigden	300	157	....	13,553	.....	1,462	30	.50–.75
Burlington	3,300	167	....	8,439	.....	.....	48	.75
Cainsville	600	132	....	5,995	.....	.....	4	.80
Caledonia	2,000	545	....	49,905	.....	.....	7	.60
Canfield	150	62	....	5,313	.....	602	1	.50–.60
Cayuga	790	215	1	20,778	54	529	6	.60
Chatham	16,970	4,115	1	485,024	5,435	35,916	22	.50–.75
Chippawa	1,100	12	....	511	.....	.....	5	.40
Coatsworth	100	31	1	2,453	43	24	4	.50–.75
Comber	658	141	....	16,552	.....	1,809	19	.50–.75
Cottam	300	90	3	9,414	217	736	35	.55
Courtland	380	52	....	4,124	.....	122	3	.60
Courtright	450	123	1	12,435	252	670	49	.50–.75
Crystal Beach	352	205	....	13,581	.....	.....	1	1.00–1.30
Delhi	840	292	....	25,169	.....	1,289	4	.60
Dorchester	477	111	1	7,993	18	.....	95	.60–.85
Dresden and Tupperville	1,450	498	1	54,682	132	647	30	.50–.75
Dundas	5,000	1,161	1	64,761	40	5,421	172	.70
Dunnville	3,500	997	3	101,983	410	9,741	7	.40–.60
Dutton	835	255	3	25,029	157	1,067	52	.55–.80
Echo Place	300	66	....	3,036	.....	.....	3	.80
Eden	80	27	....	1,299	.....	.....	11	.60
Essex	1,600	519	1	59,698	101	4,013	33	.55–.80
Fairground	40	15	....	656	.....	.....	1	.60
Fenwick	165	99	....	6,431	.....	.....	18	.75
Fingal	410	41	2	3,295	12	539	71	.55–.80
Fisherville	102	50	....	4,889	.....	241	2	.50–.55
Florence	278	56	....	1,424	.....	.....	5	.55–.80
Fonthill	750	235	....	6,223	.....	.....	25	.95–1.20
Galt	13,752	1,034	1	61,582	261	5,015	147	.80
Grimsby	1,888	59	....	2,089	.....	.....	10	.85
Hagersville	1,290	416	....	35,362	.....	.....	14	.60
Hamilton 24-8 M	143,129	8,295	4	223,035	622	217,573	47	.75
Hepworth	300	6	2	458	400	.....	1	.75
Highgate	410	114	3	11,112	445	.....	32	.50–.75
Ingersoll	5,100	964	2	43,069	313	3,372	100	.80
Inwood	250	68	....	1,580	.....	.....	14	.55–.80
Jarvis	460	202	....	19,780	.....	.....	9	.60
Kingsville	3,590	698	1	91,800	266	190	30	.55
Lake Shore	.....	389	....	8,407	.....	.....	16	1.00–1.30
Lambeth	486	84	....	5,621	.....	.....	85	.60–.85
Leamington	5,169	1,465	....	197,558	.....	4,497	20	.55
Lynedoch	151	47	....	3,486	.....	1,779	2	.60
Mabee	82	11	....	704	.....	.....	1	.60
Merlin	386	147	2	16,009	2,252	1,092	2	.50–.75
Merritton	2,596	370	....	14,481	.....	135	35	.75
Nelles Corners	100	1	4	.....	1,000	529	1	.50
Niagara Falls	18,539	3,045	....	114,535	.....	28,228	11	1.00–1.30
Oil Springs	512	125	....	4,836	.....	.....	2	.75
Paris	4,368	595	1	27,295	127	1,396	129	.80
Petrolia	3,148	745	1	84,621	412	.....	60	.55–.80

The graph on page 2 shows very clearly the history of the gas industry in Ontario—total production, total number of producing wells, and number of producing wells drilled each year for forty years.

Table II shows the number of gas consumers and the quantity of gas used for purely domestic cooking and heating. The amount of gas used by industries and for other purposes is shown in Tables III and IV.

TABLE II—DOMESTIC CONSUMPTION OF GAS, 1921-1930

Year	No. of pay consumers	Total quantity used	Quantity used per consumer
		M cu. ft.	M cu. ft.
1921	58,609	5,937,316	101.3
1922	63,229	6,028,947	95.3
1923	62,352	6,210,459	99.6
1924	61,100	5,933,595	97.1
1925	62,338	5,300,424	85.6
1926	63,695	5,595,521	87.8
1927	66,818	5,210,315	78
1928	70,259	5,699,553	71.2
1929	80,991	6,336,873	78.2
1930	84,135	6,332,519	75.2

The following table shows the capital invested, number of men employed, and wages paid in the natural gas industry for the years 1927 to 1930:—

	1927	1928	1929	1930
Capital invested in all natural gas operations, including drilling, producing and distributing	$31,987,879	$36,601,828	$35,162,736	$36,162,268
Number of men employed	1,123	1,209	1,323	1,328
Wages paid	$1,148,339	$1,497,999	$1,529,367	$1,545,648

Analysis of Gas Consumption

Tables III and IV give details concerning the gas consumed in Ontario during 1930. By comparing these tables with those published in previous years, the history of prices and quantity consumed can be traced from year to year. It will be found of interest to note the changes in the ratio of gas used to the price charged from year to year.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1930—*Continued*

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Port Burwell	650	233	....	15,371	.....	.....	3	$0.60
Port Colborne and Humberstone	5,661	1,778	5	91,138	568	2,766	5	.60–.95
Port Dover	1,650	553	1	50,348	150	454	1	.60
Port Rowan	669	239	....	15,704	.....	.....	1	.60
Ridgetown	1,895	645	3	68,002	2,293	1,096	28	.50–.75
Ridgeway	864	219	....	14,509	.....	.....	1	1.00–1.30
Rodney	680	243	2	22,539	156	664	40	.55–.80
Ruthven	438	48	....	6,846	.....	.....	25	.55
St. Anns	92	25	....	1,005	.....	.....	7	.85
St. Catharines	30,000	4,734	2	234,640	515	11,661	35	.75
St. George	550	98	....	3,882	.....	26	148	.80
St. Williams	300	109	....	6,520	.....	965	1	.60
Sarnia	18,503	4,583	1	359,325	1,232	11,274	55	.55–.80
Selkirk	585	139	1	13,217	99	.....	1	.60
Shedden	400	92	....	7,452	.....	.....	63	.55–.80
Simcoe	4,582	1,664	3	193,947	482	9,873	20	.60
Smithville	330	177	....	7,157	.....	.....	6	.75
Sombra and Port Lambton	2,000	147	....	14,711	.....	585	45	.55–.80
Stevensville	450	33	....	2,186	.....	.....	1	1.00–1.30
Straffordville	300	80	....	6,573	.....	595	6	.60
Thamesville	800	190	1	4,869	44	186	13	.55–.80
Thorold	4,932	990	....	40,078	.....	423	35	.75
Tilbury	2,000	494	2	50,171	494	634	14	.50–.75
Tillsonburg	3,257	1,003	1	80,047	377	2,894	16	.63
Vienna	284	77	1	3,882	107	.....	1	.60–.80
Vittoria	280	82	....	5,223	.....	.....	3	.60
Wallaceburg	4,530	1,175	1	128,261	292	109,241	19	.50–.75
Wallacetown	244	46	1	4,011	23	490	60	.55–.80
Waterford	1,096	14	....	75	.....	.....	30	.60
Welland	12,100	2,654	3	90,934	487	7,364	3	.45–1.30
Wellandport	140	16	....	247	.....	.....	3	.75
West Lorne	818	207	3	18,912	345	714	49	.55–.80
Wheatley	700	242	....	22,447	.....	1,412	12	.50–.65
Windsor (Border Cities)	85,900	14,779	....	1,677,111	.....	99,302	45	.55–.80
Woodstock	10,898	1,910	1	85,186	293	3,433	110	.80
Wyoming	475	102	....	2,253	.....	.....	65	.55–.80
Total	.....	76,362	84	5,674,674	24,150	604,079	.....	.....

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1930

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, North	2,190	98	2	9,886	303	175	$0.55
Gosfield, South	2,291	392	1	38,616	597	17,084	.50–.55
Maidstone	2,109	79	7	6,534	1,592	552	.55–.80
Mersea	3,825	454	2	47,263	400	23,834	.50–.55
Rochester	1,941	198	6	16,848	1,369	646	.55–.80
Sandwich, East	1,090	11	.....	2,615	.....	.....	.55–.80
Sandwich, South	1,433	113	.....	11,638	.....	523	.55–.80
Sandwich, West	2 754	1	.....	69	.....	.....	.55–.80
Tilbury, North	1,788	32	.....	1,659	.....	204	.50–.75
Tilbury, West	1,563	22	1	2,137	208	.....	.50–.75
LAMBTON:							
Brooke	2,350	9	.....	152	.....	.....	.55–.80
Dawn	2,307	65	3	4,963	581	1,349	.40–.65
Enniskillen	2,656	115	.....	7,063	.....	431	.55–.80
Moore	3,251	295	.....	22,013	.....	990	.50–.75
Plympton	2,531	5	.....	109	.....	.....	.55–.80
Sarnia	2,560	3	10	600	2,113	.....	.40
Sombra	2,875	57	.....	4,537	.....	630	.50–.75
KENT:							
Camden	1,305	13	.....	668	.....	.....	.50–.75
Chatham	4,940	91	.....	8,477	.....	736	.50–.75
Dover	3,600	426	1	45,195	153	3,404	.30–.80
Harwich	4,327	440	10	43,265	2,868	.....	.50–.75
Howard	2,768	174	3	19,231	442	.....	.50–.75
Orford	1,875	20	3	2,239	373	.....	.50–.75
Raleigh	3,676	576	24	63,451	6,357	865	.50–.75
Romney	1,510	74	37	7,884	10,795	500	.40–.65
Tilbury, East	2,914	237	72	23,777	23,078	9,740	.40–.65
Zone	800	7	.....	220	.....	.....	.55–.80
ELGIN:							
Aldborough	2,837	21	1	1,292	325	.....	.55–.80
Bayham	3,162	75	17	3,682	3,118	389	.60–.80
Dunwich	2,500	49	1	4,820	109	.....	.55–.80
Malahide	2,953	53	3	2,222	475	.....	.60–.80
Southwold	3,510	110	.....	8,548	.....	585	.55–.80
MIDDLESEX:							
North Dorchester	3,056	15	1	1,027	300	.....	.60–.85
Westminster	6,175	161	.....	18,148	.....	.....	.60–.85
NORFOLK:							
Charlotteville	2,600	16	7	1,186	985	.....	.60
Middleton	2,150	33	1	2,264	200	.....	.60
North Walsingham	1,520	5	4	375	588	.....	.....
South Walsingham	1,581	21	7	1,701	1,022	.....	.60
Townsend	3,715	32	.....	2,380	.....	.....	.60
Windham	3,205	2	3	174	478	.....	.60
Woodhouse	2,050	163	10	17,035	1,459	.....	.60
BRANT:							
Brantford	7,220	8	.....	286	.....	.....	.80
Burford	3,833	2	.....	151	.....	.....	.80
Onondaga	1,017	51	13	3,922	2,473	.....	.60–.70
South Dumfries	2,532	10	.....	346	.....	.....	.80
Tuscarora	800	1	.....	144	.....	.....	.30
OXFORD:							
East Oxford	1,724	9	.....	589	.....	.....	.80
West Oxford	1,810	54	.....	4,158	.....	.....	.80

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1930—*Continued*

Township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industria	
HALDIMAND.							
Canborough	902	82	49	6,290	8,093	492	$0.60
Dunn	800	119	10	7,275	2,615	.....	.60
Moulton	1,628	312	31	9,854	3,827	12,099	.50–.60
North Cayuga	1,309	5	12	153	2,076	.....	.60
Oneida	1,287	67	9	8,232	1,680	.....	.50–.60
Rainham	1,695	138	27	10,455	5,230	1,468	.40–.60
Seneca	1,561	150	53	12,242	7,630	.....	.60
Sherbrooke	300	82	11	4,653	1,189	.....	.50–.60
South Cayuga	510	58	16	3,752	2,812	.....	.60
Walpole	3,042	312	59	23,530	9,039	1,783	.40–.60
LINCOLN:							
Caistor	1,220	101	26	6,446	2,486	199	.50–.60
Gainsborough	2,017	23	2	1,932	229	.....	.50
Grantham	4,175	9	.....	581	.....	.....	.75
Louth	2,548	8	1	528	100	.....	.75
WELLAND:							
Bertie	3,298	189	69	12,666	13,315	.....	.50–1.30
Crowland	3,750	87	22	2,937	2,850	.....	.75–.1.30
Humberstone	2,149	247	37	15,249	5,967	.....	.50–1.30
Pelham	2,365	60	2	3,944	115	.....	.75
Stamford	4,915	87	4	5,764	772	.....	1.00–1.30
Thorold	3,401	8	1	130	170	.....	.75–.80
Wainfleet	2,357	86	26	4,098	4,921	.....	.40–1.00
Willoughby	870	29	29	1,921	5,467	.....	1.00–1.30
WENTWORTH:							
Ancaster	4,550	55	.....	8,865	.....	.....	.70–.75
Barton	7,665	229	.....	10,051	.....	.....	.60–.75
Binbrook	1,109	72	21	9,614	4,186	786	.60
Glanford	1,415	125	4	14,690	664	393	.60
Saltfleet	4,706	135	.....	6,434	.....	.....	.75
Total	.....	7,773	771	657,845	148,194	79,857	.....

SUMMARY

	M cu. ft.
Total distribution to customers	7,188,799
Used by companies for all purposes	110,575
Used by private well-owners	74,000
Leakage in transmission lines	413,619
Leakage in distribution plants	288,367
Leakage in rural lines	15,881
Total amount of gas distributed	8,091,241

Gas Wells and Their Production

In Table V is given a summary by townships of the number of gas wells in Ontario, their production, and the number abandoned; the number of new wells drilled, with their open flow; and the rock pressure of each township. Only the acres under lease held by operating companies are herein reported.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1930

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield, South	20						171	5,898	$325
	Mersea	3						278		
Kent	Raleigh	30		7	11	24,301	4,999,278	606		
	Romney	147		1	3	357		229	132,428	
	Tilbury, East	137	3		2	399		229		
	Dover	9		3	1		459,112	360	14,662	179,054
Lambton	Dawn	18		5	4	7,131	124,411	667	91,143	
	Euphemia	3						345		
	Enniskillen	3					4,836	100	760	
	Sarnia	14					2,400	70	5,000	50
Middlesex	Dorchester, North	3					300	25	100	
	Mosa	1		4	1	1,048				
Elgin	Bayham	39	1				48,018	172		
	Malahide	1	1					215		
Norfolk	Charlotteville	15	1					224		
	Houghton	3						300		
	Middleton	25	1		1	300		294		
	North Walsingham	9					277,971	365		
	South Walsingham	13	1					333		
	Townsend	1						300		
	Windham	8						266		
	Woodhouse	53	3					267		
Haldimand	Canborough	126	3		1	28		96		
	Dunn	31	1	1	1	25		166		
	Moulton	88	8		1	17		123		
	North Cayuga	128	11	14	19	938		247		
	Oneida	23	3	3	3	102		119	298,727	69,1
	Rainham	199	2	4	20	1,157		262		
	Seneca	166	2	11	17	1,239		104		

The following table shows the capital invested, number of men employed, and wages paid in the natural gas industry for the years 1928 to 1931. The increase is due to extension of plant, mainly the new pipe-line of the Union Gas Company[1] from Hamilton to the Haldimand gas field.



Laying a high-pressure gas line in Hespeler. The line crosses under a sewer pipe, house service pipes, curb, and roadway.

	1928	1929	1930	1931
Capital invested in all natural gas operations, including drilling, producing, and distributing	$36,601,828	$35,162,736	$36,162,268	$42,921,142
Number of men employed	1,209	1,323	1,328	1,241
Wages paid	$1,497,999	$1,529,367	$1,545,648	$1,383,286

Analysis of Gas Consumption

Tables III and IV give details concerning the gas consumed in Ontario during 1931. By comparing these tables with those published in previous years, the history of prices and quantity consumed can be traced from year to year. It will be found of interest to note the changes in the ratio of gas used to the price charged from year to year.

[1]The name of the company was changed during the year from Union Natural Gas Company of Canada, Limited, to Union Gas Company of Canada, Limited.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1931

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Alvinston	708	168	1	9,865	25	.....	20	$0.55–.80
Aylmer	2,283	675	....	26,476	.....	.....	16	.90
Bartonville	602	94	....	4,618	.....	.....	19	.60–.75
Belle River	782	175	....	13,188	.....	537	29	.55–.80
Belmont	317	60	....	4,000	.....	.....	9	1.00
Binbrook	100	19	....	1,137	.....	.....	1	.25–.40
Blenheim	1,737	575	3	54,558	336	932	20	.50–.75
Bothwell	649	110	1	8,720	30	.....	14	.55–.80
Brantford	30,107	4,250	5	156,824	921	6,521	140	.80
Brigden	433	155	....	11,702	.....	1,474	30	.50–.75
Burlington	3,046	219	....	17,429	.....	.....	48	.75
Cainsville	324	130	....	5,497	.....	.....	4	.80
Caledonia	1,396	548	....	48,229	.....	.....	7	.60
Canfield	166	60	....	4,981	.....	.....	1	.50–.60
Cayuga	721	223	1	19,906	67	531	6	.60
Chatham	14,569	4,170	5	412,982	3,482	5,686	22	.50–.75
Chippawa	1,100	11	1	414	75	.....	5	.40
Coatsworth	101	28	1	2,103	13	4	4	.40–.65
Comber	506	144	....	14,028	.....	1,518	19	.50–.75
Cottam	425	88	....	8,067	.....	710	35	.55
Courtland	214	55	....	3,739	.....	139	3	.60
Courtright	345	121	1	8,831	185	1,225	53	.50–.75
Crystal Beach	661	210	....	11,970	.....	.....	1	1.00–1.30
Delhi	1,121	338	....	25,619	.....	706	4	.60
Dorchester	403	111	....	7,437	.....	.....	95	.60–.85
Dresden and Tupperville	1,649	503	2	46,820	141	822	38	.50–.75
Dundas	5,026	1,172	2	61,221	34	3,529	172	.70
Dunnville	3,405	1,006	3	92,932	510	8,383	7	.40–.60
Dutton	776	257	3	21,968	119	1,113	52	.55–.80
Echo Place	732	72	....	3,044	.....	.....	3	.80
Eden	76	27	....	1,342	.....	.....	11	.60
Essex	1,954	495	2	52,962	126	3,321	33	.55–.80
Fairground	75	13	....	635	.....	.....	1	.60
Fenwick	328	111	....	6,256	.....	.....	18	.75
Fingal	169	38	....	2,701	.....	349	71	.55–.80
Fisherville	162	50	....	4,374	.....	276	2	.50
Florence	184	55	....	3,956	.....	.....	5	.55–.80
Fonthill	863	210	....	5,023	.....	.....	25	.95–1.20
Fort Erie	5,904	1,373	3	63,633	1,822	.....	8	1.00–1.30
Galt	14,006	1,750	2	63,961	258	4,887	147	.80
Grimsby	2,198	142	....	3,573	.....	.....	10	.85
Grimsby Beach	500	25	....	339	.....	.....	11	.85
Hagersville	1,385	416	....	32,365	.....	.....	14	.60
Hamilton	123,076	8,661	3	258,756	687	661,296	47	.75
Hepworth	314	6	2	116	400	.....	1	.75
Hespeler	2,752	21	....	39	.....	.....	155	.80
Highgate	361	113	2	10,382	295	.....	32	.50–.75
Ingersoll	5,233	999	3	38,115	278	2,576	100	.80
Inwood	250	70	....	4,119	.....	.....	14	.55–.80
Jarvis	506	205	....	18,505	.....	.....	9	.60
Kingsville	2,179	672	1	78,867	214	36	30	.55
Lake Shore	11,000	390	....	6,212	.....	.....	16	1.00–1.30
Lambeth	172	99	....	5,992	.....	.....	85	.60–.85
Leamington	4,902	1,473	....	177,823	.....	4,256	20	.55
Lynedoch	175	44	....	3,004	.....	1,855	2	.60
Merlin	189	145	2	13,969	1,599	934	2	.50–.75
Merritton	2,523	404	....	13,956	.....	160	35	.75
Nelles Corners	86	1	4	.....	800	478	1	.60
Niagara Falls	19,046	2,950	....	104,943	.....	14,077	11	1.00–1.30
Oil Springs	394	125	....	5,806	.....	.....	2	.75
Paris	4,137	742	1	29,476	126	1,550	129	.80

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1931—*Continued*

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Petrolia	2,596	749	1	74,241	366	929	60	$0.55–.80
Port Burwell	423	225	....	12,723	.....	.....	3	.60
Port Colborne and Humberstone	8,993	1,786	6	86,173	448	609	5	.70–1.00
Port Dover	1,707	572	....	46,243	.....	321	1	.60
Port Rowan	689	235	....	14,569	.....	.....	1	.60
Preston	6,280	325	....	4,188	.....	131	151	.80
Ridgetown	1,952	628	4	58,599	1,887	650	28	.50–.75
Ridgeway	1,096	249	....	14,234	.....	.....	1	1.00–1.30
Rodney	736	246	1	19,954	70	529	40	.55–.80
Ruthven	146	50	....	6,020	.....	.....	25	.55
St. Anns	120	22	....	972	.....	.....	7	.85
St. Catharines	24,753	4,809	1	216,103	417	12,347	35	.75
St. George	507	104	....	3,536	.....	.....	148	.80
St. Williams	270	107	....	5,994	.....	648	1	.60
Sarnia and Pt. Edward	19,553	4,493	1	316,149	1,346	10,952	55	.55–.80
Selkirk	196	130	1	10,749	79	.....	1	.60
Shedden	233	91	....	6,569	.....	258	63	.55–.80
Simcoe	5,226	1,717	3	174,760	484	11,741	20	.60
Smithville	570	181	....	7,642	.....	.....	6	.75
Sombra and Port Lambton	419	146	....	12,623	.....	616	45	.55–.80
Stevensville	418	38	....	2,166	.....	.....	1	1.00–1.30
Straffordville	253	85	....	6,226	.....	1,067	6	.60
Thamesville	797	194	3	13,696	93	736	13	.55–.80
Thorold	5,092	998	....	37,724	.....	720	35	.75
Tilbury	1,992	505	2	42,218	449	1,211	14	.50–.75
Tillsonburg	3,385	1,032	1	75,028	336	1,692	16	.63
Vienna	217	75	1	3,559	111	.....	1	.60–.80
Vittoria	205	81	....	4,201	.....	.....	3	.60
Wallaceburg	4,326	1,161	1	105,144	257	102,377	19	.50–.75
Wallacetown	143	47	1	3,476	18	538	60	.55–.80
Waterford	1,213	79	....	2,424	.....	25	30	.60
Welland	10,709	2,678	3	84,621	544	3,643	3	.45–1.30
West Lorne	840	200	3	15,934	316	575	49	.55–.80
Wheatley	798	235	....	20,307	.....	1,072	12	.50–.65
Windsor (Border Cities)	104,540	14,261	....	1,318,223	.....	114,717	45	.55–.80
Woodstock	11,395	2,050	3	83,073	228	2,836	110	.80
Wyoming	480	107	1	5,965	19	492	65	.55–.80
Total	.....	78,263	91	5,035,531	20,011	1,001,313	.....	.....

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1931

County and township	Population	No. of consumers		Quantity consumed, M. cu. ft.			Net rate per M. cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, North	1,964	106	3	8,555	393	208	$0.55
Gosfield, South	2,544	382	1	32,666	639	20,562	.50–.55
Maidstone	3,010	74	7	5,729	1,469	584	.55–.80
Mersea	5,241	450	2	40,569	377	28,888	.50–.55
Rochester	2,456	173	6	13,301	1,159	739	.55–.80
Sandwich, East	5,421	10	.....	960	.....	.....	.55–.80
Sandwich, South	2,276	112	.....	9,717	.....	724	.55–.80
Tilbury, North	2,047	26	.....	1,412	.....	60	.50–.75
Tilbury, West	1,624	14	1	1,126	172	.....	.50–.75
LAMBTON:							
Brooke	2,373	16	.....	372	.....	.....	.55–.80
Dawn	2,294	70	5	4,576	685	1,857	.40–.65
Enniskillen	2,692	112	.....	7,089	.....	465	.55–.80
Moore	3,381	299	.....	19,218	.....	911	.50–.75
Plympton	2,695	6	.....	508	.....	.....	.55–.80
Sarnia	3,441	1	.....	234	.....	.....	.40
Sombra	2,971	56	.....	3,813	.....	677	.50–.75
KENT:							
Camden	2,241	12	.....	732	.....	.....	.50–.75
Chatham	6,418	81	.....	6,333	.....	840	.50–.75
Dover	5,151	438	4	41,634	153	2,396	.30–.65
Harwich	5,506	458	10	38,212	3,181	.....	.50–.75
Howard	2,837	178	2	15,838	356	.....	.50–.75
Orford	1,850	21	2	1,785	145	.....	.50–.75
Raleigh	4,830	574	24	55,472	5,674	924	.40–.75
Romney	1,518	71	38	7,062	10,588	.....	.40–.65
Tilbury, East	3,457	234	71	21,299	18,396	6,251	.40–.65
Zone	886	13	.....	724	.....	.....	.55–.80
ELGIN:							
Aldborough	2,753	23	2	1,060	366	.....	.55–.80
Bayham	3,510	80	17	3,313	2,364	.....	.60–.80
Dunwich	2,429	53	1	4,103	112	.....	.55–.80
Malahide	3,045	52	2	1,900	188	.....	.60–.80
Southwold	3,553	111	.....	7,501	.....	56	.55–.80
MIDDLESEX:							
North Dorchester	3,075	15	2	1,008	408	.....	.60–.85
Westminster	7,153	165	.....	18,075	.....	.....	.60–.85
NORFOLK:							
Charlotteville	3,289	16	6	818	1,150	.....	.60
Middleton	2,505	47	2	2,975	330	.....	.60
North Walsingham	2,047	6	2	450	363	.....	.60
South Walsingham	1,710	20	6	1,662	692	.....	.60
Townsend	4,155	31	.....	2,435	.....	.....	.60
Windham	3,677	2	4	169	619	.....	.60
Woodhouse	2,576	161	10	16,443	1,367	.....	.60
BRANT:							
Brantford	8,162	9	.....	289	.....	6,174	.80
Burford	3,868	3	.....	168	.....	.....	.80
Onondaga	1,052	53	14	3,058	2,162	.....	.60–.70
South Dumfries	2,639	10	.....	306	.....	.....	.80
Tuscarora	2,654	6	.....	341	.....	.....	.30–.70
OXFORD:							
East Oxford	1,886	8	.....	443	.....	.....	.80
West Oxford	2,049	55	.....	3,624	.....	.....	.80

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1931—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industria[1]	
HALDIMAND:							
Canborough	875	70	40	4,401	6,900	313	$0.60
Dunn	815	117	11	6,030	2,732	.....	.60
Moulton	1,607	138	22	6,486	3,630	.....	.60
North Cayuga	1,419	11	11	278	1,877	15,080	.60
Oneida	1,319	70	9	7,087	1,565	.....	.60
Rainham	1,700	170	29	8,472	4,789	774	.40–.60
Seneca	1,673	149	40	9,087	5,930	118	.60
Sherbrooke	357	73	9	3,966	1,149	.....	.60
South Cayuga	586	59	16	3,189	2,608	.....	.60
Walpole	3,235	317	58	18,063	8,666	1,130	.40–.60
LINCOLN:							
Caistor	1,238	116	1	7,087	122	252	.50–.60
Gainsborough	2,114	28	1	919	75	.....	.25–.75
Grantham	5,364	8	.....	484	.....	.....	.75
Louth	3,165	9	.....	549	.....	.....	.75
WELLAND:							
Bertie	4,246	193	64	10,831	11,264	.....	.50–1.30
Crowland	4,999	89	25	3,241	3,230	.....	.75–1.30
Humberstone	2,407	259	34	14,261	5,204	.....	.50–1.30
Pelham	2,685	66	1	3,579	65	.....	.75
Stamford	7,744	92	4	5,244	792	.....	1.00–1.30
Wainfleet	2,717	113	22	4,498	4,070	.....	.50–1.00
Willoughby	948	39	26	2,223	4,483	.....	1.00–1.30
WENTWORTH:							
Ancaster	4,596	66	.....	4,551	.....	.....	.60–.75
Barton	3,295	236	.....	12,709	.....	.....	.60
Binbrook	1,175	67	22	6,317	3,843	957	.60
Glanford	1,356	128	4	12,970	782	524	.60
Saltfleet	7,217	172	.....	6,326	.....	.....	.75
WATERLOO:							
Waterloo	11,974	19	.....	288	.....	.....	.80
Total	.....	7,787	693	572,213	127,284	91,464	.....

SUMMARY

	M cu. ft.
Total distribution to customers	6,847,816
Used by companies for all purposes	64,944
Used by private well-owners	74,000
Leakage in transmission lines	323,509
Leakage in distribution plants	197,876
Leakage in rural lines	13,530
Total amount of gas distributed	7,521,675

Gas Wells and Their Production

In Table V is given a summary by townships of the number of gas wells in Ontario, their production, and the number abandoned; the number of new wells drilled, with their open flow; and the rock pressure of each township. Only the acres under lease held by operating companies are herein reported. The total footage drilled in 1931 was 249,245.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1931

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Colchester South								1,604	
	Gosfield South	21			1	50		150	5,533	$193
	Mersea	3						280		
Kent	Harwich			1			4,376,184			
	Raleigh	33	1	4	4	2,140		549	195,957	
	Romney	145	3		1	357		228		
	Tilbury East	142			3	1,237		228		
	Chatham								1,580	197,735
	Dover	9					338,422	328	15,521	
Lambton	Dawn	19		5	1	25,023	124,392	623	79,837	
	Euphemia	3		1				345		
	Enniskillen	4				1,000	5,806	570	1,000	65
	Moore								4,400	
	Sarnia	13	1					100	5,000	
Middlesex	Caradoc			1					428	
	East Williams								1,573	
	Ekfrid			2					176	
	Mosa	3		2	2	2,092		803	275	
	North Dorchester	3					300	25	100	
Elgin	Bayham	38	1					168		
	Aldborough						43,536			
	Malahide	1						225		
Norfolk	Charlotteville	15						212		
	Houghton	7		2	4	1,057		412		
	Middleton	35		2	10	3,407		400		
	North Walsingham	9						310		
	South Walsingham	13					312,535	356		
	Townsend	1		3				290		
	Windham	8						237		
	Woodhouse	56	1	2	5	541		259		

and the Ajax Oil and Gas Company, on the Six Nations Indian Reserve, during the past five years.

Forty-five drilling rigs were in operation in 1932, and a total of 176,497 feet was drilled in 8,019 working days. Drillers had an investment of $219,600 in drilling rigs, and they employed 138 men, to whom they paid $85,391 in wages.

The following table shows the capital invested, number of men employed, and wages paid in the natural gas industry for the years 1927 to 1932:—

Year	Capital invested in all natural gas operations[1]	No. of men employed	Wages paid
1927	$31,987,879	1,123	$1,148,339
1928	36,601,828	1,209	1,497,999
1929	35,162,736	1,323	1,529,367
1930	36,162,268	1,328	1,545,648
1931	42,921,142	1,241	1,383,286
1932	45,982,719	893	1,059,643

[1]Including drilling, producing, and distributing.

The people of Ontario have, at a low valuation, $7,000,000 invested in service lines, house-piping, ranges, furnace equipment, burners, etc., space heaters, hot plates, and hot water heaters.

Analysis of Gas Consumption

Tables III and IV give the statistics of gas consumed in houses and industries in urban and rural municipalities during the year 1932. By comparing these tables with those published annually since the year 1921, the quantity used at various rates can be observed.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1932

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Alvinston	690	172	1	11,278	17	525	20	$0.55–.80
Aylmer	1,989	670	....	25,593	.....	.....	16	.90
Bartonville	602	95	....	4,359	.....	.....	19	.60–.75
Belle River	782	163	....	12,252	.....	524	29	.55–.80
Belmont	317	73	....	2,660	.....	.....	9	1.00–1.10
Binbrook	100	18	1	1,034	200	.....	1	.40
Blenheim	1,690	576	3	54,811	402	887	20	.50–.75
Bothwell	646	112	1	9,358	20	.....	14	.55–.80
Brantford	30,724	4,436	11	165,738	1,040	9,836	140	.80
Brigden	433	149	....	11,711	.....	1,920	30	.50–.75
Burlington	3,517	256	....	22,672	.....	.....	48	.75
Cainsville	324	107	....	4,125	.....	.....	4	.80
Caledonia	1,400	521	....	43,893	.....	10,901	7	.60
Canfield	166	60	....	4,791	.....	.....	1	.50–.60
Cayuga	705	216	1	19,971	53	551	6	.60
Chatham	16,223	4,069	3	409,731	4,434	4,007	22	.50–.75
Chippawa	1,073	11	1	415	75	.....	5	.40
Coatsworth	101	25	1	1,824	12	260	4	.40–.65
Comber	506	138	....	14,758	.....	740	19	.50–.75
Cottam	425	87	3	7,665	239	640	35	.55
Courtland	348	51	....	3,476	.....	154	3	.60
Courtright	345	116	1	8,317	88	998	53	.50–.75
Crystal Beach	550	199	....	10,603	.....	.....	1	1.00–1.30
Delhi	1,298	387	....	28,788	.....	282	4	.60
Dorchester	403	112	....	7,201	.....	.....	95	.60–.85
Dresden and Tupperville	1,650	498	2	48,395	148	860	38	.50–.75
Dundas	5,138	1,137	2	58,872	11	2,952	172	.70
Dunnville	3,615	1,039	3	95,385	549	8,705	7	.60
Dutton	761	248	3	21,751	135	1,046	52	.55–.80
Echo Place	732	78	....	2,886	.....	.....	5	.80
Eden	76	29	....	1,449	.....	.....	11	.60
Essex	1,888	466	2	48,267	106	2,856	33	.55–.80
Fairground	75	13	....	611	.....	.....	1	.60
Fenwick	328	97	....	6,424	.....	.....	18	.75
Fingal	169	38	....	2,698	.....	.....	71	.55–.80
Fisherville	162	49	....	4,479	.....	57	2	.50
Florence	184	50	....	3,849	.....	.....	5	.55–.80
Fonthill	862	209	....	5,107	.....	.....	25	.95–1.20
Fort Erie	5,431	1,447	3	65,410	1,513	.....	8	1.00–1.30
Galt	14,036	1,905	1	67,661	242	4,210	147	.80
Grimsby	2,200	186	....	6,078	.....	.....	10	.85
Grimsby Beach		32	....	1,137	.....	.....	11	.85
Hagersville	1,370	397	....	32,627	.....	.....	14	.60
Hamilton	154,701	9,600	3	286,501	552	565,360	47	.75
Hepworth	327	5	2	100	400	.....	1	.75
Hespeler	2,784	86	....	1,519	.....	.....	155	.80
Highgate	338	113	1	9,916	342	.....	32	.50–.75
Ingersoll	5,296	1,021	3	38,793	254	2,076	100	.80
Inwood	250	70	....	4,338	.....	.....	14	.55–.80
Jarvis	504	207	....	17,957	.....	.....	9	.60
Kingsville	2,268	675	1	76,975	216	43	30	.55
Lake Shore	.....	349	....	5,584	.....	.....	16	1.00–1.30
Lambeth	172	101	....	7,091	.....	.....	85	.60–.85
Leamington	5,025	1,402	....	175,206	.....	2,650	20	.55
Lynedoch	175	45	....	3,106	.....	1,223	2	.60
Merlin	189	139	3	13,666	1,992	701	2	.50–.75
Merritton	2,544	414	....	15,003	.....	251	35	.75
Nelles Corners	86	7	....	1,215	.....	.....	1	.50
Niagara Falls	18,508	2,992	....	100,110	.....	15,876	11	1.00–1.30
Oil Springs	433	125	....	7,111	.....	.....	2	.60–.75
Paris	4,330	821	1	34,112	153	1,376	129	.80

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1932—*Continued*

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Petrolia	2,569	739	1	75,175	365	1,054	60	$0.55–.80
Port Burwell	423	211	....	13,210	.....	.....	3	.60
Port Colborne and Humberstone	8,271	1,729	4	80,294	258	555	5	.70–1.00
Port Dover	1,680	573	....	48,082	.....	318	1	.60
Port Rowan	674	226	....	13,954	.....	.....	1	.60
Preston	6,138	518	1	15,378	88	757	151	.80
Ridgetown	1,942	612	2	58,501	2,024	811	28	.50–.75
Ridgeway	1,096	235	....	12,765	.....	.....	1	1.00–1.30
Rodney	757	241	1	19,633	64	681	40	.55–.80
Ruthven	146	49	....	5,694	.....	.....	25	.55
St. Anns	120	22	....	500	.....	.....	7	.85
St. Catharines	26,192	4,873	1	220,142	420	13,475	35	.75
St. George	507	116	....	3,969	.....	.....	148	.80
St. Williams	270	107	....	5,849	.....	321	1	.60
Sarnia and Pt. Edward	19,012	4,544	1	316,680	1,593	7,990	55	.55–.80
Selkirk	196	128	1	11,165	70	.....	1	.60
Shedden	233	95	....	6,583	.....	504	63	.55–.80
Simcoe	5,397	1,719	4	175,032	718	8,327	20	.60
Smithville	570	181	....	8,196	.....	.....	6	.75
Sombra and Port Lambton	419	145	....	12,104	.....	300	45	.50–.75
Stevensville	418	34	....	1,841	.....	.....	1	1.00–1.30
Straffordville	253	84	....	6,281	.....	639	6	.60
Thamesville	754	204	3	14,536	66	821	13	.55–.80
Thorold	5,068	1,019	....	37,397	.....	309	35	.75
Tilbury	1,996	503	2	45,121	455	1,483	14	.50–.75
Tillsonburg	3,351	1,034	1	78,191	359	1,772	16	.63
Vienna	208	76	1	3,530	97	.....	1	.60–.80
Vittoria	205	82	....	4,341	.....	.....	3	.60
Wallaceburg	4,343	1,155	1	104,629	234	371,367	19	.50–.75
Wallacetown	143	48	1	3,542	20	521	60	.55–.80
Waterdown	924	21	....	298	.....	.....	45	.75
Waterford	1,168	119	....	5,689	.....	187	30	.60–1.48
Welland	10,668	2,664	4	81,764	689	1,190	3	.45–1.30
West Lorne	814	177	3	13,967	233	605	49	.55–.80
Wheatley	724	226	....	18,477	.....	680	12	.50–.65
Windsor (Border Cities)	98,659	13,296	....	1,075,302	.....	177,118	45	.55–.80
Woodstock	10,956	2,126	3	84,964	219	2,789	110	.80
Wyoming	482	115	....	7,932	.....	.....	65	.55–.80
Total	.....	78,955	92	4,849,121	21,165	1,237,041	.....	.....

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1932

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M. cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield, North	2,066	106	2	8,313	244	266	$0.55
Gosfield, South	2,351	362	1	30,437	435	14,502	.50–.55
Maidstone	2,921	72	8	5,537	1,862	623	.55–.80
Mersea	4,446	396	2	35,880	384	20,689	.50–.55
Rochester	2,282	172	6	12,681	1,358	557	.55–.80
Sandwich, East	5,542	10	.....	851	.....	.....	.55–.80
Sandwich, South	2,273	110	.....	9,758	.....	913	.55–.80
Tilbury, North	1,919	22	.....	1,097	.....	93	.50–.75
Tilbury, West	1,489	18	1	995	161	.....	.50–.75
LAMBTON:							
Brooke	2,226	13	.....	436	.....	.....	.55–.80
Dawn	2,191	67	7	4,806	1,044	1,805	.40–.65
Enniskillen	2,547	111	.....	6,909	.....	549	.55–.80
Moore	3,121	292	.....	18,810	.....	756	.50–.75
Plympton	2,671	6	.....	491	.....	.....	.55–.80
Sarnia	3,102	.....	10	.....	2,069	.....	.40
Sombra	2,384	51	.....	3,393	.....	750	.50–.75
KENT:							
Camden	2,027	12	.....	785	.....	.....	.50–.75
Chatham	5,732	82	.....	5,757	.....	832	.50–.75
Dover	4,109	406	1	39,620	142	2,675	.30–.70
Harwich	4,802	421	9	36,402	2,814	.....	.50–.75
Howard	2,649	158	3	14,900	820	.....	.50–.75
Orford	1,796	19	2	1,748	166	.....	.50–.75
Raleigh	3,950	558	25	52,685	5,620	768	.40–.75
Romney	1,391	70	37	5,805	10,566	.....	.40–.65
Tilbury, East	3,262	231	72	19,545	22,233	2,340	.40–.65
Zone	881	12	.....	911	.....	.....	.55–.80
ELGIN:							
Aldborough	2,598	22	1	961	456	.....	.55–.80
Bayham	3,262	76	17	3,569	2,880	471	.60–.80
Dunwich	2,415	51	2	3,816	113	.....	.55–.80
Malahide	2,610	50	2	1,497	282	.....	.60–.80
Southwold	3,594	102	.....	7,202	.....	.....	.55–.80
Middlesex:							
North Dorchester	2,998	16	1	1,040	98	.....	.60–.85
Westminster	6,406	171	.....	19,636	.....	.....	.60–.85
NORFOLK:							
Charlotteville	3,016	15	5	779	1,142	.....	.60
Middleton	2,418	47	2	3,035	364	.....	.60
North Walsingham	1,824	6	2	514	439	.....	.60
South Walsingham	1,502	21	6	1,710	728	.....	.60
Townsend	3,883	30	.....	2,370	.....	.....	.60
Windham	3,331	2	4	183	600	.....	.60
Woodhouse	2,182	163	8	15,676	1,484	.....	.60
BRANT:							
Brantford	7,497	40	.....	1,594	.....	5,973	.80
Burford	3,683	3	.....	164	.....	.....	.80
Onondaga	982	49	11	2,955	1,543	.....	.60–.70
South Dumfries	2,504	13	.....	374	.....	.....	.80
Tuscarora	2,654	6	.....	590	.....	.....	.30–.70
OXFORD:							
East Oxford	1,873	8	.....	439	.....	.....	.80
West Oxford	1,144	56	.....	2,987	.....	.....	.80

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1932—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	893	88	46	6,295	8,102	323	$0.60
Dunn	791	119	10	5,808	2,358	.....	.60
Moulton	1,526	158	20	8,346	3,200	.....	.60
North Cayuga	1,310	40	10	3,025	2,084	5	.60
Oneida	1,317	70	15	6,529	2,379	49	.50–.60
Rainham	1,681	164	27	8,181	5,023	1,499	.50–.60
Seneca	1,609	140	35	9,894	5,711	299	.60
Sherbrooke	332	55	10	3,101	1,336	.....	.60
South Cayuga	586	57	16	2,641	2,886	.....	.60
Walpole	3,047	319	61	19,098	10,144	749	.40–.60
LINCOLN:							
Caistor	1,167	117	21	5,089	2,109	147	.50–.60
Gainsborough	2,046	21	.....	490	.....	.....	.75–.85
Grantham	5,007	9	.....	603	.....	.....	.75
Louth	2,829	10	.....	661	.....	.....	.75
WELLAND:							
Bertie	4,050	185	61	10,085	11,762	70	.45–1.30
Crowland	4,921	95	22	3,350	2,806	.....	.75–1.30
Humberstone	2,341	267	33	13,299	5,828	.....	.50–1.30
Pelham	2,603	61	1	4,087	78	.....	.75
Stamford	7,673	89	4	4,856	756	.....	1.00–1.30
Wainfleet	2,625	84	20	4,035	3,807	.....	.50–1.00
Willoughby	882	33	26	1,782	4,940	.....	1.00–1.30
WENTWORTH:							
Ancaster	3,400	94	.....	6,519	.....	.....	.70–.75
Barton	1,641	245	.....	15,596	.....	.....	.70–.75
Binbrook	3,226	70	21	6,306	3,837	790	.60
Glanford	1,273	125	4	11,837	593	542	.60
Saltfleet	4,954	215	.....	8,256	.....	.....	.75
WATERLOO:							
Waterloo	7,556	22	.....	621	.....	.....	.80
Total	.....	7,676	710	560,033	139,786	59,035	.....

SUMMARY

	M cu. ft.
Total distribution to customers	6,866,181
Used by companies for all purposes	40,592
Used by private well-owners	74,000
Leakage in transmission lines	240,509
Leakage in distribution plants	267,439
Leakage in rural lines	9,160
Total amount of gas distributed	7,497,881

Gas Wells and Their Production

In Table V will be found a summary, by townships, of the gas wells of the province, also full details of wells abandoned, new wells drilled, and those in operation; the production of gas, rock pressure, the acreage under lease, and the rentals paid.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1932

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled[1]			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Colchester South								1,604	
	Gosfield South	21		2				150	719	$684
	Mersea	3						266		
Kent	Harwich						4,506,072			
	Orford									
	Raleigh	35		1	2	420		550	104,883	
	Romney	145	1		1	93		218		146,459
	Tilbury East	144			2	420		218		
	Chatham								1,580	
	Dover	8	1				275,958	342	7,279	
Lambton	Dawn	19					161,760	610	59,938	
	Euphemia	3						340		
	Enniskillen	4					7,111	700	1,000	
	Moore								4,400	
	Sarnia	13					1,800	70	5,000	
	Sombra			1					1,450	
Middlesex	Ekfrid and others								25,689	88
	Metcalfe								1,186	
	Mosa	3						713	275	
	North Dorchester	3						50		
Elgin	Bayham	35	3				45,708	167		
	Dunwich									
	Malahide	1						190		
Norfolk	Charlotteville	13	2				365,638	243		
	Houghton	7						522		
	Middleton	37		1	2	145		258		
	North Walsingham	9		1				312		
	South Walsingham	13						378		
	Townsend	1						270		
	Windham	8						228		
	Woodhouse	56						248		

The remainder of the drilling was within the limits of the Haldimand, Norfolk, and Welland fields, with the greatest activity in Walpole township following the success of 1932.

Over 90 per cent. of the wells drilled are owned by small independent producing companies, who drill under contract to sell their output to a distributing company.

The open flow of new wells was 15,826 M cubic feet, as compared with 8,870 M cubic feet in 1932. Fifty-one drilling rigs were in operation in 1933, and a total of 234,869 feet was drilled, an increase over 1932 of 58,372 feet. The number of wells abandoned increased by 13, and the number of dry wells drilled showed the greatest percentage of increase, being 67 in 1933 as compared to 32 in 1932. The acres under lease decreased over 200,000, but the rentals paid increased $11,500. Drillers had an investment of $251,303.61 in drilling rigs and equipment, and they employed 129 men. Wages paid amounted to $100,486.02. These figures are included in Table II, which shows the capital invested, number of men employed, and wages paid in all branches of the natural gas industry.

As well as the investment shown in Table II, the people of Ontario have, at a low valuation, $7,000,000 invested in service lines, house-piping, ranges, furnace equipment, burners, space heaters, hot plates, and hot water heaters.

Analysis of Gas Consumption

Tables III and IV give the statistics of gas consumed in homes and industries in all gas-using municipalities during 1933. By comparing these tables with those published annually since 1921, the quantity used at various rates can be ascertained for each locality. It will be noted that there is a marked difference in the quantity used at equal prices between urban and rural municipalities, and that municipalities where gas has been used for many years use more gas at the same rates than do municipalities where gas has been in use for a shorter period.

It should be remembered that the years 1931 to 1933 are scarcely normal years, and it is probable that more than ordinary economy in the use of gas was practised by the average consumer. A return to prosperity should increase the average consumption per consumer.

It should be noted that the rates have been slightly reduced in the Border Cities, and changes have been made elsewhere. Lack of space does not permit the publication of the intermediate rates.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1933

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Alvinston	648	181	....	10,898	.....	.....	20	$0.55–.80
Aylmer	1,987	650	....	23,522	.....	.....	16	.90
Bartonville	602	119	....	4,150	.....	.....	19	.60
Belle River	719	146	....	10,252	.....	539	29	.55–.80
Belmont	317	77	....	3,419	.....	.....	9	1.00
Binbrook	100	18	1	1,056	189	.....	1	.40
Blenheim	1,702	573	1	51,275	160	880	20	.50–.75
Bothwell	685	130	1	8,132	21	468	14	.55–.80
Brantford	30,611	4,263	5	169,153	973	7,832	140	.80
Brigden	433	165	....	9,934	.....	1,848	30	.55–.80
Burlington	3,562	230	....	21,686	.....	.....	48	.60–1.90
Cainsville	324	101	....	4,067	.....	.....	4	.80
Caledonia	1,475	499	....	37,882	.....	11,497	7	.60
Canfield	166	60	....	4,496	.....	.....	1	.60
Cayuga	693	208	1	18,147	49	361	6	.60
Chatham	16,140	4,024	3	369,416	4,265	4,793	22	.50–.75
Chippawa	1,051	11	1	310	90	.....	5	.40
Coatsworth	101	23	1	1,418	26	264	4	.40–.65
Comber	506	142	....	13,922	.....	2,421	19	.50–.75
Cottam	425	84	2	6,790	167	593	35	.55
Courtland	348	49	....	2,943	.....	121	3	.60
Courtright	338	120	4	7,043	158	881	53	.50–.75
Crystal Beach	529	197	....	10,732	.....	.....	1	1.00–1.50
Delhi	1,269	366	....	27,747	.....	244	4	.60
Dorchester	403	113	....	6,790	.....	.....	95	.60–.85
Dresden and Tupperville	1,469	508	2	42,975	149	766	38	.50–.75
Dundas	5,032	1,122	1	55,350	4	2,194	172	.70
Dunnville	3,632	1,059	2	91,126	401	10,526	7	.50–.60
Dutton	798	241	3	20,090	151	880	52	.55–.80
Echo Place	732	76	....	2,705	.....	.....	5	.80
Eden	76	29	....	1,344	.....	.....	11	.60
Essex	1,786	459	2	40,390	110	1,381	33	.55–.80
Fairground	75	13	....	659	.....	.....	1	.60
Fenwick	328	98	....	5,622	.....	.....	18	.75
Fingal	169	34	....	2,351	.....	.....	71	.55–.80
Fisherville	162	51	....	3,553	.....	57	2	.50
Florence	184	63	....	3,231	.....	.....	5	.55–.80
Fonthill	872	210	....	5,750	.....	.....	25	.75–.85
Fort Erie	5,366	1,376	3	60,031	1,364	.....	8	1.00–1.50
Galt	14,057	1,890	1	68,505	263	3,784	147	.80
Grimsby	1,952	219	....	7,026	.....	.....	10	.85
Grimsby Beach		45	....	1,407	.....	.....	11	.85
Hagersville	1,355	407	....	29,165	.....	.....	14	.60
Hamilton	153,504	8,246	3	318,856	546	577,335	47	.75
Hepworth	380	5	2	100	400	.....	1	.75
Hespeler	2,798	91	....	4,137	.....	.....	155	.80
Highgate	343	104	2	8,917	409	.....	32	.50–.75
Ingersoll	5,104	1,032	2	38,543	246	810	100	.80
Inwood	250	84	....	3,927	.....	.....	14	.55–.80
Jarvis	531	203	....	16,904	.....	.....	9	.60
Kingsville	2,354	666	1	70,749	164	87	30	.50–.55
Lake Shore	.....	323	....	4,854	.....	.....	16	1.00–1.50
Lambeth	172	108	....	7,049	.....	.....	85	.60–.85
Leamington	5,004	1,396	....	154,715	.....	2,359	20	.55
Lynedoch	175	41	....	2,979	.....	.....	2	.60
Merlin	189	140	3	12,699	2,070	612	2	.50–.75
Merritton	2,487	417	....	14,189	.....	270	35	.75
Nelles Corners	86	7	....	878	.....	.....	1	.60
Niagara Falls	18,193	3,048	....	93,815	.....	14,347	11	1.00–1.50
Oil Springs	462	125	....	6,459	.....	.....	2	.60–.75

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1933—*Continued*

Town or city	Population	No. of consumers		Quantity consumed, M cu. ft.			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
							miles	
Paris	4,297	840	1	36,685	150	4,231	129	.80
Petrolia	2,715	770	1	67,736	380	1,112	60	.55–.80
Port Burwell	423	207	....	11,324	.....	.....	3	.60
Port Colborne and Humberstone	7,859	1,735	4	72,188	273	325	5	.60–1.00
Port Dover	1,692	561	....	43,797	.....	324	1	.60
Port Rowan	692	232	....	12,287	.....	.....	1	.60
Preston	6,189	497	1	21,107	61	1,475	151	.80
Ridgetown	1,914	640	4	53,966	1,861	621	28	.50–.75
Ridgeway	1,096	230	....	12,648	.....	.....	1	1.00–1.50
Rodney	748	231	1	17,598	68	483	40	.55–.80
St. Anns	120	21	....	796	.....	.....	7	.85
St. Catharines	26,161	4,929	1	211,333	457	11,691	35	.75
St. George	507	113	....	3,886	.....	.....	148	.80
St. Williams	270	107	....	5,056	.....	382	1	.60
Sarnia and Pt. Edward	18,956	4,919	1	299,251	1,560	7,065	55	.55–.80
Selkirk	196	140	1	10,424	78	315	1	.60
Shedden	233	92	....	6,378	.....	351	63	.55–.80
Simcoe	5,174	1,751	2	165,437	906	9,329	20	.60
Smithville	570	182	....	7,480	.....	.....	6	.75
Sombra and Port Lambton	419	157	....	10,589	.....	124	45	.50–.75
Stevensville	418	32	....	1,807	.....	.....	1	1.00–1.50
Straffordville	253	83	....	5,803	.....	543	6	.60
Thamesville	763	227	4	13,122	71	896	13	.55–.80
Thorold	4,945	1,031	....	36,166	.....	400	35	.75
Tilbury	1,897	522	2	42,442	503	1,775	14	.50–.75
Tillsonburg	3,380	1,046	1	74,695	429	1,615	16	.63
Vienna	222	79	1	3,730	97	.....	1	.60–.80
Vittoria	205	86	....	3,879	.....	.....	3	.60
Wallaceburg	4,457	1,163	1	97,625	247	478,346	19	.50–.75
Wallacetown	143	46	1	3,499	42	552	60	.55–.80
Waterdown	919	24	....	1,198	.....	.....	45	.60–.90
Waterford	1,213	122	....	7,613	.....	139	30	.60–1.48
Welland	10,655	2,682	4	76,441	820	.....	3	1.00–1.50
West Lorne	776	166	3	12,036	210	282	49	.55–.80
Wheatley	754	223	....	18,249	.....	531	12	.50–.75
Windsor (Border Cities)	93,739	12,397	....	992,995	.....	136,021	45	.55–.80
Woodstock	11,007	2,105	3	83,828	215	1,982	110	.80
Wyoming	505	138	....	7,650	.....	603	65	.55–.80
Total	.....	77,011	84	4,578,974	20,803	1,309,663	.....	.....

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1933

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield North	2,164	98	2	7,482	233	181	$0.50–.55
Gosfield South	2,311	460	.....	33,792	.....	26,470	.50–.55
Maidstone	2,976	66	7	4,456	1,761	428	.55–.80
Mersea	4,929	363	5	34,068	587	11,064	.50–.55
Rochester	2,260	171	6	11,059	1,184	551	.55–.80
Sandwich East	5,376	9	.....	691	.....	.....	.55–.80
Sandwich South	2,066	110	.....	8,565	.....	796	.55–.80
Tilbury North	1,920	22	.....	1,074	.....	127	.50–.75
Tilbury West	1,554	16	1	1,195	172	.....	.50–.75
LAMBTON:							
Brooke	2,217	15	.....	563	.....	.....	.55–.80
Dawn	2,160	70	5	4,577	1,381	1,055	.40–.65
Enniskillen	2,725	105	.....	6,243	.....	317	.55–.80
Moore	2,873	290	.....	17,484	.....	863	.50–.75
Plympton	2,681	6	.....	483	.....	.....	.55–.80
Sarnia	3,156	.....	10	.....	2,117	.....	.40
Sombra	2,746	53	.....	2,260	.....	1,067	.50–.75
KENT:							
Camden	2,152	12	.....	632	.....	.....	.50–.75
Chatham	5,832	73	.....	6,115	.....	.....	.50–.75
Dover	3,906	400	1	35,311	159	14,130	.45–.70
Harwich	5,010	401	11	32,311	3,777	.....	.50–.75
Howard	2,813	142	3	11,661	789	.....	.50–.75
Orford	1,718	17	2	1,664	188	.....	.50–.75
Raleigh	4,230	574	23	46,574	6,719	716	.40–.75
Romney	1,456	68	40	5,033	11,143	.....	.40–.65
Tilbury East	3,406	224	75	18,021	22,374	3,797	.40–.65
Zone	859	14	.....	627	.....	.....	.55–.80
ELGIN:							
Aldborough	2,708	19	1	930	367	.....	.55–.80
Bayham	3,265	77	20	3,139	4,082	444	.60–.80
Dunwich	2,357	53	2	3,140	100	.....	.55–.80
Malahide	2,714	50	2	1,302	488	.....	.60–.80
Southwold	2,397	101	.....	6,549	.....	.....	.55–.80
MIDDLESEX:							
North Dorchester	2,932	16	1	906	94	.....	.60–.85
Westminster	6,730	167	.....	19,468	.....	.....	.60–.85
NORFOLK:							
Charlotteville	2,978	15	5	927	985	.....	.60
Middleton	2,493	48	2	3,011	198	.....	.60
North Walsingham	2,118	7	2	602	420	.....	.60
South Walsingham	1,711	20	5	1,664	700	.....	.60
Townsend	2,968	29	.....	2,550	.....	.....	.60
Windham	3,618	2	3	191	601	.....	.60
Woodhouse	2,308	175	9	15,587	1,403	.....	.60
BRANT:							
Brantford	7,336	46	.....	1,927	.....	.....	.80
Burford	3,697	3	.....	145	.....	.....	.80
Onondaga	964	52	12	2,535	1,491	.....	.60–.70
South Dumfries	2,523	13	.....	333	.....	.....	.80
Tuscarora	2,654	6	.....	710	.....	.....	.30–.70
OXFORD:							
East Oxford	1,957	8	.....	386	.....	.....	.80
West Oxford	1,796	56	.....	2,502	.....	.....	.80

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1933—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	840	98	46	5,944	8,300	196	.60
Dunn	805	152	10	6,318	2,048	.....	.60
Moulton	1,590	155	19	7,087	2,551	.....	.60
North Cayuga	1,282	51	10	3,277	2,142	.....	.60
Oneida	1,301	68	12	5,867	1,807	.....	.50–.60
Rainham	1,608	152	26	9,077	4,586	400	.50–.60
Seneca	1,589	148	29	9,128	5,222	.....	.60
Sherbrooke	346	55	9	2,343	1,122	.....	.60
South Cayuga	580	55	15	2,232	2,539	.....	.60
Walpole	3,145	315	57	19,352	8,571	270	.60
LINCOLN:							
Caistor	1,260	115	1	3,448	132	148	.50–.60
Gainsborough	2,091	29	.....	466	.....	.....	.75–.85
Grantham	5,010	9	.....	513	.....	.....	.75
Louth	2,903	11	.....	627	.....	.....	.75
WELLAND:							
Bertie	4,174	180	64	9,955	11,089	.....	.50–1.50
Crowland	5,082	88	18	2,210	2,109	.....	.75–1.50
Humberstone	2,368	244	33	7,242	5,158	.....	.70–1.50
Pelham	2,690	62	1	3,575	103	.....	.75
Stamford	8,020	87	4	4,839	739	.....	1.00–1.50
Wainfleet	2,718	183	22	3,952	3,675	.....	.60–1.00
Willoughby	905	31	26	786	4,396	.....	1.00–1.50
WENTWORTH:							
Ancaster	3,606	96	.....	7,538	.....	.....	.70
Barton	1,840	258	.....	17,805	.....	.....	.60–.75
Binbrook	1,080	81	21	5,801	3,496	330	.60
East Flamborough	3,705	50	.....	2,650	.....	.....	.60
Glanford	1,265	125	4	10,244	1,024	468	.60–.75
Saltfleet	4,837	260	.....	10,096	.....	.....	.75
WATERLOO:							
Waterloo	7,591	22	.....	549	.....	.....	.80
Total	.....	7,922	682	523,366	134,322	63,818	.....

SUMMARY

	M cu. ft.
Total distribution to customers	6,630,946
Used by companies for all purposes	45,552
Used by private well-owners	74,000
Leakage in transmission lines	274,367
Leakage in distribution plants	228,045
Leakage in rural lines	10,824
Total amount of gas distributed	7,263,734

Gas Wells and Their Production

Table V gives the details by townships and fields of the natural gas wells drilled in 1933. There was an increase over 1932 of 114 in the number of producing wells in the province. The number of producing wells drilled was 22 more than in 1932, and the open flow of the 173 wells drilled was 6,956 M cubic feet more than that of the 151 wells drilled in 1932.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1933

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	22			1	50		150	719	$381
	Maidstone			1						
	Mersea	3						265		
Kent	Harwich						4,201,704			
	Orford			2						
	Raleigh	36		4	1	12		521	55,547	145,414
	Romney	144	1					195		
	Tilbury East	150	1	1	7	540		214		
	Chatham Gore			1						
	Dover	9			1	535	252,694	350	5,351	
Lambton	Dawn	22		1	3	2,740	256,802	651	41,666	
	Euphemia	3						265		
	Enniskillen	4					6,459	231	1,000	
	Moore								4,000	
	Sarnia	13					1,800	70	6,573	
Middlesex	Caradoc and others									
	Ekfrid			1					11,271	88
	Metcalfe									
	Mosa	3						743		
	North Dorchester	3						50	10,000	90
Elgin	Aldborough									
	Bayham	35					45,968	156		
	Dunwich									
	Malahide	1						180		
Norfolk	Charlotteville	13						225		
	Houghton	7						342		
	Middleton	39	2	4	4	397		279		
	North Walsingham	10			1	45		312		
	South Walsingham	14			1	280	346,621	382		
	Townsend	1						330		
	Windham	8						233		
	Woodhouse	55	1	1				242		

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1931–1934

County	Field	1931	1932	1933	1934
		M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Essex	Kingsville	4,376,184	4,506,072	4,201,704	4,093,186
Kent	Tilbury				
	Dover	338,422	275,958	252,694	363,344
Lambton	Dawn	130,198	170,671	265,061	517,009
	Oil Springs				
Middlesex	Crumlin	300	.....	.....	.....
Elgin	Bayham	43,536	45,708	45,968	51,483
Norfolk	Norfolk	312,535	365,638	346,621	354,274
Lincoln	Lincoln				
Haldimand	Haldimand	1,590,452	1,453,864	1,524,251	1,801,160
Wentworth	Wentworth				
Brant	Onondaga	170,521	140,612	121,578	109,486
Bruce	Amabel	516	500	500	500
Welland	Welland	377,566	351,616	333,619	318,409
Wells in surface drift	Howard and Sarnia	19,304	15,515	14,663	14,000
Private wells		60,000	60,000	60,000	60,000
Total produced		7,419,534	7,386,154	7,166,659	7,682,851
Value		$4,635,497	$4,719,297	$4,523,084	$4,741,368
		M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Imported mixed gas		102,141	111,727	97,075	102,667
Total distributed		7,521,675	7,497,881	7,263,734	7,785,518

TABLE II—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921–1934

Year	Retail rate, cents per M cu. ft.	No. of pay consumers	Total quantity used	Quantity used per consumer	Capital invested in all natural gas operations[1]	No. of men employed	Wages paid
			M cu. ft.	M cu. ft.			
1921	47	58,609	5,937,316	101.3	$17,328,757	632	$592,606
1922	47	63,229	6,028,947	95.3	17,769,664	692	539,072
1923	50	62,352	6,210,459	99.6	25,570,972	603	633,365
1924	55	61,100	5,933,595	97.1	24,781,723	727	639,167
1925	56	62,338	5,300,424	85.6	26,111,387	692	625,826
1926	57	63,695	5,595,521	87.8	30,500,874	860	842,305
1927	60	66,818	5,210,315	78	31,987,879	1,123	1,148,339
1928	60	70,259	5,699,553	71.2	36,601,828	1,209	1,497,999
1929	58	80,991	6,336,873	78.2	35,162,736	1,323	1,529,367
1930	64	84,135	6,332,519	75.2	36,162,268	1,328	1,545,648
1931	62	86,050	5,607,744	65.1	42,921,142	1,241	1,383,286
1932	63	86,631	5,409,154	62.2	45,982,719	893	1,059,643
1933	63	84,933	5,102,340	60	51,766,592	958	958,336
1934	62	86,393	5,262,631	61	41,934,395	931	1,010,979

[1]This includes capital invested in drilling, producing, and distributing.

Analysis of Gas Consumption

Tables III and IV give in detail the statistics of gas consumed in homes and industries in all gas-consuming municipalities in Ontario during 1934.

Similar tables have been published annually since 1921, and these give an excellent comparison of the quantity of gas used at varying rates. It should be borne in mind that the price of other fuels in different localities will affect the consumption of gas, as also does the atmosphere, temperature, and wind velocity. In making a comparison of these tables, these factors should be given due consideration. The slight increase in the per capita consumption, may be due to either the late spring or to a more general use of gas.

Space does not permit of publishing the intermediate steps in the rates. The maximum and minimum rates only are given.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1934

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M. cu. ft.	miles	
Alvinston	648	190	1	11,434	6	.....	20	$0.60–.85
Aylmer	1,987	625	....	25,707	.....	.....	16	.70
Bartonville	602	128	....	4,882	.....	.....	19	.60
Belle River	719	154	....	10,443	.....	230	29	.55–.70
Belmont	317	110	....	3,400	.....	.....	9	.80–1.00
Binbrook	100	18	1	540	200	.....	1	.40
Blenheim	1,702	579	1	53,534	150	1,716	20	.50–.65
Bothwell	685	139	1	9,503	15	347	14	.60–.85
Brantford	30,611	4,480	5	195,724	1,237	10,746	140	.80
Brigden	433	149	....	9,338	.....	903	30	.55–.70
Burlington	3,562	272	....	24,359	.....	.....	48	.60–1.90
Cainsville	324	100	....	4,260	.....	.....	4	.80
Caledonia	1,475	492	1	37,819	438	13,677	7	.60
Canfield	166	60	....	4,378	.....	.....	1	.50–.60
Cayuga	693	213	1	18,693	49	241	6	.60
Chatham	16,140	4,009	3	349,599	4,081	10,832	22	.50–.75
Coatsworth	101	24	1	1,484	85	216	4	.40–.65
Comber	506	133	....	14,208	.....	3,663	19	.50–.65
Cottam	425	82	....	6,046	.....	578	35	.55
Courtland	348	50	....	2,793	.....	83	3	.60
Courtright	338	120	1	6,851	88	931	53	.55–.70
Crystal Beach	529	181	....	2,698	.....	.....	1	1.00–1.30
Delhi	1,269	386	....	28,290	.....	275	4	.60
Dorchester	403	115	....	6,934	.....	.....	95	.60–.85
Dresden and Tupperville	1,469	495	3	43,458	174	835	38	.50–.65
Dundas	5,032	1,124	1	56,133	8	4,151	172	.70
Dunnville	3,632	1,000	2	95,947	433	11,038	7	.45–.60
Dutton	798	240	3	19,966	213	870	52	.55–.80
Echo Place	732	75	....	3,371	.....	.....	5	.80
Eden	76	28	....	1,382	.....	.....	11	.60
Essex	1,786	466	2	39,277	85	570	33	.55–.70
Fairground	75	13	....	619	.....	.....	1	.60
Fenwick	328	96	....	5,856	.....	.....	18	.60–.75
Fingal	169	33	....	2,312	.....	.....	71	.55–.80
Fisherville	162	45	....	3,652	.....	78	2	.50
Florence	184	64	....	3,691	.....	.....	5	.50–.75
Fonthill	872	224	....	6,601	.....	.....	25	.75–.85
Fort Erie	5,366	1,364	5	56,186	2,332	.....	8	1.00–1.30
Galt	14,057	2,202	1	82,881	210	5,551	147	.55–.80
Grimsby	1,952	247	....	7,684	.....	.....	10	.85
Grimsby Beach		54	....	1,977	.....	.....	11	.85
Hagersville	1,355	410	....	31,158	.....	.....	14	.60
Hamilton	153,504	8,280	3	354,252	763	644,343	47	.75
Hepworth	380	5	2	100	400	.....	1	.75

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1934—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M. cu. ft.	miles	
Hespeler	2,798	192	....	10,502	.....	.....	155	.55–.80
Highgate	343	104	2	8,648	370	.....	32	.50–.75
Ingersoll	5,104	1,026	2	42,984	274	2,956	100	.80
Inwood	250	84	....	3,897	.....	.....	14	.60–.85
Jarvis	531	208	....	17,629	.....	.....	9	.60
Kingsville	2,354	641	1	64,476	230	119	30	.55
Lake Shore	.....	292	....	4,380	.....	.....	16	1.00–1.30
Lambeth	172	108	....	8,164	.....	.....	85	.60–.85
Leamington	5,004	1,437	....	149,693	.....	.....	20	.55
Lynedoch	175	39	....	3,008	.....	.....	2	.60
Merlin	189	142	2	13,115	1,98	2 563	2	.45–.60
Merritton	2,487	435	....	14,869	.....	446	35	.60–.75
Nelles Corners	86	7	....	922	.....	.....	1	.60
Niagara Falls	18,193	3,209	....	97,985	.....	17,742	11	1.00–1.50
Oil Springs	462	125	....	6,613	.....	.....	2	.60–.75
Paris	4,297	868	2	42,275	153	5,181	129	.55–.80
Petrolia	2,715	744	1	72,009	394	1,136	60	.55–.70
Port Burwell	423	212	1	11,152	51	.....	3	.60
Port Colborne and Humberstone	7,859	1,779	3	78,576	314	300	5	.70–1.00
Port Dover	1,692	575	....	44,589	.....	392	1	.60
Port Rowan	692	245	....	12,816	.....	.....	1	.60
Preston	6,189	598	....	29,533	.....	2,260	151	.55–.80
Ridgetown	1,914	635	5	55,851	1,839	856	28	.55–.65
Ridgeway	1,095	229	....	10,595	.....	.....	1	1.00–1.30
Rodney	748	228	1	16,779	116	402	40	.55–.80
St. Anns	120	25	....	885	.....	.....	7	.85
St. Catharines	26,161	5,105	1	217,358	512	23,745	35	.60–.75
St. George	507	115	....	3,927	.....	.....	148	.80
St. Williams	270	105	....	5,074	.....	265	1	.60
Sarnia and Pt. Edward	18,956	5,016	4	303,963	1,582	23,341	55	.55–.80
Selkirk	196	139	1	10,899	105	.....	1	.60
Shedden	233	91	....	6,450	.....	339	63	.55–.80
Simcoe	5,174	1,772	2	177,560	1,073	12,321	20	.60
Smithville	570	177	....	7,301	.....	.....	6	.75
Sombra and Port Lambton	419	152	....	10,311	.....	71	45	.55–.70
Stevensville	418	32	....	1,278	.....	.....	1	1.00–1.30
Straffordville	253	82	....	6,130	.....	523	6	.60
Thamesville	763	220	3	15,100	101	1,099	13	.50–.75
Thorold	4,945	1,035	....	37,396	.....	502	35	.60–.75
Tilbury	1,897	530	2	46,290	575	2,318	14	.50–.65
Tillsonburg	3,380	1,041	1	80,809	475	1,477	16	.63
Vienna	222	96	1	4,073	64	.....	1	.60–.80
Vittoria	205	76	....	3,981	.....	.....	3	.60
Wallaceburg	4,457	1,171	1	99,308	297	441,358	19	.50–.65
Wallacetown	143	46	1	3,146	7	531	60	.60–.80
Waterdown	919	21	....	989	.....	.....	45	.60–.90
Waterford	1,213	167	....	9,917	.....	141	30	.60–1.48
Welland	10,655	2,784	6	80,997	934	.....	3	1.00–1.50
West Lorne	776	167	1	11,922	176	229	49	.55–.80
Wheatley	754	224	....	17,130	.....	277	12	.50–.65
Windsor (Border Cities)	93,739	12,035	....	980,857	.....	188,539	45	.55–.80
Woodstock	11,007	2,116	2	94,105	279	2,578	110	.55–.80
Wyoming	505	143	1	8,354	3	627	65	.60–.85
Total	.....	78,119	85	4,715,990	22,873	1,444,508	.....	.....

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1934

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield North	2,164	105	3	7,042	395	373	$0.50–.55
Gosfield South	2,311	492	.....	30,985	.....	28,379	.50–.55
Maidstone	2,976	71	7	4,284	1,296	146	.70
Mersea	4,929	340	4	32,857	782	7,914	.50–.55
Rochester	2,260	193	7	12,465	948	523	.55–.70
Sandwich East	5,376	10	.....	207	.....	.....	.55–.70
Sandwich South	2,066	111	.....	7,808	.....	248	.55–.70
Tilbury North	1,920	31	.....	1,333	.....	126	.55–.70
Tilbury West	1,554	20	2	1,295	144	.....	.55–.70
LAMBTON:							
Brooke	2,217	21	.....	517	.....	.....	.55–.80
Dawn	2,160	76	3	4,540	669	854	.45–.60
Enniskillen	2,725	129	.....	6,021	.....	383	.55–.70
Moore	2,873	329	.....	17,969	.....	1,874	.55–.70
Plympton	2,681	6	.....	472	.....	.....	.55–.70
Sarnia	3,156	.....	10	.....	2,208	.....	.55–.70
Sombra	2,746	58	.....	2,208	.....	951	.55–.70
KENT:							
Camden	2,152	15	.....	571	.....	.....	.55–.70
Chatham	5,832	80	.....	5,904	.....	.....	.45–.60
Dover	3,906	424	1	36,144	148	8,812	.45–.60
Harwich	5,010	457	9	32,304	3,779	.....	.50–.75
Howard	2,813	168	3	11,850	907	.....	.50–.75
Orford	1,718	17	2	1,651	201	.....	.50–.75
Raleigh	4,230	585	21	47,767	7,585	1,131	.45–.75
Romney	1,456	67	38	4,945	12,535	.....	.40–.65
Tilbury East	3,406	236	71	18,247	22,763	1,984	.45–.60
Zone	859	17	.....	698	.....	.....	.55–.70
ELGIN:							
Aldborough	2,708	19	1	869	358	.....	.55–.75
Bayham	3,265	74	18	3,061	3,065	380	.60–.70
Dunwich	2,357	54	2	3,175	130	.....	.55–.80
Malahide	2,714	44	3	1,321	318	.....	.60–.70
Southwold	2,397	104	.....	6,848	.....	48	.55–.80
MIDDLESEX:							
North Dorchester	2,932	14	1	756	86	.....	.60–.85
Westminster	6,730	168	.....	20,246	.....	.....	.60–.85
NORFOLK:							
Charlotteville	2,978	15	5	1,037	1,001	.....	.60
Middleton	2,493	46	2	3,224	362	.....	.60
North Walsingham	2,118	6	1	641	185	.....	.60
South Walsingham	1,711	21	5	1,698	704	.....	.60
Townsend	2,968	30	.....	2,607	.....	.....	.60
Windham	3,618	2	3	210	590	.....	.60
Woodhouse	2,308	176	10	15,590	1,528	.....	.60
BRANT:							
Brantford	7,336	47	.....	2,218	.....	.....	.55–.80
Burford	3,697	3	.....	140	.....	.....	.55–.80
Onondaga	964	48	12	2,620	1,621	.....	.50–.70
South Dumfries	2,523	25	.....	586	.....	.....	.55–.80
Tuscarora	2,654	8	.....	524	.....	.....	.25
OXFORD:							
East Oxford	1,957	7	.....	327	.....	.....	.55–.80
West Oxford	1,796	53	.....	2,102	.....	.....	.55–.80

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1934—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	840	95	48	6,299	8,069	140	.50–.60
Dunn	805	151	10	6,373	914	.....	.60
Moulton	1,590	153	16	7,321	2,482	.....	.60
North Cayuga	1,282	51	9	3,461	3,790	.....	.60
Oneida	1,301	53	12	5,603	1,783	.....	.50–.60
Rainham	1,608	156	26	8,473	4,547	598	.50–.60
Seneca	1,589	149	28	9,045	5,128	.....	.60
Sherbrooke	346	59	7	2,613	877	.....	.60
South Cayuga	580	53	15	2,135	2,737	.....	.60
Walpole	3,145	331	56	19,933	8,617	72	.60
LINCOLN:							
Caistor	1,260	62	1	2,114	117	136	.60–.85
Gainsborough	2,091	78	1	1,768	50	.....	.50–.75
Grantham	5,010	8	.....	549	.....	.....	.75
Louth	2,903	10	.....	607	.....	.....	.75
WELLAND:							
Bertie	4,174	176	61	10,297	9,532	.....	.75–1.30
Crowland	5,082	74	13	2,946	524	.....	.75–1.30
Humberstone	2,368	266	30	12,331	4,392	.....	.70–1.30
Pelham	2,690	62	1	3,648	80	.....	1.00–1.30
Stamford	8,020	85	4	4,953	616	.....	1.00–1.30
Wainfleet	2,718	190	21	4,101	3,592	.....	.60–1.00
Willoughby	905	30	26	1,670	4,004	.....	1.00–1.30
WENTWORTH:							
Ancaster	3,606	122	.....	14,048	.....	.....	.70
Barton	1,840	260	.....	22,217	.....	.....	.60–.75
Binbrook	1,080	83	21	6,646	3,656	349	.40–.60
East Flamborough	3,705	51	.....	2,908	.....	.....	.60
Glanford	1,265	126	4	10,774	1,126	467	.60–.75
Saltfleet	4,837	307	.....	13,660	.....	.....	.55–.75
WATERLOO:							
Waterloo	7,591	11	....	264	.....	.....	.55–.80
Total	.....	8,274	654	546,641	130,941	55,888	.....

SUMMARY

	M cu. ft.
Total distribution to customers	6,916,841
Used by companies for all purposes	59,919
Used by private well-owners	74,000
Leakage in transmission lines	368,738
Leakage in distribution plants	349,673
Leakage in rural lines	16,347
Total amount of gas distributed	7,785,518

Gas Wells and Their Production

In Table V is given a summary by townships of the number of gas wells in Ontario, their production, and the number abandoned; the number of new wells drilled, with their open flow; the rock pressure of each township; and the acreage under lease and the rentals paid.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1934

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	23		1	1	75		150	744	$427
	Maidstone									
	Mersea	3						276		
Kent	Harwich						4,093,186			
	Orford									
	Raleigh	42	1	3	5	31,089		544	54,897	
	Romney	142	2					215		140,089
	Tilbury East	153			3	516		215		
	Dover	12		2	3	9,860	363,344	1,140	7,607	
Lambton	Dawn	23		4	1	198	508,596	656	19,763	
	Euphemia		3	1						
	Enniskillen	4					6,613	247	1,000	
	Moore								4,000	
	Sarnia	13					1,800	70	5,000	
	Sombra			3					7,998	
Middlesex	Mosa	3						706		
	North Dorchester	3						50		
Elgin	Aldborough			1						
	Bayham	39		2	4	2,157	51,483	595		
	Dunwich									
	Malahide	1						210		
Norfolk	Charlotteville	13						225		
	Houghton	5	2					400		
	Middleton	46		2	7	1,927		600		
	North Walsingham	10						319		
	South Walsingham	16			1	95	354,274	361		
	Townsend	2			1	17		195		
	Windham	10		1	2	190		230		
	Woodhouse	59		1	4	225		241		

NATURAL GAS RATES, 1935—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
G		Minimum bill	80c.
		Up to 10M cu. ft.	80c. per M cu. ft.
		From 10M to 25M cu. ft.	65c. per M cu. ft.
		Over 25M cu. ft.	55c. per M cu. ft.
H		Up to 5M cu. ft.	$1.00 per M cu. ft.
		From 5M to 10M cu. ft.	90c. per M cu. ft.
		Over 10M cu. ft.	60c. per M cu. ft.
I		Up to 5M cu. ft.	$1.00 per M cu. ft.
		From 5M to 10M cu. ft.	90c. per M cu. ft.
		From 10M to 15M cu. ft.	80c. per M cu. ft.
		From 15M to 25M cu. ft.	70c. per M cu. ft.
		Over 25M cu. ft.	60c. per M cu. ft.
J		Up to 200 cu. ft.	40c. per hundred cu. ft.
		From 200 cu. ft. to 5M cu. ft.	70c. per M cu. ft.
		From 5M cu. ft. to 10M cu. ft.	60c. per M cu. ft.
		Over 10M cu. ft.	45c. per M cu. ft.
	October to April, discount	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to September, discount	On bills under $5.00	10 per cent.
K		Up to 200 cu. ft.	40c per hundred cu. ft.
		From 200 cu. ft. to 5M cu. ft.	75c. per M cu. ft.
		From 5M cu. ft. to 10M cu. ft.	65c. per M cu. ft.
		Over 10M cu. ft.	50c. per M cu. ft.
	October to April, discount	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to September, discount	On bills under $5.00	10 per cent.
L	Fonthill-Ridgeville Gas Co.	First 400 cu. ft., minimum charge	85c.
		Over 400 cu. ft.	75c. per M cu. ft.
	Dominion Natural Gas Co.		75c. per M cu. ft.
M		Up to 15M cu. ft.	75c. per M cu. ft.
		Over 15M cu. ft.	55c. per M cu. ft.
	Saltfleet township	Minimum bill	75c.
N		Up to 1M cu. ft.	$1.00 per M cu. ft.
		From 1M to 10M cu. ft.	80c. per M cu. ft.
		From 10M to 25M cu. ft.	65c. per M cu. ft.
		Over 25M cu. ft.	55c. per M cu. ft.
O		Up to 5M cu. ft.	80c. per M cu. ft.
		Over 5M cu. ft.	70c. per M cu. ft.
	Port Colborne	Over 10M cu. ft.	55c. per M cu. ft.
	Summer residents		$2.00 per M cu. ft.
P		200 cu. ft. or less	$1.00
		Over 200 cu. ft.	60c. per M cu. ft.
R	May to October	Up to 10M cu. ft.	70c. per M cu. ft.
		Over 10M cu. ft.	55c. per M cu. ft.
	November to April	Up to 10M cu. ft.	65c. per M cu. ft.
		Over 10M cu. ft.	55c. per M cu. ft.
S		Up to 5M cu. ft.	$1.00 per M cu. ft.
		From 5M cu. ft. to 10M cu. ft.	90c. per M cu. ft.
		Over 10M cu. ft.	60c. per M cu. ft.

Wellland	10,000	2,695	0	80,017	847	3,160	3	F
West Lorne	775	161	1	11,001	128	348	49	B
Wheatley	755	224	....	16,336	.....	148	12	C
Windsor (Border Cities)	114,391	19,169	3	1,105,496	7,107	254,897	45	K
Woodstock	11,007	2,072	3	96,433	215	3,337	110	G
Wyoming	505	145	1	8,747	6	.....	65	A
Total	.....	110,204	85	4,999,313	29,415	1,536,752	.....	.....

[1]M.B.—Minimum monthly bill.

368-655
583 607
952 262

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1935

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft	M. cu. ft.	miles	
Alvinston	650	198	1	10,761	4	484	20	A
Aylmer	1,990	680	....	26,535	.....	.....	16	70c.
Bartonville	602	128	....	5,850	.....	.....	19	60c.
Belle River	719	146	....	10,337	.....	563	29	B
Belmont	317	117	....	3,508	.....	.....	9	$1.00
Binbrook	100	14	1	216	300	.....	1	50c.
Blenheim	1,702	583	1	52,734	140	4,002	20	C
Bothwell	685	136	1	9,306	14	.....	14	A
Brantford	30,611	4,584	2	212,161	1,231	12,423	140	G
Brigden	433	160	....	8,452	.....	278	30	B
Burlington	3,562	283	....	26,095	.....	.....	48	H
Cainsville	324	100	....	4,411	.....	.....	4	G
Caledonia	1,475	495	....	35,857	.....	18,054	7	60c.
Canfield	166	60	....	4,238	.....	.....	1	60c.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1935

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
ESSEX:							
Gosfield North	2,164	107	2	6,868	213	178	60c.
Gosfield South	2,311	503	.....	34,960	.....	35,674	60c.
Maidstone	2,976	71	7	5,454	1,436	.....	B
Mersea	4,929	365	2	27,160	706	15,766	60c.
Rochester	2,260	193	7	13,530	1,226	.....	B
Sandwich East	5,376	10	1	765	359	.....	B
Sandwich South	2,066	111	2	7,992	790	.....	B
Tilbury North	1,920	33	.....	2,367	.....	1,444	C
Tilbury West	1,554	18	1	1,298	168	.....	C
LAMBTON:							
Brooke	2,217	24	.....	470	.....	.....	A
Dawn	2,160	84	3	4,374	574	1,322	D
Enniskillen	2,725	134	.....	5,684	.....	465	B
Moore	2,873	328	.....	17,599	.....	3,090	B
Plympton	2,681	6	.....	431	.....	.....	B
Sarnia	3,156	.....	7	.....	2,001	.....	B
Sombra	2,746	57	.....	3,007	.....	390	B
KENT:							
Camden	2,152	18	.....	624	.....	.....	C
Chatham	5,832	80	.....	4,964	.....	603	C
Dover	3,906	419	1	35,446	156	6,291	D
Harwich	5,010	443	10	32,493	3,827	246	C
Howard	2,813	155	3	12,460	691	.....	C
Orford	1,718	21	2	2,619	214	.....	C
Raleigh	4,230	601	28	48,949	6,914	1,237	D
Romney	1,456	70	40	4,498	11,848	.....	D
Tilbury East	3,406	236	72	17,387	21,560	1,740	D
Zone	859	18	.....	650	.....	.....	J
ELGIN:							
Aldborough	2,708	19	1	733	394	.....	B
Bayham	3,265	74	18	3,047	3,122	391	60c.
Dunwich	2,357	54	.....	3,055	.....	.....	B
Malahide	2,714	46	3	1,473	303	.....	70c.
Southwold	2,397	109	2	6,506	131	201	B
Yarmouth	5,030	38	.....	686	.....	.....	A
MIDDLESEX:							
North Dorchester	2,932	13	.....	744	.....	.....	E
Westminster	6,730	225	.....	22,484	.....	.....	K
NORFOLK:							
Charlotteville	2,978	13	5	886	1,012	.....	60c.
Middleton	2,493	48	2	3,354	397	.....	60c.
North Walsingham	2,118	7	1	690	195	.....	60c.
South Walsingham	1,711	21	4	1,685	626	.....	60c.
Townsend	2,968	30	.....	2,710	.....	.....	60c.
Windham	3,618	2	3	196	599	.....	60c.
Woodhouse	2,308	175	10	15,270	1,491	.....	60c.
BRANT:							
Brantford	7,336	45	.....	2,105	.....	.....	G
Burford	3,697	3	.....	141	.....	.....	G
Onondaga	964	44	9	2,467	1,250	.....	70c.
South Dumfries	2,523	18	.....	710	.....	.....	80c. (M.B.50c.)
Tuscarora	2,654	6	.....	524	.....	.....	25c.
OXFORD:							
East Oxford	1,957	6	.....	267	.....	.....	80c. (M.B. 50c.)
West Oxford	1,796	56	.....	2,214	.....	.....	G

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1935—*Continued*

County and township	Population	No. of consumers		Quantity consumed, M cu. ft.			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
HALDIMAND:							
Canborough	840	94	41	5,587	7,230	220	60c.
Dunn	805	138	10	6,248	868	.....	60c.
Moulton	1,590	160	13	6,415	1,959	.....	60c.
North Cayuga	1,282	47	11	3,672	2,283	.....	60c.
Oneida	1,301	66	8	3,494	1,379	.....	60c.
Rainham	1,608	160	26	8,192	4,222	1,224	60c.
Seneca	1,590	146	35	9,498	6,379	.....	60c.
Sherbrooke	350	25	7	2,271	762	.....	60c.
South Cayuga	580	56	11	2,189	2,853	.....	60c.
Walpole	3,145	333	55	19,353	8,550	69	60c.
LINCOLN:							
Caistor	1,260	57	5	2,188	370	155	60c.
Gainsborough	2,090	68	7	1,593	470	.....	60c.
Grantham	5,010	9	.....	522	.....	.....	75c.
Louth	2,905	10	.....	590	.....	.....	75c.
WELLAND:							
Bertie	4,175	174	59	9,336	9,006	.....	F
Crowland	5,082	55	16	2,093	1,822	.....	F
Humberstone	2,370	269	29	12,389	4,334	.....	F
Pelham	2,690	61	1	3,538	84	.....	L
Stamford	8,020	85	4	4,505	604	.....	F
Wainfleet	2,720	230	19	4,104	3,325	.....	60c.
Willoughby	905	28	25	1,512	3,750	.....	F
WENTWORTH:							
Ancaster	3,606	157	.....	16,573	.....	.....	70c. (M.B.$1.00)
Barton	1,840	266	.....	27,237	.....	.....	60c.
Binbrook	1,080	96	21	6,405	3,716	413	60c.
East Flamborough	3,705	50	.....	3,060	.....	.....	S
Glanford	1,265	130	4	10,587	1,062	511	60c.
Saltfleet	4,837	318	.....	14,997	.....	.....	M (M.B. 75c.)
WATERLOO:							
North Dumfries	2,361	57	.....	2,149	.....	.....	80c. (M.B. 50c.)
Waterloo	7,591	13	.....	296	.....	.....	G
Total	.....	8,515	653	554,589	127,231	71,630	.....

[1]M.B.—Minimum monthly bill.

SUMMARY

	M cu. ft.
Total distribution to customers	7,318,930
Used by companies for all purposes	51,091
Used by private well-owners	74,000
Leakage in transmission lines	446,159
Leakage in distribution plants	352,062
Leakage in rural lines	15,431
Total amount of gas distributed	8,257,673

Gas Wells and Their Production

In Table V is given a summary of all the phases of the production of natural gas; much of this will be seen in comparison with previous years in the graph on page 1, in which the annual increase in the total of natural gas wells and the open flow of new wells drilled are shown, as far as records are available.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1935

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	26			3	185		150	881	$446
	Mersea	3						250		
Kent	Chatham			1			4,161,021			
	Raleigh	44	1	3	2	36,000		556	52,911	150,911
	Romney	141	1					206		
	Tilbury East	154		1	1	15		206		
	Dover	22		2	10	24,779	935,446	825	11,426	
Lambton	Dawn	23					403,644	654	18,512	
	Enniskillen	4					7,156	240	1,000	
	Moore								4,000	
	Sarnia	13					1,144	70	5,000	
Middlesex	Mosa	3						570		
	North Dorchester	3		1				50		
Oxford	Dereham	2			2	450		465		
Elgin	Bayham	47	1		9	6,917	116,118	600		
	Malahide	1						210		
Norfolk	Charlotteville	13						218		
	Houghton	4	1					395		
	Middleton	48		1	2	2,235		600		
	North Walsingham	9	1					315		
	South Walsingham	17	1	1	2	112	472,993	350		
	Townsend	2						240		
	Windham	10						214		
	Woodhouse	64		2	5	253		241		

A 6-inch transmission line was being laid from the centre of this field near Brownsville to the town of Ingersoll, a distance of about 10 miles. This pipe line is owned by the Oxford Pipe Line Company.

The extension of the Bayham township field, known as the Eden field, is gratifying, although the limits appear to have been reached on three sides, east, north, and west.

Drilling in the Haldimand field was very much curtailed in 1936, and the proportion of dry holes increased greatly, which may be taken as an indication that drilling in this field is reaching its conclusion. There are now 1,899 producing wells in Haldimand county and the adjacent townships in Welland, Lincoln, and Brant counties.

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1936

County	Field	Quantity
		M cu. ft.
Essex	Kingsville	3,531,870
	Tilbury	
Kent	Declute	1,298,363
	Dover	842,362
Lambton	Dawn	1,436,919
	Oil Springs	
Elgin	Bayham	207,914
Norfolk	Norfolk	462,653
Lincoln	Lincoln	1,735,171
Haldimand	Haldimand	
Wentworth	Wentworth	
Welland	Welland	286,345
Brant	Onondaga	130,747
Bruce	Amabel	400
Wells in surface drift	Harwich and Howard tps.	14,000
Private wells		60,000
Total produced		10,006,743
Value		$6,054,294
		M cu. ft.
Imported mixed gas		113,721
Total distributed		10,120,464

TABLE II—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921–1936

Year	Retail rate, cents per M cu. ft.	No. of pay consumers	Total quantity used	Quantity used per consumer	Capital invested in all natural gas operations	No. of men employed	Wages paid
			M cu. ft.	M cu. ft.			
1921	47	58,609	5,937,316	101.3	$17,328,757	632	$592,606
1922	47	63,29	6,028,947	95.3	17,769,664	692	539,072
1923	50	62,352	6,210,459	99.6	25,570,972	603	633,365
1924	55	61,100	5,933,595	97.1	24,781,723	727	639,167
1925	56	62,338	5,300,424	85.6	26,111,387	692	625,826
1926	57	63,695	5,595,521	87.8	30,500,874	860	842,305
1927	60	66,818	5,210,315	78	31,987,879	1,123	1,148,339
1928	60	70,259	5,699,553	71.2	36,601,828	1,209	1,497,999
1929	58	80,991	6,336,873	78.2	35,162,736	1,323	1,529,367
1930	64	84,135	6,332,519	75.2	36,162,268	1,328	1,545,648
1931	62	86,050	5,607,744	65.1	42,921,142	1,241	1,383,286
1932	63	86,631	5,409,154	62.2	45,982,719	893	1,059,643
1933	63	84,933	5,102,340	60	51,766,592	958	958,336
1934	62	89,990	5,262,631	58.5	41,934,395	931	1,010,979
1935	60	118,719	5,553,902	46.8–52	42,975,846	1,273	1,219,520
1936	60	118,117	6,956,453	59.3	45,197,240	1,336	1,354,611

Analysis of Gas Consumption

Tables III and IV give in detail the quantity of gas used by pay, free, and industrial consumers in Ontario, and the rates paid in each municipality. It will be found of interest to compare rural and urban municipalities over past years. Similar tables have been published since 1921.

It should be said to the credit of the companies distributing gas in Ontario that they have rendered a real service to consumers by selling more efficient appliances, which perform the same service and use less gas. This is illustrated in Table II in the column "Quantity used per consumer," by a comparison of the figures for 1921, which show 101.3 M cubic feet, with those for 1936, which show 59.3 M cubic feet per annum.

The rates for natural gas in the various municipalities, as indicated in the right-hand column of Tables III and IV by letters of the alphabet, are given in detail in the following table:—

NATURAL GAS RATES, 1936

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
A		Up to 10 M cu. ft.	85c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
B	October to April	Up to 10 M cu. ft.	55c. per M cu. ft.
		From 10 M to 20 M cu. ft.	60c. per M cu. ft.
		Over 20 M cu. ft	70c. per M cu. ft.
	May to September		80c. per M cu. ft.
C	October to April	Up to 10 M cu. ft.	50c. per M cu. ft.
		From 10 M to 20 M cu. ft.	55c. per M cu. ft.
		Over 20 M cu. ft.	65c. per M cu. ft.
	May to September		75c. per M cu. ft.
D	October to April	Up to 10 M cu. ft.	40c. per M cu. ft.
		From 10 M to 20 M cu. ft.	45c. per M cu. ft.
		Over 20 M cu. ft.	55c. per M cu. ft.
	May to September		70c. per M cu. ft.
E	October to April	Up to 10 M cu. ft.	60c. per M cu. ft.
		From 10 M to 20 M cu. ft.	65c. per M cu. ft.
		Over 20 M cu. ft.	75c. per M cu. ft.
	May to September		85c. per M cu. ft.
F		Less than 1 M cu. ft.	$1.50
		From 1 M to 10 M cu. ft.	$1.00 per M cu. ft.
		Over 10 M cu. ft.	$1.30 per M cu. ft.
	Where imported mixed gas is used		Additional charge for duty
	City of Niagara Falls	Over 10 M cu. ft.	$1.00 per M cu. ft.
G		Minimum bill	80c.
		Up to 10 M cu. ft.	80c. per M cu. ft.
		From 10 M to 25 M cu. ft.	65c. per M cu. ft.
		Over 25 M cu. ft.	55c. per M cu. ft.
H		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft.	90c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
I		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft.	90c. per M cu. ft.
		From 10 M to 15 M cu. ft.	80c. per M cu. ft.
		From 15 M to 25 M cu. ft.	70c. per M cu. ft.
		Over 25 M cu. ft.	60c. per M cu. ft.

NATURAL GAS RATES, 1936—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
J		Up to 200 cu. ft.	40c. per hundred cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	70c. per M cu. ft.
		From 5 M cu. ft. to 10 M. cu. ft.	60c. per M cu. ft.
		Over 10 M cu. ft.	45c. per M cu. ft.
	October to April, discount.	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to September, discount.	On bills under $5.00	10 per cent.
K		Up to 200 cu. ft.	40c. per hundred cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	75c. per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	50c. per M cu. ft.
	October to April, discount.	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to September, discount	On bills under $5.00	10 per cent.
L	Fonthill-Ridgeville Gas Co.	First 400 cu. ft., minimum charge	85c.
		Over 400 cu. ft.	75c. per M cu. ft.
	Dominion Natural Gas Co.		75c. per M cu. ft.
M		Up to 15 M cu. ft.	75c. per M cu. ft.
		Over 15 M cu. ft.	55c. per M cu. ft.
N		Up to 1 M cu. ft.	$1.00 per M cu. ft.
		From 1 M to 10 M cu. ft.	80c. per M cu. ft.
		From 10 M to 25 M cu. ft.	65c. per M cu. ft.
		Over 25 M cu. ft.	55c. per M cu. ft.
O		Up to 5 M cu. ft.	80c. per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	70c. per M cu. ft.
	Port Colborne	Over 10 M cu. ft.	55c. per M cu. ft.
	Summer residents		$2.00 per M cu. ft.
P		200 cu. ft. or less	$1.00
		Over 200 cu. ft.	60c. per M cu. ft.
R	November to April	Up to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
S		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	90c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
T	October to April	Up to 5 M cu. ft.	70c. per M cu. ft.
		Over 5 M cu. ft.	50c. per M cu. ft.
	May to September		70c. per M cu. ft.
U		Up to 1 M cu ft or less	95¢ M. cu. ft.
		From 1 M cu ft to 9 M cu ft	60¢
		" 10 " " 15 M cu ft	55¢
		over 15 M cu ft	50¢

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1936

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M. cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu.ft.	M cu. ft.	miles	
Alvinston	650	210	....	11,203	.....	.....	20	K
Appin	.....	31	1	602	53	.....	32	K
Attercliffe	.....	25	....	1,200	.....	.....	3	60c.
Aylmer	1,990	700	....	31,925	.....	.....	16	T
Bartonville	602	141	....	6,069	.....	.....	19	60c.
Belle River	719	147	....	10,881	.....	571	29	B
Belmont	317	117	....	3,570	.....	.....	9	$1.00
Binbrook	100	14	1	250	300	.....	1	50c.
Blenheim	1,702	593	1	55,717	168	4,274	20	C
Bothwell	685	154	1	11,214	63	415	14	J ~~A~~
Brantford	30,611	5,137	5	260,124	1,350	15,997	140	G
Brigden	433	156	....	9,116	.....	495	30	B
Burlington	3,562	379	....	29,732	.....	.....	48	H (M.B.[1]50c.)
Byron	3,046	56	....	2,322	.....	.....	51	K
Cainsville	324	98	....	5,148	.....	.....	4	G
Caledonia	1,475	520	....	36,370	.....	17,881	7	60c.
Canfield	166	60	....	4,495	.....	.....	1	60c.
Cayuga	693	225	1	18,557	63	344	6	60c.
Chatham	16,140	4,178	3	417,930	4,556	18,285	22	J
Coatsworth	101	23	1	1,617	104	145	4	D
Comber	506	139	....	15,118	.....	3,917	19	C
Cottam	425	85	4	6,878	384	.....	35	60c.
Courtland	348	49	....	3,049	.....	134	3	60c.(M.B. 50c.)
Courtright	338	114	1	6,401	85	317	53	B
Crystal Beach	529	154	....	3,093	.....	.....	1	F
Delhi	1,269	449	....	35,250	.....	397	4	60c. (M.B. 60c.)
Dorchester	403	118	....	6,998	.....	.....	95	E (M.B. 50c.)
Dresden and Tupperville	1,469	507	1	44,108	167	676	38	C
Dundas	5,032	1,162	1	55,230	23	5,309	172	70c.(M.B.$1.00)
Dunnville	3,632	1,058	2	98,815	458	11,289	7	60c.
Dutton	798	245	1	20,647	40	689	52	B (M.B. 50c.)
Echo Place	732	73	....	3,870	.....	.....	5	G
Eden	76	32	....	1,687	.....	.....	11	60c.(M.B.50c.)
Essex	1,786	482	1	40,374	160	3,370	33	B
Fairground	75	21	....	505	.....	.....	1	60c. (M.B. 50c.)
Fenwick	328	115	....	5,750	.....	.....	18	75c.
Fingal	169	30	....	2,259	.....	.....	71	B (M.B. 50c.)
Fisherville	162	46	....	3,551	.....	57	2	50c.
Florence	184	62	....	4,497	.....	231	5	J
Fonthill	872	265	....	6,977	.....	.....	25	L
Fort Erie	5,366	1,376	2	54,971	1,779	.....	8	F
Galt	14,057	2,508	1	107,812	22	11,489	147	G
Grimsby	1,952	312	1	8,182	75	1,025	10	85c.
Grimsby Beach		68	....	2,241	.....	.....	11	85c.
Hagersville	1,355	412	....	31,686	.....	.....	14	60c. (M.B. 35c.)
Hamilton	153,504	11,708	3	402,229	1,127	638,951	47	M
Hepworth	380	5	2	100	300	.....	1	75c.
Hespeler	2,798	479	....	22,113	.....	8,659	155	N (M.B. $1.00)
Highgate	343	110	2	9,153	571	.....	32	C (M.B. 50c.)
Ingersoll	5,109	1,072	2	52,782	262	7,881	100	G
Inwood	250	87	....	3,985	.....	.....	14	A
Jarvis	531	201	....	16,869	.....	.....	9	60c.
Kingsville	2,354	653	3	64,385	216	120	30	U ~~55c~~.
Lake Shore	.....	130	....	2,310	.....	.....	16	F
Lambeth	172	124	1	10,673	154	.....	85	K
Leamington	5,004	1,491	....	156,325	.....	3,805	20	55c.
London	73,880	13,938	33	942,554	5,175	66,369	55	K
Lynedoch	175	41	....	3,225	.....	.....	2	60c.
Merlin	190	143	2	14,681	1,750	534	2	D
Merritton	2,490	483	....	15,541	.....	7,437	35	70c.

638 951
390 993
1.019.944

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 193'—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M. cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu.ft.	M cu. ft.	miles	
Mount Brydges	525	62	....	475	.....	.....	43	K
Nelles Corners	86	7	....	850	.....	.....	1	60c.
Niagara Falls	18,193	3,465	....	102,365	.....	21,414	11	F
Oil Springs	462	125	....	7,840	.....	.....	2	R
Paris	4,300	920	2	45,996	162	8,476	129	G
Petrolia	2,715	782	2	84,053	438	1,143	60	B
Port Burwell	423	255	1	11,086	47	.....	3	60c.
Port Colborne and Humberstone	7,860	2,109	4	90,872	332	210	5	O (M.B. $1.00)
Port Dover	1,692	626	....	44,990	.....	469	1	60c.
Port Rowan	692	228	....	13,543	.....	.....	1	60c. (M.B. 60c.)
Preston	6,290	990	1	52,074	75	3,147	151	G
Ridgetown	1,914	642	2	57,042	1,802	1,780	28	C
Ridgeway	1,100	220	....	13,860	.....	.....	1	F
Rodney	750	233	1	16,378	101	367	40	B (M.B. 50c.)
St. Anns	120	23	....	704	.....	.....	7	85c.
St. Catharines	26,400	5,530	2	230,524	533	37,026	35	[illegible]0c.
St. George	510	129	....	4,217	.....	.....	148	80c.
St. Thomas	16,088	2,349	3	6,099	181	.....	75	[illegible]
St. Williams	270	107	....	5,255	.....	672	1	60c.(M.B. 50c.)
Sarnia	18,956	5,237	2	312,399	1,589	35,845	55	B
Selkirk	196	132	1	9,645	124	.....	1	60c.
Shedden	235	90	....	5,941	.....	439	63	B (M.B. 50c.)
Simcoe	5,200	1,875	2	186,095	955	12,548	20	60c.
Smithville	570	178	....	6,871	.....	.....	6	75c.
Sombra and Port Lambton	420	161	....	11,495	.....	87	45	B
Springfield	420	23	....	88	.....	.....	24	T
Stevensville	420	30	....	1,890	.....	.....	1	F
Straffordville	255	90	....	7,264	.....	91	6	60c. (M.B. 50c.)
Thamesville	765	250	1	23,001	58	2,840	13	J
Thorold	4,950	1,067	....	34,992	.....	1,162	35	7[illegible]c.
Tilbury	1,900	574	2	53,153	692	1,933	14	C
Tillsonburg	3,380	1,132	1	88,951	482	130,833	16	63c.
Vienna	225	88	1	4,426	113	.....	1	60c. (M.B. 50c.)
Vittoria	205	110	....	4,591	.....	.....	3	60c.
Wallaceburg	4,460	1,246	1	97,558	355	380,993	19	C
Wallacetown	143	49	....	3,684	.....	337	60	B
Waterdown	900	33	....	1,216	.....	.....	45	I
Waterford	1,213	208	....	12,879	.....	631	30	P (M.B. $1.00)
Welland	10,600	2,939	7	82,905	1,001	3,823	3	F
West Lorne	775	166	1	11,410	241	529	49	B (M.B. 50c.)
Wheatley	755	219	1	17,953	38	291	12	60c. (M.B. 60c.)
Windsor (Border Cities)	114,391	18,771	3	1,263,420	9,742	247,597	45	K
Woodstock	11,007	2,272	3	111,936	276	3,407	110	G
Wyoming	505	153	....	9,286	.....	242	65	A
Total	.....	109,406	121	6,35[illegible],188	38,742	1,729,395	.....	.....

[1]M.B.—Minimum monthly bill.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1936

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu.ft.	
ESSEX:							
Gosfield North	2,164	106	.....	7,286	.....	181	60c.
Gosfield South	2,311	546	1	38,295	410	45,377	60c.
Maidstone	2,976	70	7	5,110	1,447	600	B
Mersea	4,929	375	4	28,415	782	12,693	60c.
Rochester	2,260	192	8	14,016	1,688	2,382	B
Sandwich East	5,376	11	1	829	229	.....	B
Sandwich South	2,066	113	5	8,249	1,200	749	B
Tilbury North	1,920	36	.....	1,297	.....	3,615	C
Tilbury West	1,554	19	1	1,585	162	.....	C
LAMBTON:							
Brooke	2,217	23	.....	497	.....	.....	A
Dawn	2,160	94	4	5,974	829	1,590	D
Enniskillen	2,725	135	.....	6,439	.....	682	B
Euphemia	2,692	6	.....	241	.....	.....	J
Moore	2,873	349	1	19,211	633	3,154	B
Plympton	2,681	6	.....	603	.....	.....	A
Sarnia	3,156	.....	6	.....	1,100	.....	B
Sombra	2,746	66	.....	3,344	.....	654	B
KENT:							
Camden	2,152	18	.....	965	.....	.....	C
Chatham	5,832	82	.....	4,859	.....	592	C
Dover	3,906	421	1	37,594	147	3,089	D
Harwich	5,010	447	10	33,987	3,783	.....	C
Howard	2,813	161	3	12,818	722	.....	C
Orford	1,718	22	2	2,850	216	.....	C
Raleigh	4,230	612	23	53,682	6,640	1,176	D
Romney	1,456	76	40	5,313	13,691	521	D
Tilbury East	3,406	248	79	20,012	26,058	2,496	D
Zone	859	22	.....	1,110	.....	.....	A
ELGIN:							
Aldborough	2,708	16	1	724	454	.....	B
Bayham	3,265	73	18	3,396	2,970	698	60c.
Dunwich	2,357	54	2	3,503	193	.....	B
Malahide	2,714	47	3	1,541	357	.....	70c.
Southwold	2,397	113	2	7,150	129	232	B
Yarmouth	5,030	51	.....	2,914	.....	.....	A
MIDDLESEX:							
Caradoc	3,026	5	.....	29	.....	.....	K
Delaware	1,180	3	.....	41	.....	.....	K
Ekfrid	1,971	6	.....	213	.....	.....	K
North Dorchester	2,932	13	.....	793	.....	.....	E
Westminster	6,730	282	.....	32,101	.....	.....	K
NORFOLK:							
Charlotteville	2,978	12	5	900	1,128	.....	60c.
Middleton	2,493	50	2	4,294	396	.....	60c.
North Walsingham	2,118	7	1	630	202	.....	60c.
South Walsingham	1,711	20	4	1,720	564	.....	60c.
Townsend	2,968	31	.....	2,666	.....	.....	60c.
Windham	3,618	2	3	197	690	.....	60c.
Woodhouse	2,308	174	10	15,490	1,558	.....	60c.
BRANT:							
Brantford	7,336	44	.....	2,588	.....	.....	G
Burford	3,697	6	.....	314	.....	.....	G
Onondaga	964	35	9	2,413	1,185	.....	70c.
South Dumfries	2,523	23	.....	772	.....	.....	80c. (M.B. 50c.)
Tuscarora	2,654	8	1	558	294	.....	25c.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1936—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu.ft.	
OXFORD:							
East Oxford	1,957	8	.....	432	.....	.....	80c. (M.B. 50c.)
West Oxford	1,796	50	.....	1,520	.....	.....	G
HALDIMAND:							
Canborough	840	70	39	4,416	7,335	269	60c.
Dunn	805	142	9	6,480	698	294	60c.
Moulton	1,590	139	13	6,584	2,034	.....	60c.
North Cayuga	1,282	49	14	2,020	2,602	.....	60c.
Oneida	1,301	30	9	3,755	1,405	.....	60c.
Rainham	1,608	193	26	9,559	4,807	870	60c.
Seneca	1,590	148	33	8,703	5,830	.....	60c.
Sherbrooke	350	27	6	1,511	820	.....	60c.
South Cayuga	580	52	15	2,261	2,686	.....	60c.
Walpole	3,145	333	55	19,423	8,948	47	60c.
LINCOLN:							
Caistor	1,260	106	25	3,441	1,734	168	60c.
Gainsborough	2,090	26	2	594	100	.....	60c.
Grantham	5,010	11	.....	536	.....	.....	75c.
Louth	2,905	13	.....	650	.....	.....	75c.
WELLAND:							
Bertie	4,175	155	60	9,585	9,650	.....	F
Crowland	5,082	30	2	1,890	328	.....	F
Humberstone	2,370	227	28	12,190	4,262	.....	F
Pelham	2,690	77	3	3,773	250	.....	L
Stamford	8,020	80	4	5,040	632	.....	F
Wainfleet	2,720	179	17	4,542	3,048	.....	60c.
Willoughby	905	25	25	1,575	3,925	.....	F
WENTWORTH:							
Ancaster	3,606	164	.....	17,332	.....	.....	70c.(M.B. $1.00)
Barton	1,840	296	.....	31,442	.....	.....	60c.
Binbrook	1,080	99	22	7,165	3,687	411	60c.
East Flamborough	3,705	51	.....	3,315	.....	.....	S
Glanford	1,265	130	3	10,747	980	564	60c.
Saltfleet	4,837	396	.....	17,876	.....	.....	M (M.B. 75c.)
WATERLOO:							
North Dumfries	2,361	69	.....	2,224	.....	.....	80c. (M.B. 50c.)
Waterloo	7,591	5	.....	156	.....	.....	G
Total	.....	8,711	667	600,265	135,618	83,104	.....

SUMMARY

	M. cu. ft.
Total distribution to customers	8,943,312
Used by companies for all purposes	32,859
Used by private well-owners	74,000
Leakage in transmission lines	550,889
Leakage in distribution plants	501,494
Leakage in rural lines	17,910
Total amount of gas distributed	10,120,464

Gas Wells and Their Production

In Table V is given in detail by townships the production of gas wells in Ontario and the results of drilling activities in Ontario in the year 1936.

TABLE V—GAS WELLS AND THEIR PRODUCTION, 1936

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled			Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
				No. dry	No. producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	27	1	.....	2	36		160	2,103	$471
	Mersea	3	.....	.....	.....	.....		283	.....	
Kent	Chatham	1	.....	4	1	250	4,830,232	625		
	Raleigh	41	5	3	2	13,583		504	80,409	157,185
	Romney	139	2	1	.....	.....		201		
	Tilbury East	154	1	.....	1	10		201		
	Dover	23	.....	1	1	426	842,362	645	19,278	
Lambton	Dawn	29	.....	5	6	21,766	1,427,979	605	35,696	
	Enniskillen	4	.....	.....	.....	.....	7,840	225	1,000	.....
	Moore	.....	.....	.....	.....	.....	.....	.....	4,000	.....
	Sarnia	13	.....	.....	.....	.....	1,100	38	5,000	.....
	Sombra	.....	.....	1	.....	.....	.....	.....	1,721	.....
Middlesex	Mosa	3	.....	.....	.....	.....	.....	593	.....	.....
	North Dorchester	.....	3	.....	.....	.....	.....	.....	.....	.....
Oxford	Dereham	13	.....	4	11	17,454	.....	415	1,479	.....
Elgin	Bayham	52	5	4	10	5,263	207,914	600		
	Malahide	1	.....	1	.....	.....		200		
Norfolk	Charlotteville	15	.....	1	2	162		225		
	Houghton	4	.....	1	.....	.....		340		
	Middleton	55	.....	.....	7	2,641		313		
	North Walsingham	9	.....	.....	.....	.....	462,653	296		
	South Walsingham	17	.....	.....	.....	.....		421		
	Townsend	2	.....	.....	.....	.....		182		
	Windham	10	.....	1	.....	.....		223		
	Woodhouse	68	2	2	6	585		219		

Analysis of Gas Consumption

The increase in the consumption of natural gas noted previously is due to a number of causes; certainly the increased use of natural gas for house-heating is one of the principal reasons, but automatic hot-water heaters and individual room heaters are becoming very popular and are an important factor in the increase. The manufacturers of these appliances have increased their efficiency and have made the designs and colour schemes very attractive.

The rate structure that was fixed for conditions in 1921 has undergone a complete change in sixteen years. In 1921 the principle was laid down that rates should increase directly with the consumption; at present it is the reverse—the rates decrease as the consumption increases. The effect has been to encourage a greater use of gas in homes.

It will be noted that the consumption of gas in industries has had a decided increase. This parallels the general revival of industry in 1936 and 1937. Again, American industry having vast supplies of cheap natural gas available have designed modern equipment for this fuel, and Canadian manufacturers find this opposition difficult to meet without falling in line with it. The pressure on the Department to grant new permits and increase allotments has been very great; consequently, where present equipment is in use more hours in the day, increases have been allowed. Permits to certain new industries have been granted where indispensable, where it tended to create new employment, and on sanitary and other grounds.

NATURAL GAS RATES, 1937

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
A		Up to 10 M cu. ft.	85c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
B	October to April	Up to 10 M cu. ft.	55c. M per cu. ft.
		From 10 M to 20 M cu. ft.	60c. per M cu. ft.
		Over 20 M cu. ft.	70c. per M cu. ft.
	May to September		80c. per M cu. ft.
C	October to April	Up to 10 M cu. ft.	50c. per M cu. ft.
		From 10 M to 20 M cu. ft.	55c. per M cu. ft.
		Over 20 M cu. ft.	65c. per M cu. ft.
	May to September		75c. per M cu. ft.
D	October to April	Up to 10 M cu. ft.	40c. per M cu. ft.
		From 10 M to 20 M cu. ft.	45c. per M cu. ft.
		Over 20 M cu. ft.	55c. per M cu. ft.
	May to September		70c. per M cu. ft.
E	October to April	Up to 10 M cu. ft.	60c. per M cu. ft.
		From 10 M to 20 M cu. ft.	65c. per M cu. ft.
		Over 20 M cu. ft.	75c. per M cu. ft.
	May to September		85c. per M cu. ft.
F		Less than 1 M cu. ft.	$1.50
		From 1 M to 10 M cu. ft.	$1.00 per M cu. ft.
		Over 10 M cu. ft.	$1.30 per M cu. ft.
	Where imported mixed gas is used		Additional charge for duty
	City of Niagara Falls	Over 10 M cu. ft.	$1.00 per M cu. ft.
G		Minimum bill	80c.
		Up to 10 M cu. ft.	80c. per M cu. ft.
		From 10 M to 25 M cu. ft.	65c. per M cu. ft.
		Over 25 M cu. ft.	55c. per M cu. ft.

NATURAL GAS RATES, 1937—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
H		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft.	90c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
I		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft.	90c. per M cu. ft.
		From 10 M to 15 M cu. ft.	80c. per M cu. ft.
		From 15 M to 25 M cu. ft.	70c. per M cu. ft.
		Over 25 M cu. ft.	60c. per M cu. ft.
J		Up to 200 cu. ft.	40c. per hundred cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	70c. per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	60c. per M cu. ft.
		Over 10 M cu. ft.	45c. per M cu. ft.
	October to April, discount.	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to September, discount	On bills under $5.00	10 per cent.
K		Up to 200 cu. ft.	40c. per hundred cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	75c. per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	50c. per M cu. ft.
	October to April, discount.	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to September, discount	On bills under $5.00	10 per cent.
L	Fonthill-Ridgeville Gas Co.	First 400 cu. ft., minimum charge	85c.
		Over 400 cu. ft.	75c. per M cu. ft.
	Dominion Natural Gas Co.		75c. per M cu. ft.
M		Up to 15 M cu. ft.	75c. per M cu. ft.
		Over 15 M cu. ft.	55c. per M cu. ft.
N		Up to 1 M cu. ft.	$1.00 per M cu. ft.
		From 1 M to 10 M cu. ft.	80c. per M cu. ft.
		From 10 M to 25 M cu. ft.	65c. per M cu. ft.
		Over 25 M cu. ft.	55c. per M cu. ft.
O		Up to 5 M cu. ft.	80c. per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	70c. per M cu. ft.
	Port Colborne	Over 10 M cu. ft.	55c. per M cu. ft.
	Summer residents		$2.00 per M cu. ft.
P		200 cu. ft. or less	$1.00
		Over 200 cu. ft.	60c. per M cu. ft.
R	November to April	Up to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
S		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	90c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
T	October to April	Up to 5 M cu. ft.	70c. per M cu. ft.
		Over 5 M cu. ft.	50c. per M cu. ft.
	May to September		70c. per M cu. ft.
U		1 M cu. ft. or less	95c. per M cu. ft.
		From 1 M cu. ft. to 10 M cu. ft.	60c. per M cu. ft.
		From 10 M cu. ft. to 15 M cu. ft.	55c. per M cu. ft.
		Over 15 M cu. ft.	50c. per M cu. ft.

Tables III and IV give in detail the quantity of gas used by pay, free, and industrial consumers in Ontario, and the rates paid in each municipality. Similar tables have been published since the year 1921 and reflect the changes that have taken place in each municipality during those years.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1937

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Alvinston	650	220	2	11,821	58	.....	20	K
Ancaster	.....	106	....	12,366	.....	.....	170	70c.
Appin	.....	38	....	2,118	.....	.....	32	K
Attercliffe	.....	30	....	1,200	.....	.....	3	60c.
Aylmer	1,990	781	....	49,374	.....	203	16	T
Bartonville	602	160	....	5,571	.....	.....	19	60c.
Belle River	810	146	1	12,143	82	493	29	B
Belmont	317	115	....	3,454	.....	.....	92	$1.00
Binbrook	100	14	1	384	250	.....	1	60c.
Blenheim	1,702	623	2	56,463	341	3,560	20	C
Bothwell	685	167	1	11,175	17	226	14	J
Brantford	31,282	5,317	5	269,451	1,343	22,049	140	G
Brigden	433	158	....	9,298	.....	416	30	B
Burlington	3,680	447	....	31,217	.....	.....	48	H (M.B.[1]50c.)
Byron	350	80	1	8,663	18	.....	51	K
Cainsville	325	98	....	5,049	.....	.....	4	G
Caledonia	1,410	533	2	33,706	171	23,464	7	60c.
Canfield	165	60	....	3,935	.....	.....	1	60c.
Cayuga	664	227	1	16,970	30	369	6	60c.
Chatham	16,153	4,351	3	431,252	4,436	14,488	22	J
Coatsworth	321	27	1	1,724	61	482	4	D
Comber	505	153	....	17,115	.....	3,570	19	C
Cottam	425	86	4	5,206	500	.....	35	60c.
Courtland	350	57	....	3,030	.....	89	3	60c. (M.B. 50c.)
Courtright	334	152	1	6,354	97	.....	53	B
Crystal Beach	510	138	....	7,590	.....	.....	1	F
Delhi	1,675	481	....	35,455	.....	454	4	60c. (M.B. 60c.)
Dorchester	403	123	....	6,458	.....	.....	95	E (M.B. 50c.)
Dresden and Tupperville	1,700	543	2	43,375	156	517	38	C
Dundas	4,955	1,090	1	52,577	22	6,417	172	70c.(M.B.$1.00)
Dunnville	4,005	1,067	3	95,786	323	10,940	7	60c.
Dutton	810	247	1	19,338	29	719	52	B (M.B. 50c.)
Echo Place	735	78	....	3,978	.....	.....	5	G
Eden	150	32	....	1,854	.....	.....	11	60c. (M.B. 50c.)
Essex	1,785	493	1	42,315	5	3,972	33	B
Fairground	75	18	....	680	.....	.....	1	60c. (M.B. 50c.)
Fenwick	330	117	....	5,632	.....	.....	18	75c.
Fingal	170	35	....	2,123	.....	.....	71	B (M.B. 50c.)
Fisherville	160	46	....	3,246	.....	.....	2	50c.
Florence	185	64	....	4,585	.....	315	5	J
Fonthill	870	266	....	6,755	.....	.....	25	L
Fort Erie	5,755	1,417	2	53,262	1,614	.....	8	F
Galt	14,410	2,557	1	115,566	22	19,901	147	G
Grimsby	1,980	360	1	9,395	75	990	10	85c.
Grimsby Beach		76	....	3,365	.....	.....	11	85c.
Hagersville	1,307	430	....	30,647	.....	.....	14	60c. (M.B. 35c.)
Hamilton	154,020	12,173	3	392,648	1,007	796,834	47	M
Hepworth	380	45	2	2,463	300	.....	1	75c.
Hespeler	2,800	497	....	25,256	.....	18,153	155	N (M.B. $1.00)
Highgate	345	114	2	9,419	373	.....	32	B (M.B. 50c.)
Ingersoll	5,175	1,141	2	56,308	273	10,338	100	G

[1]M.B.—Minimum monthly bill.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1937—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Inwood	250	87	....	4,249	.....	.....	14	A
Jarvis	505	201	....	14,737	.....	.....	9	60c.
Kingsville	2,365	684	1	62,221	218	243	30	U
Lake Shore	.....	110	....	6,036	.....	.....	16	F
Lambeth	475	147	1	13,286	228	108	85	K
Leamington	5,445	1,429	....	159,580	.....	6,210	20	55c.
London	73,880	15,404	....	1,585,542	.....	81,072	55	K
Lynedoch	175	42	....	3,285	.....	.....	2	60c.
Merlin	400	154	2	14,453	1,892	2,157	2	D
Merritton	2,644	503	....	17,219	.....	13,938	35	70c.
Mount Brydges	525	109	1	8,324	64	553	43	K
Nelles Corners	86	7	....	850	.....	.....	1	60c.
Niagara Falls	18,747	3,633	....	103,377	.....	23,571	11	F
Oil Springs	470	126	....	8,226	.....	441	2	R
Paris	4,325	954	2	44,869	261	17,896	129	G
Petrolia	2,710	798	2	69,502	449	1,192	60	B
Port Burwell	450	244	1	10,487	2	102	3	60c.
Port Colborne and Humberstone	8,975	2,049	4	95,921	326	1,643	5	O (M.B. $1.00)
Port Dover	1,640	575	....	45,122	.....	402	1	60c.
Port Rowan	690	231	....	12,046	.....	.....	1	60c. (M.B. 60c.)
Preston	6,415	984	1	58,018	56	5,371	151	G
Ridgetown	1,955	658	6	57,277	2,427	1,549	28	C
Ridgeway	1,100	201	....	11,055	.....	.....	1	F
Rodney	722	240	1	16,010	72	337	40	B (M.B. 50c.)
St. Anns	120	24	....	660	.....	.....	7	85c.
St. Catharines	26,834	5,856	1	240,717	505	59,879	35	70c.
St. George	510	129	....	4,456	.....	.....	148	80c.
St. Thomas	16,210	2,857	2	79,998	550	.....	75	K
St. Williams	410	112	....	5,138	.....	679	1	60c. (M.B. 50c.)
Sarnia	18,955	5,369	3	309,896	1,615	40,233	55	B
Selkirk	200	134	1	9,005	111	.....	1	60c.
Shedden	235	100	....	6,076	.....	458	63	B (M.B. 50c.)
Simcoe	5,826	1,965	3	179,813	873	13,010	20	60c.
Smithville	570	181	....	6,834	.....	.....	6	75c.
Sombra and Port Lambton	420	162	....	11,558	.....	84	45	B
Springfield	420	95	....	5,019	.....	445	5	T
Stevensville	420	30	....	1,650	.....	.....	1	F
Straffordville	255	97	....	6,891	.....	30	6	60c. (M.B. 50c.)
Thamesville	814	264	2	23,309	102	2,777	13	J
Thorold	4,905	1,097	....	38,234	.....	1,389	35	70c.
Tilbury	1,900	594	2	51,804	750	860	14	C
Tillsonburg	3,830	1,185	1	90,237	477	130,910	16	63c.
Vienna	225	88	1	5,669	109	128	1	60c. (M.B. 50c.)
Vittoria	205	138	....	4,731	.....	.....	3	60c.
Wallaceburg	4,535	1,294	3	107,038	342	402,733	19	C
Wallacetown	175	53	1	3,342	6	828	60	B
Waterdown	900	39	....	1,159	.....	.....	45	I
Waterford	1,250	230	....	13,273	.....	242	30	P (M.B. $1.00)
Welland	10,925	3,159	7	83,707	920	4,594	3	F
West Lorne	745	177	1	10,919	238	448	49	B (M.B. 50c.)
Wheatley	745	224	1	17,541	50	421	12	60c. (M.B. 60c.)
Windsor (Border Cities)	114,390	19,457	1	1,326,289	898	318,024	45	K
Woodstock	11,380	2,429	3	114,279	267	6,042	110	G
Wyoming	528	165	....	9,382	.....	457	65	A
Total	.....	115,068	101	7,229,431	25,411	2,080,415	.....	.....

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1937

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
ESSEX:							
Gosfield North	2,164	110	.....	7,335	.....	.....	60c.
Gosfield South	2,311	591	1	32,908	367	45,150	60c.
Maidstone	2,976	71	7	5,396	1,147	672	B
Mersea	4,929	345	2	31,740	400	11,061	60c.
Rochester	2,260	195	7	14,820	748	2,480	B
Sandwich East	5,376	12	.....	912	.....	.....	B
Sandwich South	2,066	110	.....	8,366	.....	811	B
Tilbury North	1,920	44	1	1,622	168	5,529	C
Tilbury West	1,554	27	1	2,074	124	.....	C
LAMBTON:							
Brooke	2,217	24	.....	479	.....	.....	A
Dawn	2,160	99	4	6,238	743	1,651	D
Enniskillen	2,725	133	.....	5,955	.....	402	B
Euphemia	2,692	6	.....	302	.....	.....	J
Moore	2,873	358	1	19,059	390	2,939	B
Plympton	2,681	6	.....	482	.....	.....	A
Sarnia	3,156	.....	6	.....	1,000	.....	B
Sombra	2,746	69	.....	3,539	.....	947	B
KENT:							
Camden	2,152	18	.....	864	.....	.....	C
Chatham	5,832	83	.....	4,711	.....	327	C
Dover	3,906	426	1	36,696	137	12,658	D
Harwich	5,010	470	9	33,861	3,401	483	C
Howard	2,813	168	2	12,383	227	.....	C
Orford	1,718	24	2	2,851	268	.....	C
Raleigh	4,230	640	23	54,108	7,163	1,234	D
Romney	1,456	84	42	5,599	13,162	518	D
Tilbury East	3,406	251	67	19,779	22,595	2,688	D
Zone	859	26	.....	1,057	.....	.....	A
ELGIN:							
Aldborough	2,708	18	1	751	387	.....	B
Bayham	3,265	82	16	3,597	2,561	708	60c.
Dunwich	2,357	52	2	3,223	172	.....	B
Malahide	2,714	49	.....	2,008	.....	258	70c.
Southwold	2,397	115	2	7,623	70	209	B
Yarmouth	5,030	59	.....	3,022	.....	.....	A (M.B.[1] 85c.)
MIDDLESEX:							
Caradoc	3,026	9	.....	521	.....	.....	K
Delaware	1,180	4	.....	180	.....	.....	K
Ekfrid	1,971	10	.....	491	.....	.....	K
North Dorchester	2,932	21	.....	950	.....	.....	E
Westminster	6,730	65	.....	7,215	.....	.....	K
NORFOLK:							
Charlotteville	2,978	11	5	976	897	.....	60c.
Middleton	2,493	63	5	4,505	636	1,054	60c.
North Walsingham	2,118	8	1	760	198	.....	60c.
South Walsingham	1,711	20	4	1,760	580	.....	60c.
Townsend	2,968	31	.....	2,883	.....	.....	60c.
Windham	3,618	2	3	204	533	.....	60c.
Woodhouse	2,308	175	10	14,504	1,437	.....	60c.
BRANT:							
Brantford	7,336	47	.....	2,467	.....	.....	G
Burford	3,697	6	.....	93	.....	.....	G
Onondaga	964	32	9	1,967	1,148	.....	70c.
South Dumfries	2,523	2	.....	104	.....	.....	80c. (M.B. 50c.)
Tuscarora	2,654	13	.....	566	.....	.....	25c.

[1]M.B.—Minimum monthly bill.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1937—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
OXFORD:							
East Oxford	1,957	14	.....	607	.....	.....	80c. (M.B. 50c.)
West Oxford	1,796	53	.....	2,144	.....	.....	G
HALDIMAND:							
Canborough	840	83	38	4,390	6,733	347	60c.
Dunn	805	132	6	6,348	713	.....	60c.
Moulton	1,590	138	11	5,994	1,817	.....	60c.
North Cayuga	1,282	60	16	2,900	3,134	.....	60c.
Oneida	1,301	90	14	4,405	2,699	.....	60c.
Rainham	1,608	182	24	9,532	4,506	762	60c.
Seneca	1,590	138	33	7,917	5,424	.....	60c.
Sherbrooke	350	26	3	1,909	646	.....	60c.
South Cayuga	580	54	14	1,933	2,546	.....	60c.
Walpole	3,145	342	54	17,634	8,416	183	60c.
LINCOLN:							
Caistor	1,260	84	25	3,358	3,472	286	60c.
Gainsborough	2,090	22	2	477	200	.....	60c.
Grantham	5,010	15	.....	825	.....	.....	75c.
Louth	2,905	13	.....	715	.....	.....	75c.
WELLAND:							
Bertie	4,175	152	61	8,207	9,330	.....	F
Crowland	5,082	49	16	2,181	1,850	.....	F
Humberstone	2,370	231	30	11,126	4,273	.....	F
Pelham	2,690	78	2	4,278	267	.....	L
Stamford	8,020	76	4	4,139	564	.....	F
Wainfleet	2,720	171	18	4,233	2,986	.....	60c.
Willoughby	905	24	26	1,311	3,845	.....	F
WENTWORTH:							
Ancaster	3,603	80	.....	5,907	.....	.....	70c. (M.B. $1.00)
Barton	1,840	110	.....	8,564	.....	.....	60c.
Binbrook	1,080	95	22	6,462	3,438	396	60c.
East Flamborough	3,705	53	.....	3,445	.....	.....	S
Glanford	1,265	141	3	10,166	842	354	60c.
Saltfleet	4,837	399	.....	20,654	.....	.....	M (M.B. 75c.)
WATERLOO:							
North Dumfries	2,361	65	.....	2,345	.....	.....	80c. (M.B. 50c.)
Waterloo	7,591	5	.....	316	.....	.....	G
Total	.....	8,459	656	537,928	128,360	94,107	.....

SUMMARY

	M cu. ft.
Total distribution to customers	10,095,652
Used by companies for all purposes	43,230
Used by private well-owners	74,000
Leakage in transmission lines	198,369
Leakage in distribution plants	260,756
Leakage in rural lines	15,389
Field operations: leakage in gathering and transmission lines to measuring stations (estimated)	172,433
Total amount of gas distributed	10,859,829

NATURAL GAS RATES, 1938—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
I		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft.	90c. per M cu. ft.
		From 10 M to 15 M cu. ft.	80c. per M cu. ft.
		From 15 M to 25 M cu. ft.	70c. per M cu. ft.
		Over 25 M cu. ft.	60c. per M cu. ft.
J		Up to 200 cu. ft.	40c. per hundred cu. ft
		From 200 cu. ft. to 5 M cu. ft.	70c. per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	60c. per M cu. ft.
		Over 10 M cu. ft.	45c. per M cu. ft.
	October to April, discount.	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to September, discount	On bills under $5.00	10 per cent.
K		Up to 200 cu. ft.	40c. per hundred cu. ft
		From 200 cu. ft. to 5 M cu. ft.	75c. per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	50c. per M cu. ft.
	October to April, discount.	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to September, discount	On bills under $5.00	10 per cent.
L	Fonthill-Ridgeville Gas Co.	First 400 cu. ft., minimum charge	85c.
		Over 400 cu. ft.	75c. per M cu. ft.
	Dominion Natural Gas Co.		75c. per M cu. ft.
M		Up to 15 M cu. ft.	75c. per M cu. ft.
		Over 15 M cu. ft.	55c. per M cu. ft.
N		Up to 1 M cu. ft.	$1.00 per M cu. ft.
		From 1 M to 10 M cu. ft.	80c. per M cu. ft.
		From 10 M to 25 M cu. ft.	65c. per M cu. ft.
		Over 25 M cu. ft.	55c. per M cu. ft.
O		Up to 5 M cu. ft.	80c. per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	70c. per M cu. ft.
	Port Colborne	Over 10 M cu. ft.	55c. per M cu. ft.
	Summer residents		$2.00 per M cu. ft.
P		200 cu. ft. or less	$1.00
		Over 200 cu. ft.	60c. per M cu. ft.
R	November to April	Up to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
S		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M cu. ft. to 10 M cu. ft.	90c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
T	October to April	Up to 5 M cu. ft.	70c. per M cu. ft.
		Over 5 M cu. ft.	50c. per M cu. ft.
	May to September		70c. per M cu. ft.
U		1 M cu. ft. or less	95c. per M cu. ft.
		From 1 M cu. ft. to 10 M cu. ft.	60c. per M cu. ft.
		From 10 M cu. ft. to 15 M cu. ft.	55c. per M cu. ft.
		Over 15 M cu. ft.	50c. per M cu. ft.

Tables III and IV give in detail the quantity of gas used by pay, free, and industrial consumers in Ontario, and the rates paid in each municipality. Similar tables have been published since the year 1921 and reflect the changes that have taken place in each municipality during those years.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1938

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Alvinston	650	208	1	12,484	69	.....	20	K
Ancaster	.....	111	....	12,412	.....	.....	170	70c.
Appin	.....	36	....	2,429	.....	.....	32	K
Attercliffe	.....	25	....	1,500	.....	.....	3	60c.
Aylmer	1,990	835	....	75,460	.....	6,003	16	T
Bartonville	602	192	....	6,480	.....	.....	19	60c.
Belle River	810	149	1	12,494	144	543	29	B
Belmont	317	119	....	3,473	.....	.....	92	$1.00
Binbrook	100	14	1	400	300	.....	1	60c.
Blenheim	1,702	617	2	53,544	310	2,947	20	C
Bothwell	685	176	1	12,786	1	.....	14	J
Brantford	31,282	5,520	5	288,034	1,320	21,760	140	G
Brigden	433	145	....	9,255	.....	183	30	B
Brownsville	.....	77	....	2,169	.....	.....	1	30c.
Burlington	3,680	494	....	32,992	.....	.....	48	H (M.B.[1]50c.)
Byron	350	82	....	9,117	.....	48	51	K
Cainsville	325	102	....	5,406	.....	.....	4	G
Caledonia	1,410	517	2	31,632	190	23,445	7	60c.
Canfield	165	60	....	3,478	.....	.....	1	60c.
Cayuga	664	234	2	16,578	193	396	6	60c.
Chatham	16,153	4,347	5	417,387	4,176	18,896	22	J
Coatsworth	321	29	1	1,867	76	517	4	D
Comber	505	151	....	14,111	.....	1,315	19	C
Cottam	425	91	4	6,581	418	181	35	60c.
Courtland	350	69	....	3,805	.....	67	3	60c. (M.B. 50c.)
Courtright	334	114	1	6,755	81	.....	53	B
Crystal Beach	510	154	....	7,613	.....	.....	1	F
Delhi	1,675	497	....	40,497	.....	549	4	60c. (M.B. 60c.)
Dorchester	403	120	....	6,614	.....	.....	95	E (M.B. 50c.)
Dresden and Tupperville	1,700	522	2	42,625	147	541	38	C
Dundas	4,955	1,094	1	55,186	2	6,652	172	70c.(M.B.$1.00)
Dunnville	4,005	1,071	3	87,466	349	7,602	7	60c.
Dutton	810	253	3	17,781	117	671	52	B (M.B. 50c.)
Echo Place	735	81	....	4,345	.....	.....	5	G
Eden	150	32	....	2,053	.....	.....	11	60c. (M.B. 50c.)
Essex	1,785	496	1	39,885	120	5,176	33	B
Fairground	75	18	....	523	.....	.....	1	60c. (M.B. 50c.)
Fenwick	330	132	....	6,168	.....	.....	18	75c.
Fingal	170	36	....	2,304	.....	.....	71	B (M.B. 50c.)
Fisherville	160	46	....	3,009	.....	.....	2	50c.
Florence	185	60	....	4,198	.....	341	5	J
Fonthill	870	255	....	7,274	.....	.....	25	L
Fort Erie	5,755	1,416	2	52,941	1,620	.....	8	F
Galt	14,410	2,601	1	121,347	19	14,813	147	G
Glencoe	1,980	150	....	4,025	.....	.....	28	K
Grimsby		377	....	10,990	.....	1,376	10	85c.
Grimsby Beach		86	....	3,760	.....	.....	11	85c.
Hagersville	1,307	428	....	30,291	.....	.....	14	60c. (M.B. 35c.)
Hamilton	154,020	12,198	3	411,083	1,009	676,039	47	M
Hepworth	380	27	....	1,129	.....	.....	1	75c.
Hespeler	2,800	511	....	26,299	.....	19,537	155	N (M.B. $1.00)
Highgate	345	109	2	8,250	391	.....	32	B (M.B. 50c.)
Ingersoll	5,175	1,168	2	58,422	277	9,695	100	G
Inwood	250	74	....	4,285	.....	839	14	A

[1]M.B.—Minimum monthly bill.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1938—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Jarvis	505	206	....	13,632	.....	.....	9	60c.
Kingsville	2,365	635	3	57,082	190	787	30	U
Lake Shore	.....	112	....	6,079	.....	.....	16	F
Lambeth	475	155	2	14,036	177	509	85	K
Leamington	5,445	1,660	....	159,184	.....	4,270	20	55c.
London	73,880	17,036	4	1,577,477	91	93,997	55	K
Lynedoch	175	43	....	3,346	.....	.....	2	60c.
Merlin	400	156	2	14,398	1,479	2,277	2	D
Merritton	2,644	530	....	19,207	.....	8,909	35	70c.
Mount Brydges	525	114	1	11,899	59	876	43	K
Nelles Corners	86	7	1	730	120	.....	1	60c.
Niagara Falls	18,747	3,783	....	108,598	.....	21,768	11	F
Oil Springs	470	137	....	8,045	.....	882	2	R
Paris	4,325	971	2	46,292	198	10,294	129	G
Petrolia	2,710	773	2	64,989	379	1,066	60	B
Port Burwell	450	283	1	11,779	65	76	3	60c.
Port Colborne and Humberstone	8,975	2,132	4	101,552	302	3,298	5	O (M.B. $1.00)
Port Dover	1,640	649	....	42,947	.....	109	1	60c.
Port Rowan	690	235	....	12,348	.....	.....	1	60c.
Preston	6,415	1,094	1	62,075	46	13,609	151	G
Ridgetown	1,955	634	5	54,342	1,579	1,739	28	C
Ridgeway	1,100	216	....	11,112	.....	.....	1	F
Rodney	722	248	1	16,497	85	299	40	B (M.B. 50c.)
St. Anns	120	25	....	756	.....	.....	7	85c.
St. Catharines	26,834	6,045	1	259,696	463	83,452	35	70c.
St. George	510	144	....	5,283	.....	.....	148	80c.
St. Thomas	16,210	3,041	2	149,371	557	.....	75	K
St. Williams	410	111	....	5,248	.....	941	1	60c. (M.B. 50c.)
Sarnia	18,955	5,044	4	297,912	1,473	36,110	55	B
Selkirk	200	132	2	9,401	156	.....	1	60c.
Shedden	235	98	....	6,163	.....	666	63	B (M.B. 50c.)
Simcoe	5,826	2,023	2	183,953	827	13,538	20	60c.
Smithville	570	184	....	7,047	.....	.....	6	75c.
Sombra and Port Lambton	420	138	....	9,776	.....	79	45	B
Springfield	420	102	....	8,779	.....	1,260	5	T
Stevensville	420	38	....	1,681	.....	.....	1	F
Straffordville	255	98	....	8,101	.....	1,074	6	60c. (M.B. 50c.
Thamesville	814	250	1	21,959	99	2,899	13	J
Thorold	4,905	1,108	....	41,178	.....	1,787	35	70c.
Tilbury	1,900	571	2	46,959	647	623	14	C
Tillsonburg	3,830	1,276	1	95,894	498	135,337	16	63c.
Vienna	225	137	1	6,328	77	16	1	60c. (M.B. 50c
Vittoria	205	141	....	4,844	.....	.....	3	60c.
Wallaceburg	4,535	1,284	2	110,975	265	405,604	19	C
Wallacetown	175	53	1	3,271	2	589	60	B
Waterdown	900	41	....	1,648	.....	.....	45	I
Waterford	1,250	229	....	14,418	.....	91	30	P (M.B. $1.0
Welland	10,925	3,215	7	84,608	1,091	5,256	3	F
West Lorne	745	188	1	10,557	150	400	49	B (M.B. 50c.
Wheatley	745	229	1	17,306	30	397	12	60c. (M.B. 60
Windsor (Border Cities)	114,390	20,432	6	1,315,404	9,498	308,372	45	K
Woodstock	11,380	2,487	3	123,272	248	6,692	110	G
Wyoming	528	145	....	8,826	.....	570	65	A
Total	.....	119,344	112	7,381,252	32,180	1,990,650	.....	.....

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1938

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
ESSEX:							
Gosfield North	2,164	117	.....	6,896	.....	.....	60c.
Gosfield South	2,311	384	1	31,407	349	53,784	60c.
Maidstone	2,976	72	7	5,183	1,351	772	B
Mersea	4,929	341	4	30,617	622	15,020	60c.
Rochester	2,260	196	7	14,131	1,239	2,870	B
Sandwich East	5,376	12	1	880	200	.....	B
Sandwich South	2,066	110	5	7,906	960	809	B
Tilbury North	1,920	36	1	1,706	149	3,731	C
Tilbury West	1,554	28	1	1,933	96	.....	C
LAMBTON:							
Brooke	2,217	22	.....	533	.....	.....	A
Dawn	2,160	101	4	6,222	667	1,701	D
Enniskillen	2,725	107	.....	5,091	.....	393	B
Euphemia	2,692	8	.....	271	.....	.....	J
Moore	2,873	322	1	18,459	311	2,565	B
Plympton	2,681	5	.....	425	.....	.....	A
Sarnia	3,156	.....	4	.....	800	.....	B
Sombra	2,746	65	.....	3,416	.....	1,012	B
KENT:							
Camden	2,152	15	.....	762	.....	.....	C
Chatham	5,832	82	.....	4,541	.....	1,444	C
Dover	3,906	406	1	33,805	125	4,169	D
Harwich	5,010	436	9	32,868	3,037	311	C
Howard	2,813	153	2	11,932	700	.....	C
Orford	1,718	23	2	2,280	260	.....	C
Raleigh	4,230	615	24	50,727	6,662	1,360	D
Romney	1,456	77	41	5,484	13,114	364	D
Tilbury East	3,406	251	70	18,395	21,398	3,210	D
Zone	859	22	.....	979	.....	115	A
ELGIN:							
Aldborough	2,708	18	1	1,018	376	.....	B
Bayham	3,265	54	16	4,052	2,404	2,574	60c.
Dunwich	2,357	58	1	2,922	60	49	B
Malahide	2,714	56	.....	2,612	.....	35,891	70c.
Southwold	2,397	112	1	7,483	48	386	B
Yarmouth	5,030	87	.....	3,114	.....	.....	A (M.B.[1] 85c.)
MIDDLESEX:							
Caradoc	3,026	9	.....	598	.....	.....	K
Delaware	1,180	2	.....	290	.....	.....	K
Ekfrid	1,971	12	.....	560	.....	.....	K
Lobo	.....	2	.....	17	.....	2,340	K
North Dorchester	2,932	21	.....	1,176	.....	.....	E
Westminster	6,730	72	.....	6,277	.....	.....	K
NORFOLK:							
Charlotteville	2,978	12	5	965	806	1,413	60c.
Middleton	2,493	75	2	4,991	357	.....	60c.
North Walsingham	2,118	8	1	784	184	.....	60c.
South Walsingham	1,711	20	4	2,046	469	.....	60c.
Townsend	2,968	31	.....	2,945	.....	.....	60c.
Windham	3,618	3	3	329	489	.....	60c.
Woodhouse	2,308	186	10	15,750	1,376	960	60c.
RANT:							
Brantford	7,336	51	.....	2,622	.....	.....	G
Burford	3,697	7	.....	431	.....	.....	G
Onondaga	964	33	9	2,076	884	.....	70c.
South Dumfries	2,523	3	.....	125	.....	.....	80c. (M.B. 50c.)
Tuscarora	2,654	15	.....	797	.....	.....	25c.

[1]M.B.—Minimum monthly bill.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1938—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
OXFORD:							
East Oxford	1,957	16	.....	992	.....	.....	80c. (M.B. 50c.)
West Oxford	1,796	57	.....	2,494	.....	.....	G
HALDIMAND:							
Canborough	840	83	30	4,107	5,289	841	60c.
Dunn	805	129	6	6,192	667	.....	60c.
Moulton	1,590	162	16	5,836	2,570	13	60c.
North Cayuga	1,282	49	14	2,668	2,103	.....	60c.
Oneida	1,301	102	12	6,004	2,047	.....	60c.
Rainham	1,608	200	24	9,618	4,312	1,007	60c.
Seneca	1,590	140	33	7,675	5,303	.....	60c.
Sherbrooke	350	28	3	1,887	655	.....	60c.
South Cayuga	580	55	14	1,818	1,898	.....	60c.
Walpole	3,145	336	55	17,190	7,993	554	60c.
LINCOLN:							
Caistor	1,260	81	24	3,301	3,323	295	60c.
Gainsborough	2,090	18	2	412	98	.....	60c.
Grantham	5,010	15	.....	767	.....	.....	75c.
Louth	2,905	13	.....	675	.....	.....	75c.
WELLAND:							
Bertie	4,175	156	59	8,223	9,011	.....	F
Crowland	5,082	55	16	2,241	1,300	.....	F
Humberstone	2,370	265	30	11,602	4,251	.....	F
Pelham	2,690	78	2	4,040	271	.....	L
Stamford	8,020	93	4	4,171	542	.....	F
Wainfleet	2,720	326	19	6,814	3,056	105	60c.
Willoughby	905	27	26	1,339	3,703	.....	F
WENTWORTH:							
Ancaster	3,603	82	.....	6,041	.....	.....	70c. (M.B. $1.00)
Barton	1,840	109	.....	8,317	.....	.....	60c.
Binbrook	1,080	99	19	5,825	3,169	495	60c.
East Flamborough	3,705	70	.....	4,550	.....	.....	S
Glanford	1,265	143	2	9,824	709	453	60c.
Saltfleet	4,837	504	.....	22,460	.....	.....	M (M.B. 75c.)
WATERLOO:							
North Dumfries	2,361	68	.....	2,740	.....	.....	80c. (M.B. 50c.)
Waterloo	7,591	5	.....	316	.....	.....	G
Total	.....	8,517	648	530,968	121,763	141,006	.....

SUMMARY

	M cu. ft.
Total distribution to customers	10,197,819
Used by companies for all purposes	56,756
Used by private well-owners	74,000
Leakage in transmission lines	228,004
Leakage in distribution plants	249,438
Leakage in rural lines	14,701
Field operations: leakage in gathering and transmission lines to measuring stations (estimated)	257,895
Total amount of gas distributed	11,078,613

Gas Wells and Their Production

In Table V will be found full details of the natural gas fields of Ontari Similar tables have been published since 1921. The development and decli of the natural gas fields can be followed by comparing these annual statement

WELLS AND TITLE

County	Township	No. of wells producing	No. of wells abandoned	Wells drilled: No. dry	Wells drilled: No. producing	Wells drilled: Open flow	Production	Rock pressure, lbs. per sq. in.	Acres under lease	Rental paid
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	28						160	2,103	$286.50
	Malden			1					2,039	
	Mersea	5			1	50		310	50	
							5,063,515	771		
Kent	Chatham	8			6	18,857		497		
	Raleigh (Declute)	33	1	2	6	5,058		190	1,828.564	
	Raleigh	25		2	5	3,584		190		
	Romney	139	5		1	114		190		
	Tilbury East	145	8	1						
	Orford			1	1	900	509,677	570	11,080	241,556.77
	Dover	23	1						45,318	
				3			1,885,003	523		
Lambton	Dawn	29					8,927	220		
	Enniskillen	6		2						
	Euphemia						800	35		
	Sarnia	13							15,870	
				1					19,008	
Middlesex	Delaware							730		
	London									
	Mosa	3		2						
	West Nissouri									
				1						
Perth	Blanshard									7,075.68
				1				410	23,435	
Oxford	East Nissouri			1	14	51,642	506,005			
	Dereham (Brownsville)	59						410	775	1,492.55
				2	10	27,348	50,917	200	1,770	2,471.00
Elgin	Bayham[1] (Brownsville)	18		1	3	502	113,651		12,700	
	Bayham	54		2				220	33,112	
	Dunwich			3					11,174	
	Malahide	1		2					30,538	
	South Dorchester			1						
	Southwold			1				78	45,495	4,056.00
	Yarmouth				5	31	135,348	95		
Brant	Onondaga	42	7		2	25				
	Tuscarora	78	2							

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1939

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Alvinston	650	208	1	14,137	80	.....	20	K
Ancaster	513	111	....	5,891	.....	.....	170	70c. (M.B.[1] 50c., M.R.[2] 50c.)
Appin	.....	37	....	2,823	.....	.....	32	K
Attercliffe	.....	25	....	1,500	.....	.....	3	60c.
Aylmer	1,990	859	....	83,324	.....	10,716	16	T
Bartonville	602	192	....	3,026	.....	.....	19	60c.
Beachville	555	2	....	.....	.....	169,277	20	50c.
Belle River	810	200	1	13,669	121	552	29	B
Belmont	317	120	....	4,251	.....	.....	92	$1.00
Binbrook	100	14	1	638	300	.....	1	60c.
Blenheim	1,702	640	1	57,515	151	3,225	20	C
Bothwell	685	180	....	14,200	.....	.....	14	J
Brantford	31,282	6,041	5	321,171	1,502	19,468	140	G
Brigden	433	165	....	10,436	.....	22	30	B
Brownsville	.....	165	....	14,785	.....	.....	1	30c.
Burlington	3,680	464	....	28,249	.....	198	48	H
Byron	350	95	....	11,610	.....	402	51	K
Cainsville	325	113	....	5,757	.....	.....	4	G
Caledonia	1,410	529	2	34,308	224	26,059	7	60c.
Canfield	165	60	....	3,610	.....	.....	1	60c.
Cayuga	664	238	2	18,396	325	442	6	60c.
Chatham	16,153	4,610	5	465,161	4,244	32,452	22	J
Coatsworth	321	29	1	1,027	65	120	4	D
Comber	505	153	....	15,096	.....	636	19	C
Cottam	425	89	3	7,441	466	690	35	60c.
Courtland	350	74	....	5,321	.....	90	3	60c. (M.B. 60c.)
Courtright	334	117	1	7,373	97	.....	53	B
Crystal Beach	510	156	....	7,356	.....	.....	1	F
Delhi	1,675	628	1	54,171	138	352	4	60c. (M.B. 60c., M.R. 10c.)
Dorchester	403	117	....	7,020	.....	.....	95	E (M.B. 50c., M.R. 10c.)
Dresden and Tupperville	1,700	547	1	48,230	151	1,262	38	C
Dundas	4,955	1,243	1	59,249	4	7,774	172	70c.
Dunnville	4,005	1,064	2	96,455	460	9,206	7	60c.
Dutton	810	257	3	20,384	227	650	52	V
Echo Place	735	90	....	4,681	.....	.....	5	G
Eden	150	39	....	2,428	.....	42	11	60c. (M.B. 50c., M.R. 10c.)
Essex	1,785	526	1	42,361	137	6,150	33	B
Fairground	75	17	....	578	.....	.....	1	60c. (M.B. 50c., M.R. 10c.)
Fenwick	330	138	....	6,566	.....	.....	18	75c.
Fingal	170	38	....	2,660	.....	152	71	B (M.B. 50c., M.R. 10c.)
Fisherville	160	47	....	2,841	.....	.....	2	50c.
Florence	185	70	....	4,677	.....	487	5	J
Fonthill	870	269	....	6,901	.....	272	25	L
Fort Erie	5,755	1,475	2	52,372	1,888	780	8	F
Galt	14,410	2,784	1	130,661	17	17,513	147	G (M.R. 10c.)
Glencoe	1,980	209	1	20,578	12	.....	28	K
Grimsby		404	....	11,821	.....	2,263	10	85c.
Grimsby Beach		92	....	4,409	.....	.....	11	85c.
Hagersville	1,307	446	....	33,256	.....	.....	14	60c. (M.B. 35c., M.R. 15c.)
Hamilton	154,020	10,795	1	434,465	406	727,115	47	M
Hespeler	2,800	569	....	29,211	.....	22,100	155	N (M.B. $1.00, M.R. 15c.)
Highgate	345	111	1	8,685	504	.....	32	B (M.B. 50c., M.R. 10c.)
Ingersoll	5,175	1,200	2	65,456	321	10,342	100	G (M.R. 15c.)
Inwood	250	78	....	4,389	.....	846	14	A

[1]M.B.—Minimum monthly bill

[2]M.R.—Meter rental.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1939—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Jarvis	505	202	....	14,357	.....	.....	9	60c.
Kingsville	2,365	663	1	67,454	223	1,229	30	U
Lake Shore	.....	112	....	5,612	.....	.....	16	F
Lambeth	475	156	1	17,238	197	479	85	K
Leamington	5,445	1,732	....	166,682	.....	20,680	20	55c.
London	73,880	17,131	4	1,734,552	99	121,321	55	K
Lynedoch	175	52	....	3,880	.....	.....	2	60c.
Merlin	400	155	2	15,720	1,610	1,739	1	D
Merritton	2,644	552	....	22,190	.....	12,207	35	70c.
Mount Brydges	525	117	1	12,342	63	294	43	K
Nelles Corners	86	7	....	1,006	.....	.....	1	60c.
Niagara Falls	18,747	3,910	....	110,174	.....	23,113	11	F
Norwich	1,302	86	1	3,165	37	.....	20	50c.
Oil Springs	470	137	....	8,305	.....	677	2	R
Otterville	571	58	....	2,088	.....	.....	15	50c.
Paris	4,325	1,001	2	49,447	207	11,150	129	G
Petrolia	2,710	785	1	67,490	320	1,130	60	B
Picton	3,582	5	3	182	192	.....	1	60c.
Port Burwell	450	255	1	14,446	277	.....	3	60c.
Port Colborne and Humberstone	8,975	2,058	3	109,976	337	419	5	O (M.B.$1.00)
Port Dover	1,640	614	....	45,926	.....	437	1	60c.
Port Rowan	690	240	....	14,384	.....	.....	1	60c. (M.B. 60c., M.R. 10c.)
Preston	6,415	1,210	1	66,726	27	15,100	151	G (M.R. 10c.)
Ridgetown	1,955	658	5	60,095	1,838	1,566	28	C
Ridgeway	1,100	218	....	11,118	.....	.....	1	F
Rodney	722	248	2	18,821	477	475	40	V
St. Anns	120	24	....	864	.....	.....	7	85c.
St. Catharines	26,834	6,234	1	275,321	509	91,604	35	70c.
St. George	510	154	....	5,764	.....	191	148	80c.
St. Thomas	16,210	3,045	2	186,018	610	838	75	K
St. Williams	410	107	....	5,505	.....	919	1	60c. (M.B. 60c., M.R. 10c.)
Sarnia	18,955	5,133	4	316,699	2,224	30,797	55	B
Selkirk	200	135	1	9,356	101	.....	1	60c.
Shedden	235	98	....	6,768	.....	208	63	B (M.B. 50c., (M.R. 10c.)
Simcoe	5,826	2,182	3	193,550	747	17,957	20	60c.
Smithville	570	191	....	7,532	.....	.....	6	75c.
Sombra and Port Lambton	420	135	....	10,264	.....	.....	45	B
Springfield	420	125	....	10,861	.....	1,149	5	T
Springford	.....	21	....	756	.....	.....	12	50c.
Stevensville	420	39	....	2,013	.....	.....	1	F
Stoney Creek	888	253	....	8,233	.....	.....	53	M (M.B. 75c.)
Straffordville	255	124	....	10,436	.....	1,092	6	60c. (M.B. 50c., M.R. 10c.)
Thamesville	814	254	1	25,230	154	2,973	13	J
Thorold	4,905	1,147	....	44,414	.....	2,487	35	70c.
Tilbury	1,900	571	2	50,016	771	502	14	C
Tillsonburg	3,830	1,354	1	109,622	529	125,624	16	63c.
Vienna	225	89	....	7,155	.....	137	1	60c. (M.B. 50c.)
Vittoria	205	109	....	5,592	.....	.....	3	60c.
Wallaceburg	4,535	1,345	2	112,480	312	447,091	19	C
Wallacetown	175	52	1	3,710	2	601	60	B
Waterdown	900	41	....	1,932	.....	.....	45	I
Waterford	1,250	262	....	16,210	.....	51	30	P (M.B. $1.00)
Welland	10,925	3,321	7	85,698	843	5,391	3	F
West Lorne	745	188	1	12,922	223	629	49	V
Wheatley	745	206	1	19,298	52	.....	12	60c. (M.B. 60c.)
Windsor (Border Cities)	114,390	20,972	7	1,436,520	12,706	309,752	45	K
Woodstock	11,380	2,536	3	135,295	318	6,883	110	G
Wyoming	528	159	....	9,486	.....	585	65	A
Total	.....	121,907	105	8,081,472	37,845	2,331,132	.....	.....

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1939

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
ESSEX:							
Gosfield North	2,164	116	.....	7,372	.....	26	60c.
Gosfield South	2,311	651	1	35,895	359	57,663	60c.
Maidstone	2,976	87	7	5,850	1,066	994	B
Mersea	4,929	383	3	33,535	400	13,310	60c.
Rochester	2,260	238	7	15,444	992	2,982	B
Sandwich East	5,376	16	1	1,232	139	.....	B
Sandwich South	2,066	147	5	9,048	740	921	B
Tilbury North	1,920	37	1	1,999	121	2,874	C
Tilbury West	1,554	26	1	1,980	128	.....	C
LAMBTON:							
Brooke	2,217	22	.....	736	.....	.....	A
Dawn	2,160	104	4	7,163	745	2,014	D
Enniskillen	2,725	112	.....	5,202	.....	568	B
Euphemia	2,692	9	.....	248	.....	.....	J
Moore	2,873	343	1	20,899	319	3,487	B
Plympton	2,681	6	.....	415	.....	.....	A
Sarnia	3,156	.....	4	.....	800	.....	B
Sombra	2,746	68	.....	3,568	.....	882	B
KENT:							
Camden	2,152	14	.....	822	.....	.....	C
Chatham	5,832	86	.....	4,960	.....	1,889	C
Dover	3,906	425	1	38,376	130	4,559	D
Harwich	5,010	444	10	36,201	3,348	303	C
Howard	2,813	154	2	10,914	745	3,581	C
Orford	1,718	21	2	1,827	220	.....	C
Raleigh	4,230	656	24	58,208	6,652	1,672	D
Romney	1,456	109	41	7,219	11,740	637	D
Tilbury East	3,406	253	77	21,976	22,923	3,398	D
Zone	859	21	.....	910	.....	277	A
ELGIN:							
Aldborough	2,708	18	.....	1,602	.....	.....	B
Bayham	3,265	98	13	4,432	2,104	1,348	60c.
Dunwich	2,357	59	.....	3,487	.....	32	B
Malahide	2,714	276	.....	6,375	.....	54,429	70c.
Southwold	2,397	118	1	8,050	69	397	B
Yarmouth	5,030	67	.....	3,425	.....	.....	A (M.B.[1] 85c.)
MIDDLESEX:							
Caradoc	3,026	9	.....	232	.....	653	K
Delaware	1,180	1	.....	299	.....	.....	K
Ekfrid	1,971	16	.....	790	.....	.....	K
Lobo	1,909	24	.....	1,454	.....	.....	K
North Dorchester	2,932	6	.....	287	.....	2,104	E
Westminster	6,730	77	.....	7,539	.....	.....	K
NORFOLK:							
Charlotteville	2,978	17	5	860	689	2,052	60c.
Middleton	2,493	78	2	5,136	394	1,206	60c.
North Walsingham	2,118	10	1	715	205	830	60c.
South Walsingham	1,711	23	4	1,801	544	796	60c.
Townsend	2,968	30	.....	2,814	.....	.....	60c.
Windham	3,618	2	2	232	397	.....	60c.
Woodhouse	2,308	177	10	16,122	1,473	.....	60c.
BRANT:							
Brantford	7,336	48	.....	2,790	.....	.....	G
Burford	3,697	7	.....	331	.....	.....	G
Onondaga	964	30	7	2,016	924	.....	70c.
South Dumfries	2,523	3	.....	123	.....	.....	80c. (M.B. 50c.)
Tuscarora	2,654	16	.....	1,107	.....	.....	25c.

[1]M.B.—Minimum monthly bill.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1939—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
OXFORD:							
Dereham	3,437	22	1	1,734	209	.....	35c.–50c.
East Oxford	1,957	17	.....	838	.....	.....	80c. (M.B. 50c.)
North Norwich	1,906	8	.....	288	.....	.....	50c.
South Norwich	2,645	10	.....	360	.....	.....	50c.
West Oxford	1,796	73	.....	4,084	.....	.....	G
HALDIMAND:							
Canborough	840	90	31	4,771	5,622	1,016	60c.
Dunn	805	126	8	6,832	795	.....	60c.
Moulton	1,590	140	16	6,061	2,712	.....	60c.
North Cayuga	1,282	49	17	3,835	2,602	.....	60c.
Oneida	1,301	102	8	6,646	1,535	.....	60c.
Rainham	1,608	204	24	11,266	4,653	949	60c.
Seneca	1,590	144	32	7,869	5,110	.....	60c.
Sherbrooke	350	23	3	1,213	661	.....	60c.
South Cayuga	580	52	14	1,626	2,341	.....	60c.
Walpole	3,145	333	53	16,811	8,092	509	60c.
LINCOLN:							
Caistor	1,260	88	17	3,784	3,056	226	60c.
Gainsborough	2,090	17	2	375	200	.....	60c.
Grantham	5,010	16	.....	780	.....	.....	75c.
Louth	2,905	14	.....	683	.....	.....	75c.
WELLAND:							
Bertie	4,175	161	59	8,193	8,698	44	F
Crowland	5,082	58	16	2,448	1,500	.....	F
Humberstone	2,370	297	29	14,520	4,539	41	F
Pelham	2,690	77	2	4,119	85	.....	L
Stamford	8,020	98	4	4,998	600	.....	F
Wainfleet	2,720	325	21	8,442	3,473	2,481	O
Willoughby	905	31	26	1,581	3,889	.....	F
WENTWORTH:							
Ancaster	3,603	158	.....	5,978	.....	686	70c. (M.B. $1.00)
Barton	1,840	371	.....	10,402	.....	.....	60c.
Binbrook	1,080	96	20	6,021	3,162	510	60c.
East Flamborough	3,705	184	.....	8,748	.....	.....	S
Glanford	1,265	137	2	10,731	745	476	60c.
Saltfleet	4,837	315	.....	17,085	.....	.....	M (M.B. 75c.)
West Flamborough	2,914	9	.....	121	.....	.....	S
HALTON:							
Nelson	3,840	13	.....	1,019	.....	.....	S
WATERLOO:							
North Dumfries	2,361	70	.....	3,150	.....	.....	80c. (M.B. 50c.)
Waterloo	7,591	5	.....	298	.....	.....	G
Total	.....	9,691	642	591,728	122,645	172,822	.....

SUMMARY

	M cu. ft.
Total distribution to customers	11,337,644
Used by companies for all purposes	51,605
Used by private well-owners	74,000
Leakage in transmission lines	139,445
Leakage in distribution plants	255,483
Leakage in rural lines	16,191
Field operations: leakage in gathering and transmission lines to measuring stations (estimated)	200,159
Total amount of gas distributed	12,074,527

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1940

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Alvinston	650	237	1	16,248	111	.....	20	K
Ancaster	513	81	....	4,589	.....	.....	170	70c.
Appin	.....	43	....	3,170	.....	.....	32	K
Attercliffe	.....	35	....	2,300	.....	.....	3	60c.
Aylmer	1,990	900	....	93,073	.....	1,592	6	T
Bartonville	602	177	1	10,961	352	.....	19	60c.
Beachville	555	35	....	3,255	.....	344,277	20	50c.
Belle River	810	215	....	15,389	.....	559	29	B
Belmont	317	137	....	4,805	.....	.....	92	$1.00
Binbrook	100	14	1	445	300	.....	1	60c.
Blenheim	1,702	660	1	62,992	181	3,674	20	C
Bothwell	685	186	....	16,137	.....	.....	14	J
Brantford	31,282	6,174	6	356,402	1,640	24,498	140	G
Brigden	433	168	....	12,292	.....	.....	30	B
Brownsville	.....	185	....	28,681	.....	.....	1	30c.
Burlington	3,680	581	....	31,334	.....	407	48	H (M.B.[1] 50c.)
Byron	350	102	....	12,913	.....	482	51	K
Cainsville	325	120	....	6,204	.....	.....	4	G
Caledonia	1,410	546	2	38,016	211	28,648	7	60c.
Canfield	165	58	....	4,188	.....	.....	1	60c.
Cayuga	664	231	1	19,776	51	581	6	60c.
Chatham	16,153	4,856	5	524,697	4,600	36,673	22	J
Comber	505	158	....	15,797	.....	860	19	C
Cottam	425	96	2	7,927	533	768	35	60c.
Courtland	350	74	....	5,341	.....	128	3	60c. (M.B. 50c.)
Courtright	334	129	1	7,800	97	.....	53	B
Crystal Beach	510	156	....	7,992	.....	.....	1	F
Delhi	1,675	670	2	53,951	127	721	4	60c. (M.B. 60c.)
Dorchester	403	142	....	7,594	.....	.....	95	E (M.B. 50c.)
Dresden and Tupperville	1,700	573	3	51,227	193	1,764	38	C
Dundas	4,955	1,259	....	61,052	.....	12,361	172	70c.(M.B.$1.00)
Dunnville	4,005	1,103	2	105,479	367	14,109	7	60c.
Dutton	810	260	3	22,047	273	869	52	B (M.B. 50c.)
Echo Place	735	96	....	5,020	.....	.....	5	G
Eden	150	29	....	2,416	.....	306	2	60c. (M.B. 50c.)
Essex	1,785	547	....	47,449	.....	7,158	33	B
Fairground	75	14	....	583	.....	.....	1	60c.
Fenwick	330	143	....	7,083	.....	.....	18	75c.
Fingal	170	62	....	3,749	.....	116	71	B (M.B. 50c.)
Fisherville	160	46	....	2,912	.....	.....	2	50c.
Florence	185	73	....	5,664	.....	564	5	J
Fonthill	870	285	....	7,910	.....	.....	25	L
Fort Erie	5,755	1,577	2	58,284	2,052	.....	8	F
Galt	14,410	2,861	1	142,455	27	28,382	147	G
Glencoe	1,980	242	1	27,009	6	719	28	K
Grimsby		413	....	12,368	.....	3,701	10	A
Grimsby Beach		97	....	5,275	.....	.....	11	A
Hagersville	1,307	454	....	31,900	.....	.....	14	60c. (M.B. 50c.)
Hamilton	154,020	11,808	1	458,962	233	583,900	47	M
Hespeler	2,800	606	....	32,277	.....	25,503	155	N (M.B. $1.00)
Highgate	345	115	2	10,714	602	.....	32	B (M.B. 50c.)
Ingersoll	5,175	1,250	2	75,256	333	14,970	100	G
Inwood	250	93	....	4,697	.....	923	14	A
Jarvis	505	200	....	16,537	.....	.....	9	60c.
Kingsville	2,365	674	1	75,199	254	2,014	30	U
Lake Shore	.....	111	....	5,384	.....	.....	16	F
Lambeth	475	164	1	19,332	264	483	85	K
Leamington	5,445	1,748	....	200,513	.....	4,982	20	55c.
London	73,880	17,657	4	1,944,249	123	161,711	55	K

[1]M.B.—Minimum monthly bill.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1940—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Lynedoch	175	52	....	3,231	.....	.....	2	60c.
Merlin	400	170	2	17,082	1,752	1,781	2	D
Merritton	2,644	599	....	24,393	.....	21,264	35	70c.
Mount Brydges	525	135	1	13,478	69	184	43	K
Nelles Corners	86	7	....	867	.....	.....	1	60c.
Niagara Falls	18,747	4,050	....	119,356	.....	24,902	11	F
Norwich	1,302	171	1	13,727	120	.....	20	50c.
Oil Springs	470	136	....	9,256	.....	.....	2	R
Otterville	571	129	....	5,578	.....	.....	15	50c.
Paris	4,325	1,059	2	54,662	219	19,962	129	G
Petrolia	2,710	842	2	71,921	424	1,473	60	B
Picton	3,582	15	2	800	200	.....	1	60c.
Port Burwell	450	252	1	15,666	333	.....	3	60c.
Port Colborne and Humberstone	8,975	2,326	4	125,719	344	681	5	O (M.B. $1.00)
Port Dover	1,640	704	....	50,052	.....	657	1	60c.
Port Rowan	690	224	....	14,342	.....	.....	1	60c.
Preston	6,415	1,254	1	72,981	27	18,984	151	G
Ridgetown	1,955	709	5	66,421	1,895	1,466	28	C
Ridgeway	1,100	229	....	13,426	.....	.....	1	F
Rodney	722	272	2	21,838	500	554	40	B (M.B. 50c.)
St. Anns	120	23	....	883	.....	.....	7	85c.
St. Catharines	26,834	6,561	1	303,633	555	135,508	35	70c.
St. George	510	154	....	6,404	.....	468	148	80c.
St. Thomas	16,210	3,141	2	221,998	627	2,438	75	K
St. Williams	410	102	....	5,919	.....	505	1	60c. (M.B. 50c.)
Sarnia	18,955	5,724	2	350,563	2,668	39,866	55	B
Selkirk	200	140	1	9,810	124	.....	1	60c.
Shedden	235	102	1	6,640	76	176	63	B (M.B. 50c.)
Simcoe	5,826	2,217	3	220,071	580	19,152	20	60c.
Smithville	570	191	....	7,981	.....	.....	6	75c.
Sombra and Port Lambton	420	162	1	11,989	38	.....	45	B
Springfield	420	132	....	12,632	.....	4,027	5	T
Springford	.....	29	....	3,065	.....	.....	12	50c.
Stevensville	420	45	....	2,280	.....	.....	1	F
Stoney Creek	888	206	....	12,867	.....	.....	53	M (M.B. 75c.)
Straffordville	255	125	....	11,183	.....	1,009	6	60c. (M.B. 50c.)
Thamesville	814	273	1	27,398	167	3,019	13	J
Thorold	4,905	1,174	....	47,131	.....	3,347	35	70c.
Tilbury	1,900	605	2	53,175	831	499	14	C
Tillsonburg	3,830	1,312	1	120,590	493	82,606	16	63c.
Vienna	225	96	....	5,786	.....	.....	1	60c. (M.B. 50c.)
Vittoria	205	125	....	6,298	.....	.....	3	60c.
Wallaceburg	4,535	1,450	3	127,926	333	479,831	19	C
Wallacetown	175	57	1	4,237	12	960	60	B
Waterdown	900	54	....	2,406	.....	.....	45	I
Waterford	1,250	277	....	15,364	.....	56	30	P (M.B. $1.00)
Welland	10,925	3,524	7	96,155	782	6,583	3	F
West Lorne	745	194	1	13,977	221	888	49	B (M.B. 50c.)
Wheatley		241	1	21,345	76	.....	12	60c. (M.B. 60c.)
Windsor (Border Cities)	114,390	21,195	1	1,581,131	13,601	473,581	45	K
Woodstock	11,380	2,580	3	146,122	314	6,465	110	G
Wyoming	528	179	....	9,953	.....	638	65	A
Total	.....	127,451	101	8,998,979	40,311	2,658,933	.....	.....

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1940

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
ESSEX:							
Gosfield North	2,164	121	.....	7,852	.....	23	60c.
Gosfield South	2,311	541	.....	39,201	.....	39,084	60c.
Maidstone	2,976	90	7	6,336	1,679	902	B
Mersea	4,929	402	2	35,212	776	10,511	60c.
Rochester	2,260	242	7	16,969	1,652	2,819	B
Sandwich East	5,376	18	1	1,328	212	.....	B
Sandwich South	2,066	158	5	11,096	1,180	858	B
Tilbury North	1,920	46	1	1,996	141	3,075	C
Tilbury West	1,554	30	1	2,055	128	.....	C
LAMBTON:							
Brooke	2,217	30	.....	857	.....	.....	A
Dawn	2,160	116	4	7,578	662	2,473	D
Enniskillen	2,725	139	.....	6,066	.....	523	B
Euphemia	2,692	11	.....	315	.....	.....	J
Moore	2,873	391	1	23,219	404	3,395	B
Plympton	2,681	7	.....	385	.....	.....	A
Sarnia	3,156	.....	4	.....	800	.....	B
Sombra	2,746	81	.....	4,102	.....	1,251	B
KENT:							
Camden	2,152	20	.....	986	.....	.....	C
Chatham	5,832	94	.....	5,687	.....	2,262	C
Dover	3,906	459	1	42,179	145	4,008	D
Harwich	5,010	513	12	40,522	3,744	325	C
Howard	2,813	165	2	13,694	917	1,511	C
Orford	1,718	20	2	1,876	205	.....	C
Raleigh	4,230	688	26	61,505	7,170	4,535	D
Romney	1,456	111	43	8,883	10,895	793	D
Tilbury East	3,406	259	77	20,709	23,971	4,640	D
Zone	859	31	.....	1,097	.....	203	A
ELGIN:							
Aldborough	2,708	237	.....	1,686	.....	.....	B
Bayham	3,265	120	6	7,026	1,005	10,986	60c.
Malahide	2,714	225	7	9,528	1,347	20,286	60c.
Dunwich	2,357	57	1	4,002	59	.....	B
Southwold	2,397	126	.....	9,131	.....	409	B
Yarmouth	5,030	73	.....	3,724	.....	.....	A (M.B. 85c.)
MIDDLESEX:							
Caradoc	3,026	16	.....	694	.....	987	K
Delaware	1,180	3	.....	211	.....	.....	K
Ekfrid	1,971	17	.....	1,067	.....	.....	K
Lobo	1,909	6	.....	28	.....	1,083	K
Mosa	1,472	2	.....	35	.....	.....	K
North Dorchester	2,932	10	.....	290	.....	.....	E
Westminster	6,730	93	.....	9,146	.....	.....	K
NORFOLK:							
Charlotteville	2,978	16	5	923	733	941	60c.
Houghton	1,745	6	.....	.....	.....	2,028	60c.
Middleton	2,493	91	2	5,424	368	1,212	60c.
North Walsingham	2,118	13	1	728	200	989	60c.
South Walsingham	1,711	23	4	1,890	533	370	60c.
Townsend	2,968	30	.....	2,841	.....	.....	60c.
Windham	3,618	3	2	345	370	.....	60c.
Woodhouse	2,308	175	10	16,010	1,447	.....	60c.

M.B.—Minimum monthly bill.

TABLE IV—GAS CONSUMPTION IN TOWNSHIPS, 1940—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford	7,336	47	.....	2,414	.....	.....	G
Burford	3,697	7	.....	335	.....	.....	G
Onondaga	964	33	5	2,242	688	.....	70c.
South Dumfries	2,523	3	.....	110	.....	.....	80c. (M.B. 50c.)
Tuscarora	2,654	19	.....	1,234	.....	.....	25c.
OXFORD:							
Dereham	3,437	87	.....	7,683	.....	.....	30c.-50c.
East Oxford	1,957	17	.....	813	.....	.....	80c. (M.B. 50c.)
West Oxford	1,796	84	.....	6,625	.....	.....	G
HALDIMAND:							
Canborough	840	88	31	4,583	5,452	1,040	60c.
Dunn	805	128	1	7,506	122	.....	60c.
Moulton	1,590	151	15	7,840	1,825	.....	60c.
North Cayuga	1,282	89	18	7,240	2,955	.....	60c.
Oneida	1,301	79	8	5,609	1,400	.....	60c.
Rainham	1,608	210	24	12,214	4,466	1,200	60c.
Seneca	1,590	148	32	8,423	5,295	.....	60c.
Sherbrooke	350	25	3	1,692	652	.....	60c.
South Cayuga	580	56	14	2,029	2,451	.....	60c.
Walpole	3,145	340	49	17,595	8,404	554	60c.
LINCOLN:							
Caistor	1,260	85	16	3,941	2,762	173	60c.
Gainsborough	2,090	16	3	276	100	.....	60c.
Grantham	5,010	18	.....	936	.....	.....	75c.
Louth	2,905	14	.....	729	.....	.....	75c.
WELLAND:							
Bertie	4,175	166	60	9,268	9,675	2,245	F
Crowland	5,082	66	15	3,177	1,784	.....	F
Humberstone	2,370	289	31	17,181	4,879	.....	F
Pelham	2,690	79	2	4,451	270	.....	L
Stamford	8,020	134	3	6,874	478	.....	F
Wainfleet	2,720	220	19	7,353	3,460	2,773	O
Willoughby	905	37	24	1,667	3,912	.....	F
WENTWORTH:							
Ancaster	3,603	171	.....	15,646	.....	2,180	70c. (M.B. $1.00)
Barton	1,840	225	.....	10,997	.....	.....	60c.
Binbrook	1,080	96	19	5,981	3,308	476	60c.
East Flamborough	3,705	160	.....	16,056	.....	.....	S
Glanford	1,265	132	2	10,993	820	500	60c.
Saltfleet	4,837	460	.....	17,363	.....	.....	M (M.B. 75c.)
West Flamborough	2,914	8	.....	168	.....	.....	60c.-$1.00
HALTON:							
Nelson	3,840	19	.....	2,174	.....	.....	S
WATERLOO:							
North Dumfries	2,361	70	.....	3,850	.....	.....	80c. (M.B. 50c.)
Waterloo	7,591	6	.....	327	.....	.....	G
Total	.....	10,207	628	672,029	125,901	133,623	.....

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1941

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Alvinston	645	233	1	14,641	85	.....	20	K
Ancaster	500	83	....	4,113	.....	.....	170	70c. (M.B.[1] $1.00, M.R.[2] 50c.)
Appin	125	46	....	2,885	.....	.....	32	K
Attercliffe	47	35	....	2,240	.....	.....	3	50c.–60c.
Aylmer	2,478	894	....	86,234	.....	426	6	T
Bartonville	602	165	1	9,017	350	.....	19	60c.
Beachville	700	33	....	3,885	.....	32,229	20	33c.–60c.
Belle River	844	227	1	14,732	138	543	29	B
Belmont	500	147	....	6,033	.....	.....	92	$1.00
Binbrook	195	14	1	400	250	.....	1	60c.
Blenheim	1,952	662	2	55,364	317	2,785	20	C
Bothwell	666	187	....	13,833	.....	.....	14	Y
Brantford	31,948	6,510	5	303,612	1,334	29,392	140	G
Brigden	500	169	....	11,103	.....	.....	30	B
Brownsville	225	185	....	30,069	.....	.....	1	30c.
Burlington	3,815	622	....	26,258	.....	499	48	H (M.R. 50c.)
Byron	200	104	....	11,573	.....	532	51	K
Cainsville	600	119	....	5,474	.....	.....	4	G
Caledonia	1,425	572	1	34,767	191	2,710	7	60c.
Canfield	138	58	....	3,388	.....	.....	1	50c.–60c.
Cayuga	687	231	2	16,296	55	642	6	60c.
Chatham	17,369	4,952	5	463,473	3,839	37,101	22	J
Comber	608	154	3	14,169	.....	1,085	19	C
Cottam	450	99	2	7,134	221	722	35	60c.
Courtland	341	74	....	4,482	.....	132	3	60c. (M.B. 50c.)
Courtright	341	130	1	7,174	90	.....	53	B
Crystal Beach	661	163	....	7,987	.....	.....	1	F
Delhi	1,908	662	2	54,204	361	104	4	60c. (M.B. 60c.)
Dorchester	400	141	....	8,027	.....	.....	95	E (M.B. 50c.)
Dresden and Tupperville	1,762	569	1	44,363	144	1,194	38	C
Dundas	5,276	1,334	....	56,073	.....	11,897	172	70c. (M.R. 15c.)
Dunnville	4,028	1,140	2	93,962	288	13,316	7	60c.
Dutton	804	259	5	18,790	172	855	52	V (M.B. 50c.)
Echo Place	735	101	....	4,643	.....	.....	5	G
Eden	153	38	....	2,021	.....	285	2	60c. (M.B. 50c.)
Essex	1,935	567	1	45,355	138	5,600	33	B
Fairground	75	14	....	683	.....	.....	1	60c. (M.B. 60c.)
Fenwick	264	145	....	6,814	.....	.....	18	75c.
Fingal	350	62	....	3,817	.....	.....	71	B (M.B. 50c.)
Fisherville	200	46	....	2,724	.....	.....	2	50c.–55c.
Florence	185	69	....	5,280	.....	642	5	Y
Fonthill	919	310	....	9,762	.....	.....	25	L
Fort Erie	6,595	1,694	2	62,674	1,920	497	8	F
Galt	15,346	2,844	3	120,127	21	40,848	147	G
Glencoe	764	247	1	24,852	1	703	28	K
Grimsby	2,331	451	1	12,258	297	3,696	10	A
Grimsby Beach	400	104	....	5,295	.....	.....	11	A
Hagersville	1,429	454	....	37,329	.....	.....	14	60c. (M.B. 50c.)
Hamilton	166,337	11,983	1	395,718	148	256,763	47	M
Hespeler	3,058	609	....	26,753	.....	5,193	155	N (M.B. $1.00)
Highgate	312	113	2	9,327	485	.....	32	C
Ingersoll	5,782	1,286	3	62,796	273	17,601	100	G
Inwood	395	91	....	4,051	.....	513	14	A
Jarvis	550	207	....	15,055	.....	.....	9	60c.
Kingsville	2,317	741	2	61,625	184	1,700	30	U
Lake Shore	.....	121	....	5,684	.....	.....	16	F
Lambeth	333	154	1	15,855	220	472	85	K

[1]M.B.—Minimum monthly bill.
[2]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1941—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Leamington	5,858	1,797	....	169,592	.....	5,098	20	55c.
London	78,264	17,641	....	1,823,186	.....	189,572	55	K
Lynedoch	151	51	....	3,187	.....	.....	2	60c.
Merlin	500	169	2	14,655	1,523	1,811	2	D
Merritton	2,993	638	....	24,355	.....	19,463	35	75c.
Mount Brydges	577	126	1	11,566	54	210	43	K
Nelles Corners	100	7	....	1,156	.....	.....	1	60c.
Niagara Falls	20,589	4,399	....	129,228	.....	37,638	11	F
Norwich	1,297	178	....	16,515	.....	.....	20	50c.
Oil Springs	506	136	....	7,449	.....	.....	2	R
Otterville	500	135	....	13,058	.....	.....	15	50c.
Paris	4,637	1,085	2	45,377	171	2,915	129	G
Petrolia	2,801	829	2	61,204	366	1,965	60	B
Port Burwell	744	256	1	13,961	308	72	3	50c.–70c.
Port Colborne	6,993	2,440	1	116,626	271	691	5	O (M.B. $1.00)
Port Dover	1,784	709	....	48,208	.....	51	1	60c.
Port Rowan	657	231	....	12,530	.....	.....	1	60c. (M.B. 70c.)
Preston	6,704	1,254	1	59,567	33	18,031	151	G
Ridgetown	1,944	698	5	59,488	1,574	1,335	28	C
Ridgeway	864	242	....	12,321	.....	.....	1	F
Rodney	721	254	4	18,959	392	282	40	V
St. Anns	100	21	....	815	.....	.....	7	85c.
St. Catharines	30,275	6,803	1	288,041	487	128,651	35	75c.
St George	569	162	....	5,340	.....	480	148	80c.
St. Thomas	17,132	3,253	2	197,972	499	2,093	75	K
St. Williams	377	106	....	5,169	.....	333	1	60c. (M.B. 70c.)
Sarnia	18,734	5,839	5	329,777	2,229	47,578	55	B
Selkirk	221	139	1	8,779	87	.....	1	60c.
Shedden	209	79	....	4,758	.....	439	63	B (M.B. 50c.)
Simcoe	6,037	2,264	2	189,043	587	19,646	20	60c.
Smithville	754	205	....	7,294	.....	.....	6	60c.–75c.
Sombra and Port Lambton	688	169	....	10,850	.....	.....	45	B
Springfield	452	132	....	11,483	.....	795	5	T
Springford	188	34	....	3,069	.....	.....	12	50c.
Stevensville	578	55	....	2,750	.....	.....	1	F
Stoney Creek	972	226	....	11,259	.....	.....	53	M (M.B. 75c.)
Straffordville	267	121	....	9,538	.....	1,407	6	60c. (M.B. 50c.)
Thamesville	792	269	1	23,686	136	2,578	13	Y
Thorold	5,307	1,215	....	44,428	.....	2,870	35	75c.
Tilbury	2,155	623	2	49,939	529	526	14	C
Tillsonburg	4,002	1,305	1	97,270	392	2,510	16	63c.
Vienna	221	88	....	5,012	.....	.....	1	60c. (M.B. 50c.)
Vittoria	300	129	....	5,461	.....	.....	3	60c.
Wallaceburg	4,986	1,499	3	118,073	302	520,955	19	C
Wallacetown	175	53	....	3,382	.....	939	60	B
Waterdown	841	62	....	2,211	.....	.....	45	I (M.R. 50c.)
Waterford	1,261	279	....	17,766	.....	4	30	P (M.B. $1.00)
Welland	12,500	3,944	7	111,190	735	11,569	3	F
West Lorne	790	194	1	12,429	152	794	49	V
Wheatley	758	244	1	18,989	57	.....	12	60c. (M.B. 60c.)
Windsor (Border Cities)	105,311	23,237	1	1,489,574	10,243	647,587	45	K
Woodstock	12,461	2,586	2	129,281	231	6,827	110	G
Wyoming	554	178	....	8,750	.....	654	65	A
Total	.....	132,212	101	8,261,819	32,880	2,149,046	.....	.....

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1941

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
ESSEX:							
Gosfield North	2,140	125	1	6,953	270	.....	60c.
Gosfield South	2,690	573	.....	32,506	.....	45,493	60c.
Maidstone	2,895	89	7	6,116	1,454	1,035	B
Mersea	5,228	379	.....	29,484	.....	2,070	60c.
Rochester	2,250	243	7	16,800	1,339	3,474	B
Sandwich East	9,038	19	1	1,349	200	.....	B
Sandwich South	2,355	160	5	11,289	980	901	B
Tilbury North	1,862	45	1	2,036	107	1,416	C
Tilbury West	1,498	31	1	1,949	85	.....	C
LAMBTON:							
Brooke	2,067	31	.....	871	.....	.....	A
Dawn	2,304	112	4	7,180	534	2,301	D
Enniskillen	2,639	140	.....	5,767	.....	774	Y
Euphemia	1,300	10	.....	333	.....	.....	J
Moore	3,340	388	1	22,071	335	3,101	B
Plympton	2,567	7	.....	363	.....	.....	A
Sarnia	3,992	.....	4	.....	800	.....	B
Sombra	2,759	83	.....	4,031	.....	1,454	B
KENT:							
Camden	2,118	20	.....	887	.....	.....	C
Chatham	6,586	102	.....	5,496	.....	1,985	C
Dover	4,364	440	1	38,080	134	5,146	D
Harwich	4,921	511	9	37,697	2,893	170	C
Howard	2,610	158	3	11,892	798	1,282	C
Orford	1,678	19	2	1,296	222	.....	C
Raleigh	3,890	692	23	53,759	5,861	3,480	W
Romney	1,413	109	38	8,003	8,966	1,319	W
Tilbury East	3,094	261	72	19,216	17,654	6,099	W
Zone	830	29	.....	1,035	.....	.....	A
ELGIN:							
Aldborough	2,693	17	.....	1,148	.....	.....	V
Bayham	3,263	110	6	6,062	933	17,152	60c. (M.B.[1] 50c.)
Dunwich	2,152	54	.....	3,593	.....	.....	V
Malahide	2,825	248	10	10,389	1,296	31,610	50c.–70c.
Southwold	3,049	129	1	7,714	61	309	B (M.B. 50c.)
Yarmouth	5,234	78	.....	3,517	.....	.....	A (M.B. 85c.)
MIDDLESEX:							
Caradoc	3,012	14	.....	625	.....	761	K
Delaware	1,182	2	.....	122	.....	.....	K
Ekfrid	1,829	19	.....	855	.....	.....	K
Lobo	1,910	5	.....	14	.....	1,306	K
Mosa	1,436	2	.....	66	.....	.....	K
North Dorchester	2,746	10	.....	365	.....	.....	E (M.B. 50c.)
Westminster	8,421	108	.....	9,182	.....	.....	K
NORFOLK:							
Charlotteville	3,352	16	5	960	1,087	2,008	60c.
Houghton	1,773	6	.....	.....	.....	1,824	60c.
Middleton	2,375	22	2	4,753	338	2,831	60c.
North Walsingham	2,030	14	1	737	225	2,357	60c.
South Walsingham	1,876	24	4	1,809	495	1,011	60c.
Townsend	3,830	30	.....	2,780	.....	.....	60c.
Windham	4,104	3	.....	358	.....	.....	60c.
Woodhouse	2,434	176	11	19,369	1,406	.....	60c.

[1]M.B.—Minimum monthly bill.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1941—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford	3,026	52	.....	2,343	.....	.....	G
Burford	3,680	6	.....	258	.....	.....	G
Onondaga	919	37	5	2,138	691	.....	70c.
South Dumfries	2,434	3	.....	109	.....	.....	80c.
Tuscarora	2,654	19	.....	1,322	.....	.....	25c.
OXFORD:							
Dereham	3,284	55	.....	8,178	.....	.....	G
East Oxford	1,963	6	.....	272	.....	.....	G
North Oxford	1,043	1	.....	.....	.....	9,381	50c.
West Oxford	2,016	95	.....	6,828	.....	.....	G
HALDIMAND:							
Canborough	839	87	35	4,466	4,589	1,220	60c.
Dunn	732	135	1	7,445	123	.....	60c.
Moulton	1,528	166	10	7,726	1,493	.....	60c.
North Cayuga	1,227	87	17	4,822	2,581	.....	60c.
Oneida	1,095	76	9	4,468	1,302	.....	60c.
Rainham	1,574	213	31	10,887	4,677	1,561	60c.
Seneca	1,389	124	23	6,633	3,984	.....	60c.
Sherbrooke	297	24	3	1,580	545	.....	60c.
South Cayuga	572	55	14	2,050	2,100	.....	60c.
Walpole	3,103	349	50	18,800	7,309	525	60c.
LINCOLN:							
Caistor	1,104	83	14	3,674	1,945	165	60c. (M.B. 65c.)
Gainsborough	1,929	14	3	229	151	.....	60c.
Grantham	5,855	19	.....	847	.....	.....	75c.
Louth	3,313	16	.....	688	.....	.....	75c.
WELLAND:							
Bertie	3,594	189	52	9,166	8,097	4,155	F
Crowland	5,840	70	12	2,814	1,152	.....	F
Humberstone	2,903	328	29	16,075	4,701	.....	F
Pelham	2,701	83	2	3,818	229	.....	L
Stamford	8,774	164	3	8,103	457	.....	F
Wainfleet	2,776	166	18	6,642	2,613	3,294	75c.
Willoughby	808	39	23	1,911	3,040	.....	F
WENTWORTH:							
Ancaster	3,985	175	.....	14,505	.....	7,873	70c. (M.B. $1.00)
Barton	2,735	312	.....	11,036	.....	.....	60c.
Binbrook	1,187	107	19	5,871	2,941	355	60c.
East Flamborough	4,460	176	.....	14,093	.....	.....	S (M.R.[2] 50c.)
Glanford	1,471	133	2	9,437	582	605	60c.
Saltfleet	7,138	538	.....	18,240	.....	.....	M (M.B. 75c.)
West Flamborough	2,754	7	.....	162	.....	.....	S (M.R. 50c.)
HALTON:							
Nelson	3,836	18	.....	2,523	.....	.....	S (M.R. 50c.)
WATERLOO:							
North Dumfries	2,785	70	.....	2,717	.....	.....	80c.
Waterloo	8,552	7	.....	169	.....	.....	G
Total	.....	10,237	595	623,932	103,775	171,803	.....

[2]M.R.—Meter rental.

Natural Gas Fields

Owing to the depletion of natural gas supplies and the continued demand for natural gas, drilling contractors and companies increased their efforts

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1942

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Alvinston	648	224	....	13,827	.....	.....	20	K
Ancaster	500	139	....	7,352	.....	.....	170	[1]70c. ([2]M.B. $1.00, [3]M.R. 50c.)
Appin	125	41	....	2,506	.....	.....	32	K
Attercliffe	47	35	....	2,000	.....	.....	3	[1]50c.–60c.
Aylmer	2,474	813	....	54,363	.....	149	6	T
Beachville	700	33	....	3,161	.....	6	20	33c.–60c.
Belle River	765	234	....	16,134	.....	458	29	B
Belmont	500	138	....	5,246	.....	.....	92	$1.00
Binbrook	195	14	1	568	250	.....	1	[1]60c.
Blenheim	1,765	631	1	57,280	164	2,279	20	C
Bothwell	605	176	....	12,761	.....	.....	14	Y
Brantford	32,778	6,285	9	267,649	1,472	28,742	140	G[1]
Brigden	500	165	....	11,315	.....	.....	30	B
Brownsville	225	180	....	16,575	.....	.....	1	30c.
Burlington	4,402	628	....	22,401	.....	462	48	H (M.R. 50c.)
Byron	200	90	....	9,215	.....	425	51	K
Cainsville	600	102	....	4,236	.....	.....	4	G[1]
Caledonia	1,410	576	1	36,410	208	2,676	7	60c.
Canfield	138	61	....	3,340	.....	.....	1	[1]50c.–60c.
Cayuga	651	223	1	16,103	130	536	6	60c.
Chatham	17,241	4,968	....	456,946	.....	34,100	22	J
Comber	608	154	....	14,465	.....	1,022	19	C
Cottam	450	99	2	6,258	200	736	35	[1]60c.
Courtland	341	66	....	5,198	.....	110	3	[1]60c. (M.B. 50c.)
Courtright	313	127	....	8,073	.....	.....	53	B
Crystal Beach	692	158	....	8,394	.....	.....	1	F
Delhi	2,093	635	2	47,381	258	.....	4	[1]60c. (M.B. 50c.)
Dorchester	400	131	....	6,503	.....	219	95	E[1] (M.B. 50c.)
Dresden and Tupperville	1,762	556	1	46,584	155	1,304	38	C
Dundas	5,257	1,346	....	55,352	.....	12,719	72	70c. (M.R. 15c.)
Dunnville	4,137	1,160	2	100,632	287	13,767	7	[1]60c.
Dutton	776	253	2	17,228	130	833	52	V[1] (M.B. 50c.)
Echo Place	735	121	....	4,972	.....	.....	5	G[1]
Eden	153	36	....	2,002	.....	343	2	[1]60c. (M.B. 50c.)
Essex	1,959	560	....	45,992	.....	4,947	33	B
Fenwick	264	147	....	7,078	.....	.....	18	[1]75c.
Fingal	350	60	....	3,607	.....	.....	71	B[1] (M.B. 50c.)
Fisherville	200	46	....	2,357	.....	.....	2	[1]50c.–55c.
Florence	185	67	....	5,444	.....	606	5	Y
Fonthill	957	325	....	9,189	.....	139	25	L
Fort Erie	6,873	1,757	2	69,754	1,296	862	8	F
Galt	14,858	2,649	1	101,247	13	46,142	147	G[1]
Glencoe	793	232	....	22,842	.....	652	28	K
Grimsby	1,998	442	1	12,670	292	3,507	10	A
Grimsby Beach	400	94	....	5,216	.....	.....	11	A
Hagersville	1,524	470	....	35,254	.....	.....	14	[1]60c. (M.B. 50c.)
Hamilton	167,505	11,831	....	371,156	.....	196,651	47	M
Hespeler	3,023	564	....	22,686	.....	2,848	155	N[1] (M.B. $1.00)
Highgate	310	109	2	9,001	357	.....	32	C[1]
Ingersoll	5,810	1,277	2	58,500	349	11,499	100	G[1]
Inwood	395	89	....	4,305	.....	.....	14	A
Jarvis	539	210	....	15,010	.....	.....	9	[1]60c.
Kingsville	2,290	677	1	56,870	177	1,567	30	U[1]
Lake Shore	.....	112	....	5,936	.....	.....	16	F
Lambeth	333	152	1	11,570	200	441	80	K[1]

[1]Plus a surcharge of 4.41 cents per M cubic foot for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.B.—Minimum monthly bill.

[3]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1942—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Distance from gas field	Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial		
				M cu. ft.	M cu. ft.	M cu. ft.	miles	
Leamington	5,619	1,722	....	167,887	.....	4,215	20	[1]55c.
London	77,438	16,110	....	1,451,372	.....	134,481	55	K
Lynedoch	151	58	....	2,956	.....	.....	2	[1]60c.
Merlin	500	155	1	15,451	950	1,664	2	D
Merritton	3,189	638	....	24,615	.....	16,726	35	[1]75c.
Mount Brydges	577	116	....	9,571	.....	179	43	K
Nelles Corners	100	7	....	1,150	.....	.....	1	[1]60c.
Niagara Falls	20,118	4,576	....	135,413	.....	37,193	11	F
Norwich	1,184	151	2	10,807	277	.....	20	50c.
Oil Springs	445	135	....	8,075	.....	572	2	R
Otterville	500	118	....	10,668	.....	.....	15	50c.
Paris	4,608	1,060	1	39,550	144	2,049	129	G[1]
Petrolia	2,605	807	....	60,254	.....	2,462	60	B
Port Burwell	744	209	1	10,858	323	.....	3	50c.–70c.
Port Colborne and Humberstone	10,270	2,473	4	118,295	302	2,087	5	O[1] (M.B. $1.00)
Port Dover	1,818	661	....	52,774	.....	.....	1	[1]60c.
Port Rowan	622	232	....	12,308	.....	.....	1	60c. (M.B. 70c.)
Port Ryerse	.....	5	....	1,796	.....	.....	1	[1]60c.
Preston	6,707	1,196	1	45,127	39	15,448	151	G[1]
Ridgetown	1,854	687	2	62,748	982	1,701	28	C
Ridgeway	864	234	....	13,580	.....	.....	1	F
Rodney	722	236	1	16,583	369	.....	40	V[1]
St. Anns	100	22	....	907	.....	.....	7	85c.
St. Catharines	32,559	6,728	1	286,499	498	140,445	35	[1]75c.
St. George	569	129	....	5,028	.....	371	148	[1]80c.
St. Thomas	17,773	3,165	2	150,492	441	928	75	K[1]
St. Williams	377	109	....	5,021	.....	349	1	60c. (M.B. 70c.)
Sarnia	17,840	5,822	....	325,561	.....	59,599	55	B
Selkirk	221	133	1	8,877	106	.....	1	[1]60c.
Shedden	209	76	....	4,425	.....	484	63	B[1] (M.B. 50c.)
Simcoe	6,224	2,248	2	189,962	591	23,882	20	[1]60c.
Smithville	754	197	....	7,810	.....	.....	6	60c.–75c.
Sombra and Port Lambton	688	170	1	10,938	317	.....	45	B
Springfield	409	112	1	7,758	79	509	5	T
Springford	188	32	....	2,879	.....	.....	12	50c.
Stevensville	578	48	....	2,544	.....	.....	1	F
Stoney Creek	1,012	226	....	9,736	.....	.....	53	M (M.B. 75c.)
Straffordville	267	113	....	8,502	.....	1,233	6	60c. (M.B. 50c.)
Thamesville	789	263	....	22,781	.....	2,768	13	Y
Thorold	5,374	1,216	....	44,786	.....	3,925	35	[1]75c.
Tilbury	1,982	614	1	55,081	350	545	14	C
Tillsonburg	3,999	1,310	1	94,820	378	2,609	16	[1]63c.
Vienna	205	76	....	3,756	.....	.....	1	60c. (M.B. 50c.)
Vittoria	221	89	....	4,069	.....	.....	3	[1]60c.
Wallaceburg	4,970	1,488	....	126,091	.....	485,389	19	C
Wallacetown	175	54	....	3,195	.....	898	60	B[1]
Waterdown	898	65	....	2,120	.....	.....	45	I (M.R. 50c.)
Waterford	1,300	296	....	17,084	.....	.....	30	P[1] (M.B. $1.00)
Welland	14,899	4,201	7	129,162	768	8,362	3	F
West Lorne	785	191	2	12,302	231	801	49	V[1]
Wheatley	718	245	1	19,493	62	.....	12	[1]60c. (M.B. 60c.)
Windsor (Border Cities)	109,948	22,511	....	1,432,439	.....	800,555	45	K
Woodstock	12,745	2,555	1	112,152	272	7,657	110	G[1]
Wyoming	494	165	....	8,916	.....	758	65	A
Total	.....	128,723	66	7,605,138	13,417	2,131,591	.....	.....

[1]Plus a surcharge of 4.41 cents per M cubic foot for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1942

County and township	Population	No. of consumers		Quantity consumed			Net rate[1] per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
ESSEX:							
Gosfield North	2,160	122	2	6,087	170	.....	60c.
Gosfield South	2,716	426	1	33,629	306	34,396	60c.
Maidstone	2,980	89	.....	6,684	.....	.....	B
Mersea	5,098	366	1	28,228	397	1,266	60c.
Rochester	2,211	254	.....	17,861	.....	3,024	B
Sandwich East	9,202	25	.....	1,791	.....	.....	B
Sandwich South	2,442	170	.....	12,039	.....	879	B
Tilbury North	1,862	44	1	9,885	105	4,699	C
Tilbury West	1,477	30	1	1,906	94	.....	C
LAMBTON:							
Brooke	2,067	32	.....	944	.....	.....	A
Dawn	2,198	110	4	7,730	477	2,071	D
Enniskillen	2,522	140	.....	5,769	.....	975	Y
Euphemia	1,950	10	.....	295	.....	.....	J
Moore	3,222	390	.....	23,160	.....	2,120	B
Plympton	2,456	7	.....	307	.....	.....	A
Sarnia	4,066	.....	4	.....	800	.....	B
Sombra	2,734	80	.....	4,381	.....	1,132	B
KENT:							
Camden	2,044	23	.....	887	.....	.....	C
Chatham	6,301	96	.....	6,423	.....	2,662	C
Dover	4,286	420	1	40,883	148	3,885	D
Harwich	4,644	503	9	38,752	2,079	85	C
Howard	2,486	154	.....	12,020	.....	.....	C
Orford	1,527	19	2	1,245	162	.....	C
Raleigh	3,885	672	23	55,059	5,381	1,682	W
Romney	1,370	111	39	7,500	8,939	1,921	W
Tilbury East	3,128	260	125	20,130	32,801	4,194	W
Zone	761	23	.....	829	.....	.....	A
ELGIN:							
Aldborough	2,488	16	.....	716	.....	.....	V
Bayham	3,040	87	6	5,422	758	1,447	60c. (M.B.[2] 50c.)
Dunwich	2,035	52	3	3,404	894	.....	V
Malahide	2,685	125	10	11,236	976	4,672	50c.–70c.
Southwold	2,826	123	1	7,637	73	203	B (M.B. 50c.)
Yarmouth	5,321	77	.....	2,829	.....	.....	A (M.B. 85c.)
MIDDLESEX:							
Caradoc	2,822	14	.....	951	.....	671	K
Delaware	1,119	2	.....	41	.....	.....	K
Ekfrid	1,776	19	.....	910	.....	.....	K
Lobo	1,852	4	.....	23	.....	1,946	K
Mosa	1,351	21	.....	51	.....	.....	K
North Dorchester	2,678	12	.....	260	.....	.....	E (M.B. 50c.)
Westminster	8,441	106	.....	8,473	.....	.....	K
NORFOLK:							
Charlotteville	3,163	12	5	1,901	925	.....	60c.
Houghton	1,722	15	.....	95	.....	.....	60c.
Middleton	2,362	80	2	4,739	310	.....	60c.
North Walsingham	2,049	9	1	963	264	.....	60c.
South Walsingham	1,705	22	4	2,354	480	.....	60c.
Townsend	3,683	30	.....	3,210	.....	.....	60c.
Windham	3,487	3	.....	331	.....	.....	60c.
Woodhouse	2,376	175	10	18,725	1,305	.....	60c.

[1]All gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system, is subject to a surcharge of 4.41 cents per M cubic foot.

[2]M.B.—Minimum monthly bill.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1942—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford	8,737	52	.....	2,382	.....	.....	G
Burford	3,620	6	.....	227	.....	.....	G
Onondaga	907	36	7	1,938	735	.....	70c.
South Dumfries	2,434	3	.....	111	.....	.....	80c.
Tuscarora	2,654	19	.....	1,732	.....	.....	25c.
OXFORD:							
Dereham	3,208	53	.....	4,672	.....	.....	G
East Oxford	1,873	6	.....	234	.....	.....	G
West Oxford	2,036	96	.....	4,698	.....	.....	G
HALDIMAND:							
Canborough	805	78	31	4,648	4,339	502	60c.
Dunn	686	166	1	7,376	78	154	60c.
Moulton	1,471	156	10	9,114	1,281	.....	60c.
North Cayuga	1,211	90	12	4,885	1,932	.....	60c.
Oneida	1,102	75	8	4,368	1,169	.....	60c.
Rainham	1,551	214	27	11,987	6,621	1,170	60c.
Seneca	1,399	122	30	6,662	7,932	.....	60c.
Sherbrooke	309	26	2	1,705	857	.....	60c.
South Cayuga	532	51	14	2,256	2,174	491	60c.
Walpole	3,189	347	50	23,449	7,512	378	60c.
LINCOLN:							
Caistor	1,189	78	14	3,523	1,923	.....	60c. (M.B. 65c.)
Gainsborough	1,894	19	8	288	245	.....	60c.
Grantham	6,243	20	.....	936	.....	.....	75c.
Louth	3,368	15	.....	802	.....	.....	75c.
WELLAND:							
Bertie	3,497	179	48	9,341	7,795	4,226	F
Crowland	6,616	84	11	3,751	1,353	.....	F
Humberstone	3,074	334	24	17,406	3,747	.....	F
Pelham	2,895	83	1	4,001	201	.....	L
Stamford	9,997	210	3	9,568	494	.....	F
Wainfleet	2,691	271	18	7,349	2,628	700	75c.
Willoughby	874	42	21	2,184	3,297	.....	F
WENTWORTH:							
Ancaster	4,217	42	1	20,103	258	.....	70c. (M.B. $1.00)
Barton	3,302	371	.....	11,542	.....	7,832	60c.
Binbrook	1,180	101	21	6,609	3,944	33	60c.
East Flamborough	4,373	190	.....	11,960	.....	.....	S (M.R.[3] 50c.)
Glanford	1,440	137	2	9,308	583	641	60c.
Saltfleet	7,780	561	.....	16,498	.....	140	M (M.B. 75c.)
West Flamborough	2,771	7	.....	128	.....	.....	S (M.R. 50c.)
HALTON:							
Nelson	4,075	18	.....	1,826	.....	.....	S (M.R. 50c.)
WATERLOO:							
North Dumfries	2,945	70	.....	2,870	.....	.....	80c.
Waterloo	8,662	7	.....	169	.....	.....	G
CONSUMED BY DRILLERS:							
Western division	.....	.....	.....	.....	.....	6,610	.....
Eastern division	.....	.....	.....	.....	.....	6,952	.....
Total	.....	9,778	619	651,301	118,942	103,759	.....

[3]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1943

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	620	226	....	13,281	.....	.....	K
Ancaster	566	223	....	10,990	.....	.....	[1]70c. (M.B.[2] $1.00)
Appin	125	42	....	2,182	.....	.....	K
Attercliffe	47	35	....	2,000	.....	.....	50c.–60c.
[illegible]mer	2,474	833	....	29,776	.....	.....	T
Beachville	426	28	....	2,231	.....	98	65c. (M.B. $1.00)
Belle River	845	244	....	17,635	.....	480	B (M.R.[3] 20c.)
Belmont	500	111	....	3,137	.....	393	$1.00
Binbrook	195	14	1	373	200	.....	[1]60c.
Blenheim	1,873	646	1	59,296	149	1,341	C (M.R. 20c.)
Bothwell	605	182	....	12,730	.....	.....	Y
Brantford	34,372	6,299	....	238,117	.....	40,013	[1]G
Brigden	386	175	....	12,022	.....	823	B (M.R. 10c.)
[illegible]ownsville	225	180	....	15,803	.....	.....	65c. (M.B. $1.00)
Burlington	4,311	649	....	23,524	.....	532	H
Byron	200	96	....	4,917	.....	445	K
Cainsville	600	125	....	4,586	.....	.....	[1]G
Caledonia	1,395	536	4	43,841	406	2,115	60c.
Canfield	130	60	....	3,449	.....	.....	50c.–60c.
Cayuga	652	220	....	16,855	.....	473	[1]60c. (M.R. 15c.)
Chatham	17,807	5,006	....	438,749	.....	30,469	J
Clandrasil	116	29	3	1,729	574	.....	[1]60c.
Comber	484	158	....	14,889	.....	814	C (M.R. 20c.)
Cottam	385	96	....	6,707	.....	752	[1]60c. (M.B. 50c.)
Courtland	341	64	....	4,797	.....	29	[1]60c. (M.B. 50c.)
Courtright	357	135	....	9,814	.....	.....	B (M.R. 20c.)
[illegible]lhi	2,093	635	....	47,184	.....	.....	[1]60c. (M.B. 60c., M.R. 10c.)
Dorchester	456	143	....	6,691	.....	316	[1]E (M.B. 50c., M.R. 10c.)
Dresden and Tupperville	1,762	559	....	48,922	.....	1,720	C (M.R. 20c.)
Dundas	5,588	1,346	....	59,166	.....	11,643	70c. (M.B. $1.00)
Dunnville	4,305	1,171	....	107,981	.....	8,998	[1]60c. (M.R. 15c.)
Dutton	791	247	....	17,630	.....	842	[1]V
Echo Place	735	124	....	4,586	.....	.....	[1]G (M.B. 70c., M.R. 10c.)
Eden	153	37	....	2,119	.....	493	[1]60c. (M.B. 50c., M.R. 10c.)
Essex	1,986	562	....	49,467	.....	4,071	B (M.R. 20c.)
[illegible]wick	404	147	....	7,047	.....	.....	[1]75c. (M.R. 25c.)
[illegible]gal	161	68	....	3,885	.....	.....	[1]B (M.B. 50c.)
Fisherville	171	40	....	2,927	.....	.....	50c.–55c.
Florence	137	68	....	5,928	.....	672	Y
Fonthill	1,009	251	....	6,924	.....	145	L
Fort Erie	7,069	1,923	3	80,572	1,866	315	F
Galt	14,693	2,642	....	95,791	.....	35,822	[1]G (M.B. 80c., M.R. 10c.)
Glencoe	752	234	....	20,427	.....	576	K
[illegible]imsby	1,993	462	....	13,774	.....	3,142	Q
[illegible]imsby Beach	400	96	....	5,438	.....	.....	Q
Hagersville	1,588	475	....	37,226	.....	.....	[1]60c. (M.B. 35c., M.R. 15c.)
Hamilton	174,222	13,828	....	363,065	.....	202,168	M
Hespeler	3,021	570	....	21,613	.....	2,847	[1]N
Highgate	301	111	....	9,035	.....	.....	[1]C (M.R. 20c.)
Humberstone	3,287	730	....	34,371	.....	229	[1]O
Ingersoll	5,823	1,279	....	62,796	.....	11,588	[1]G

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.B.—Minimum monthly bill.

[3]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1943—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Inwood	175	85	....	4,846	.....	.....	A
Jarvis	557	245	....	21,614	.....	.....	[1]60c. (M.R. 10c.)
Kingsville	2,335	679	....	53,048	.....	1,949	[1]U
Lambeth	475	152	....	10,349	.....	494	[1]K
Leamington	5,456	1,796	....	165,703	.....	3,288	[1]60c.
London	81,158	16,345	....	722,069	.....	123,354	K
Lynedoch	151	72	....	5,217	.....	.....	[1]60c.
Merlin	219	158	....	16,661	.....	673	D
Merritton	3,450	642	....	25,622	.....	11,703	[1]75c. (M.R. 25c.)
Mount Brydges	462	117	....	6,770	.....	.....	K
Niagara Falls	19,138	3,505	....	109,405	.....	45,415	F
Norwich	1,199	130	....	7,498	.....	.....	65c. (M.B. $1.00)
Oil Springs	426	139	....	9,779	.....	.....	R
Otterville	481	109	....	7,554	.....	.....	65c. (M.B. $1.0
Paris	4,524	1,059	....	38,099	.....	2,109	[1]G
Petrolia	2,684	824	....	63,715	.....	3,630	T
Port Burwell	513	211	1	6,566	251	.....	T
Port Colborne	7,187	1,626	....	87,655	.....	334	[1]O
Port Dover	2,001	650	....	57,286	.....	.....	[1]60c.
Port Rowan	584	254	....	17,438	.....	.....	60c.
Port Ryerse	.....	13	....	1,885	.....	.....	[1]60c.
Preston	6,707	1,189	....	41,731	.....	17,378	[1]G
Ridgetown	1,911	701	1	66,380	26	1,906	C
Rodney	718	232	....	16,639	.....	.....	[1]V
St. Anns	185	24	....	1,083	.....	.....	60c.–85c.
St. Catharines	34,541	6,718	....	273,201	.....	132,955	[1]75c. (M.R. 25c.)
St. George	486	148	....	5,586	.....	313	[1]80c.
St. Thomas	17,773	3,123	....	118,407	.....	768	[1]K
St. Williams	166	117	....	6,786	.....	305	60c.
Sarnia	20,082	5,907	....	340,364	.....	61,124	B (M.R. 10c.)
Selkirk	167	132	....	9,598	.....	.....	[1]60c.
Shedden	183	69	....	3,885	.....	335	[1]B
Simcoe	6,047	2,466	....	213,638	.....	25,016	[1]60c.
Smithville	529	199	....	8,579	.....	.....	Q
Sombra and Port Lambton	688	174	....	11,801	.....	.....	B (M.R. 20c.)
Springfield	401	119	....	4,008	.....	.....	T
Springford	188	30	....	2,880	.....	.....	65c. (M.B. $1.00)
Stoney Creek	1,051	229	....	9,839	.....	.....	M (M.B. 75c.)
Straffordville	267	109	....	4,027	.....	205	T
Thamesville	777	278	....	21,075	.....	1,417	Y
Thorold	5,517	1,216	....	46,480	.....	4,126	[1]75c. (M.R. 25c.
Tilbury	1,995	635	1	59,433	408	463	C (M.R. 20c.)
Tillsonburg	4,081	1,343	....	98,512	.....	2,414	[1]63c.
Vienna	206	76	5	2,390	629	.....	T
Vittoria	257	100	....	5,877	.....	.....	[1]60c.
Wallaceburg	5,088	1,507	....	133,692	.....	307,012	C (M.R. 20c.)
Wallacetown	175	54	....	3,447	.....	662	[1]V
Waterdown	916	63	....	2,018	.....	.....	I
Waterford	1,352	300	....	19,785	.....	.....	[1]P
Welland	15,780	2,800	6	92,321	556	15,710	F
West Lorne	791	189	....	13,330	.....	350	[1]V
Wheatley	716	242	....	20,562	.....	.....	[1]60c.
Windsor (Border Cities)	117,031	22,906	....	1,278,863	.....	841,005	K
Woodstock	12,916	2,559	....	108,966	.....	3,479	[1]G
Wyoming	480	173	....	9,733	.....	758	A
Total	.....	129,098	26	6,601,690	5,065	1,975,014	.....

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1943

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
ESSEX:							
Gosfield North	2,160	125	2	6,840	292	.....	[1]60c.
Gosfield South	2,716	616	.....	45,882	.....	29,115	[1]60c.
Maidstone	2,980	89	11	6,525	2,802	1,710	B
Mersea	5,098	156	4	12,650	637	.....	[1]60c.
Rochester	2,211	242	....	18,226	.....	1,707	B
Sandwich East	9,202	55	.....	4,125	.....	.....	B
Sandwich South	2,442	161	.....	11,925	.....	1,712	B
Tilbury North	1,862	44	1	2,834	105	17,512	C
Tilbury West	1,477	31	1	2,207	113	.....	C
LAMBTON:							
Brooke	2,067	30	.....	1,123	.....	.....	A
Dawn	2,198	115	4	8,280	590	2,538	D
Enniskillen	2,522	136	.....	6,554	.....	1,173	B
Euphemia	1,950	10	.....	382	.....	.....	Y
Moore	3,222	402	.....	28,372	.....	986	B
Plympton	2,456	7	.....	241	.....	.....	A
Sarnia	4,066	.....	.....	.....	.....	.....	B
Sombra	2,734	83	1	4,864	52	1,539	B
KENT:							
Camden	2,044	18	.....	1,116	.....	177	C
Chatham	6,301	102	.....	7,099	.....	3,104	C
Dover	4,286	437	1	45,226	175	3,682	D
Harwich	4,644	520	5	41,901	783	67	C
Howard	2,486	158	3	13,375	525	.....	C
Orford	1,527	21	3	1,625	33	.....	C
Raleigh	3,885	671	19	57,441	4,304	1,702	D and [1]W
Romney	1,370	119	36	8,319	8,540	608	D and [1]W
Tilbury East	3,128	264	73	22,432	17,580	1,895	D and [1]W
Zone	761	25	.....	878	.....	1,593	A
ELGIN:							
Aldborough	2,488	20	3	823	428	816	[1]V
Bayham	3,040	39	.....	547	.....	1,305	T and [1]60c.
Dunwich	2,035	51	2	3,628	206	.....	[1]V
Malahide	2,685	252	7	10,229	563	1,947	T
Southwold	2,826	124	1	7,258	90	151	B
Yarmouth	5,321	77	.....	2,687	.....	.....	A
MIDDLESEX:							
Caradoc	2,822	19	.....	957	.....	831	K
Delaware	1,119	2	.....	64	.....	.....	K
Ekfrid	1,776	19	.....	1,054	.....	.....	K
Lobo	1,852	4	.....	21	.....	1,683	K
Mosa	1,351	2	.....	69	.....	.....	K
North Dorchester	2,678	18	.....	731	.....	641	E
Westminster	8,441	125	.....	7,699	.....	.....	K
NORFOLK:							
Charlotteville	3,163	.....	5	.....	828	.....	[1]60c.
Middleton	2,362	72	3	4,271	379	.....	[1]60c.
North Walsingham	2,049	.....	1	.....	201	.....	[1]60c.
South Walsingham	1,705	.....	4	.....	559	.....	60c.
Townsend	3,683	.....	.....	.....	.....	.....	[1]60c.
Windham	3,487	.....	1	.....	177	.....	[1]60c.
Woodhouse	2,376	.....	10	.....	1,519	.....	[1]60c.

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1943—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford	8,737	51	.....	2,602	.....	.....	[1]G
Burford	3,620	17	.....	794	.....	.....	[1]G
Onondaga	907	54	4	1,770	318	.....	[1]70c.
South Dumfries	2,434	3	.....	120	.....	.....	[1]80c.
Tuscarora	2,654	19	.....	2,037	.....	.....	25c.
OXFORD:							
Dereham	3,208	53	.....	4,374	.....	.....	65c. (M.B.[2] $1.00)
East Oxford	1,873	6	.....	235	.....	.....	[1]G
North Norwich	1,708	.....	.....	.....	.....	.....	65c. (M.B. $1.00)
South Norwich	2,907	.....	.....	.....	.....	.....	65c. (M.B. $1.00)
West Oxford	2,036	83	.....	4,427	.....	815	[1]G
HALDIMAND:							
Canborough	805	97	25	6,320	4,467	.....	[1]60c. (M.R.[3] 15c.)
Dunn	686	100	4	5,635	610	44	[1]60c. (M.R. 15c.)
Moulton	1,471	185	10	13,096	1,353	20	[1]60c. (M.R. 25c.)
North Cayuga	1,211	54	9	2,897	1,574	373	[1]60c.
Oneida	1,102	80	7	7,744	1,360	.....	[1]60c.
Rainham	1,551	203	23	12,636	4,110	1,735	[1]60c.
Seneca	1,399	153	25	5,566	4,610	377	[1]60c.
Sherbrooke	309	55	3	3,553	912	310	[1]60c. (M.R. 15c.)
South Cayuga	532	66	20	2,803	4,141	2,614	[1]60c. (M.R. 15c.)
Walpole	3,189	306	49	18,018	8,044	393	[1]60c. (M.R. 15c.)
LINCOLN:							
Caistor	1,189	82	17	4,358	2,323	144	50c. (M.B. 65
Gainsborough	1,894	15	4	467	199	.....	60c.
Grantham	6,243	20	.....	938	.....	.....	[1]75c. (M.R. 25c.)
Louth	3,368	15	.....	703	.....	.....	[1]75c.
WELLAND:							
Bertie	3,497	982	52	53,940	8,062	40	F
Crowland	6,616	1,342	10	44,213	1,189	.....	F
Humberstone	3,074	460	26	24,459	4,594	.....	F
Pelham	2,895	157	2	6,156	248	.....	L
Stamford	9,997	1,135	.....	35,300	.....	.....	F
Wainfleet	2,691	262	7	7,580	895	1,098	[1]75c.
Willoughby	874	20	22	1,548	3,700	.....	F
WENTWORTH:							
Ancaster	4,217	190	.....	14,004	.....	.....	[1]70c. (M.B. $1.00)
Barton	3,302	405	.....	13,480	.....	3,410	[1]60c.
Binbrook	1,180	103	18	7,039	2,757	29	[1]60c.
East Flamborough	4,373	172	.....	9,676	.....	.....	S (M.R. 50c.)
Glanford	1,440	136	1	10,899	180	740	[1]60c.
Saltfleet	7,780	291	.....	15,487	.....	206	M
West Flamborough	2,771	8	.....	163	.....	.....	S (M.R. 50c.)
HALTON:							
Nelson	4,075	18	.....	1,152	.....	.....	S (M.R. 50c.)
WATERLOO:							
North Dumfries	2,945	70	.....	2,786	.....	.....	[1]80c.
Waterloo	8,662	7	.....	293	.....	.....	[1]G
Total	.....	12,936	529	749,748	97,127	90,542	.....

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.B.—Minimum monthly bill.

[3]M.R.—Meter rental.

NATURAL GAS RATES, 1944—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
L	Fonthill-Ridgeville Gas Co.	First 100 cu. ft., minimum charge	85c.
		Over 100 cu. ft.	75c. per M cu. ft.
	Dominion Natural Gas Co.		75c. per M cu. ft.
M		Minimum bill	75c.
		Up to 15 M cu. ft.	75c. per M cu. ft.
		Over 15 M cu. ft.	55c. per M cu. ft.
N		1 M cu. ft. or less	85c.
		From 1 M to 10 M cu. ft.	80c. per M cu. ft.
		From 10 M to 25 M cu. ft.	65c. per M cu. ft.
		Over 25 M cu. ft.	55c. per M cu. ft.
O	Port Colborne	Minimum bill	$1.00
		Up to 5 M cu. ft.	80c. per M cu. ft.
		From 5 M to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	Summer residents	Minimum charge	$2.00 per M cu. ft.
P		200 cu. ft. or less	$1.00
		Over 200 cu. ft.	60c. per M cu. ft.
Q	Grimsby and Grimsby Beach	Minimum bill	$1.00
		Up to 5 M cu. ft.	85c. per M cu. ft.
		From 5 M to 10 M cu. ft.	75c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
	Smithville	Minimum bill	90c.
		Up to 5 M cu. ft.	75c. per M cu. ft.
		From 5 M to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
R	November to April	Up to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
S		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft.	90c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
T	Central Pipe Line Co.	Minimum bill	$1.90
		First 200 cu. ft.	55c. per hundred cu. ft.
		Next 800 cu. ft.	10c. per hundred cu. ft.
		Next 1,000 cu. ft.	60c. per M cu. ft.
		Next 4,000 cu. ft.	$1.00 per M cu. ft.
		Over 6,000 cu. ft.	$2.00 per M cu. ft.
U		1 M cu. ft. or less	95c. per M cu. ft.
		From 1 M to 10 M cu. ft.	60c. per M cu. ft.
		From 10 M to 15 M cu. ft.	55c. per M cu. ft.
		Over 15 M cu. ft.	50c. per M cu. ft.
V		1 M cu. ft. or less	80c. per M cu. ft.
		From 1 M to 5 M cu. ft.	60c. per M cu. ft.
		Over 5 M cu. ft.	50c. per M cu. ft.
W	October to April	Up to 10 M cu. ft.	40c. per M cu. ft.
		From 10 M to 20 M cu. ft.	45c. per M cu. ft.
		Over 20 M cu. ft.	55c. per M cu. ft.
	May to September		65c. per M cu. ft.
Y		Up to 200 cu. ft.	40c. per 100 cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	70c. per M cu. ft.
		From 5 M to 10 M cu. ft.	60c. per M cu. ft.
		Over 10 M cu. ft.	45c. per M cu. ft.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1944

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	620	233	....	13,599	.....	.....	K
Ancaster	566	202	....	10,834	.....	.....	[1]70c. (M.B.[2] $1.00)
Appin	125	46	....	2,244	.....	.....	K
Attercliffe	47	35	....	1,837	.....	494	50c.–60c.
Aylmer	2,474	835	....	29,428	.....	.....	T
Beachville	426	54	....	2,614	.....	.....	65c. (M.B. $1.00)
Belle River	845	245	....	18,624	.....	473	B (M.R.[3] 20c.)
Belmont	500	110	....	3,590	.....	585	$1.00
Binbrook	195	6	....	421	200	.....	[1]60c.
Blenheim	1,873	666	....	58,753	127	1,304	C (M.R. 20c.)
Bothwell	605	191	....	14,881	.....	.....	Y
Brantford	34,372	6,257	....	236,979	.....	33,609	[1]G
Brigden	386	170	....	12,148	.....	770	B (M.R. 10c.)
Burlington	4,311	679	....	24,850	.....	856	H
Byron	200	96	....	4,942	.....	372	K
Cainsville	600	33	....	1,023	.....	.....	[1]G
Caledonia	1,395	550	3	39,077	83	2,240	60c.
Canfield	130	60	....	3,202	.....	.....	50c.–60c.
Cayuga	652	219	....	16,078	.....	536	[1]60c. (M.R. 15c.)
Chatham	17,807	5,062	....	437,727	.....	31,127	J
Chippawa	1,266	337	3	7,784	573	.....	F
Clandrasil	116	30	3	1,485	486	.....	60c.
Comber	484	153	....	15,761	.....	932	C (M.R. 20c.)
Cottam	385	92	....	7,071	245	751	[1]60c. (M.B. 50c.)
Courtland	341	59	....	4,825	.....	.....	[1]60c. (M.B. 50c.)
Courtright	357	142	....	10,417	.....	.....	B (M.R. 20c.)
Delhi	2,093	654	....	48,832	416	.....	60c. (M.B.60c., M.R. 10c.)
Dorchester	456	146	....	6,773	.....	543	[1]E (M.B. 50c., M.R. 10c.)
Dresden and Tupperville	1,762	602	....	50,898	.....	2,428	C (M.R. 20c.)
Dundas	5,588	1,375	....	58,865	.....	10,279	70c. (M.B. $1.00)
Dunnville	4,305	1,176	1	102,265	111	6,873	[1]60c. (M.R. 15c.)
Dutton	791	253	....	17,756	213	847	[1]V
Echo Place	735	245	....	7,742	.....	.....	[1]G (M.B. 70c., M.R. 10c.)
Eden	153	35	....	2,849	.....	406	[1]60c. (M.B. 50c., M.R. 10c.)
Essex	1,986	562	....	50,146	.....	3,782	B (M.R. 20c.)
Fenwick	404	148	....	6,692	.....	360	[1]75c. (M.R. 25c.)
Fingal and Shedden	161	142	....	8,241	48	274	[1]B (M.B. 50c.)
Fisherville	171	39	....	3,012	.....	.....	50c.–55c.
Florence	137	70	....	5,979	.....	547	Y
Fonthill	1,009	326	....	11,930	.....	180	L
Fort Erie	7,069	1,914	4	85,580	1,895	2,933	F
Galt	14,693	2,679	....	91,201	.....	32,030	[1]G (M.B. 80c., M.R. 10c.)
Glencoe	752	247	....	21,741	.....	561	K
Grimsby	1,993	477	....	14,121	.....	3,140	Q
Grimsby Beach	400	111	....	6,068	.....	.....	Q
Hagersville	1,588	491	....	36,461	.....	106	[1]60c. (M.B. 35c., M.R. 15c.)
Hamilton	174,222	12,687	....	384,345	.....	192,740	M
Hespeler	3,021	581	....	21,358	.....	2,793	[1]N
Highgate	301	109	....	8,237	30	.....	[1]C (M.R. 20c.)
Humberstone	3,287	771	....	35,074	.....	263	[1]O

[1]Plus a surcharge of 5 cents per M cubic foot for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.B.—Minimum monthly bill.

[3]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1944—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Ingersoll	5,823	1,268	....	63,021	.....	10,752	[1]G
Inwood	175	90	....	5,109	.....	.....	A
Jarvis	557	247	....	21,586	.....	.....	[1]60c. (M.R. 10c.)
Kingsville	2,335	676	....	55,202	.....	1,646	[1]U
Lambeth	475	155	....	10,343	.....	494	[1]K
Leamington	5,456	1,870	....	172,540	.....	3,560	[1]60c.
London	81,158	16,748	....	739,329	.....	123,075	K
Lynedoch	151	75	....	5,533	833	.....	[1]60c.
Merlin	219	159	....	16,096	567	219	D
Merritton	3,450	642	....	23,825	.....	10,522	[1]75c. (M.R. 25c.)
Morpeth	.....	.....	....	.....	143	.....	.....
Mount Brydges	462	124	....	7,231	.....	.....	K
Niagara Falls	19,138	4,327	4	142,718	768	46,017	F
Norwich	1,199	128	....	5,981	.....	.....	65c. (M.B. $1.00)
Oil Springs	426	151	....	9,353	.....	.....	R
Otterville	481	110	....	5,928	.....	.....	65c. (M.B. $1.00)
Paris	4,524	1,045	....	37,481	.....	2,142	[1]G
Petrolia	2,684	832	....	64,341	.....	3,557	T
Port Burwell	513	219	1	7,239	172	.....	T
Port Colborne	7,187	1,720	....	81,487	200	394	[1]O
Port Dover	2,001	668	....	58,521	.....	.....	[1]60c.
Port Rowan	584	252	....	18,628	504	.....	60c.
Port Ryerse	.....	4	....	2,169	1,380	.....	[1]60c.
Preston	6,707	1,183	....	41,864	.....	18,087	[1]G
Putnam	.....	61	....	3,062	.....	1,969	E
Ridgetown	1,911	702	....	65,419	261	1,843	C
Rodney	718	232	....	17,294	404	.....	[1]V
Ruscomb	.....	.....	....	.....	298	.....	.....
St. Anns	185	32	....	1,255	.....	.....	60c.–$1.35
St. Catharines	34,541	6,702	....	265,131	.....	130,412	[1]75c. (M.R. 25c.)
St. George	486	150	....	5,374	.....	608	[1]80c.
St. Thomas	17,773	3,161	....	121,008	.....	1,283	[1]K
St. Williams	166	117	....	6,531	.....	253	60c.
Sarnia	20,082	6,003	....	342,753	.....	56,123	B (M.R. 10c.)
Selkirk	167	136	....	9,328	.....	.....	[1]60c.
Simcoe	6,047	2,469	....	210,552	166	38,459	[1]60c.
Smithville	529	202	....	8,305	.....	.....	Q
Sombra and Port Lambton	688	175	....	12,439	.....	.....	B (M.R. 20c.)
Springfield	401	107	....	4,043	.....	.....	T
Springford	188	28	....	2,059	.....	.....	65c. (M.B. $1.00)
Stoney Creek	1,051	242	....	10,305	.....	.....	M (M.B. 75c.)
Straffordville	267	118	....	4,198	.....	.....	T
Thamesville	777	275	....	21,371	.....	1,296	Y
Thorold	5,517	1,228	....	45,825	.....	3,360	[1]75c. (M.R. 25c.)
Tilbury	1,995	657	....	60,943	341	481	C (M.R. 20c.)
Tillsonburg	4,081	1,376	....	98,866	.....	2,396	[1]63c.
Vienna	206	86	4	2,771	648	.....	T
Vittoria	257	99	....	6,054	.....	.....	[1]60c.
Wallaceburg	5,088	1,588	....	132,933	.....	253,594	C (M.R. 20c.)
Wallacetown	175	51	....	3,551	.....	.....	[1]V
Waterdown	916	68	....	2,127	.....	.....	I
Waterford	1,352	314	....	20,087	.....	.....	[1]P
Welland	15,780	4,210	6	131,961	541	15,760	F
Wellandport	.....	8	3	192	196	.....	60c.
West Lorne	791	193	....	13,712	37	418	[1]V
Wheatley	716	244	....	21,370	.....	.....	[1]60c.
Windsor	117,031	22,555	....	1,255,304	.....	720,723	K
Woodstock	12,916	2,562	....	107,840	.....	2,292	[1]G
Wyoming	480	181	....	9,990	.....	797	A
Total	.....	131,427	32	6,685,838	11,886	1,787,666	.....

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1944

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
ESSEX:							
Gosfield North	2,186	121	.....	6,841	154	.....	[1]60c.
Gosfield South	2,711	625	.....	48,925	.....	15,651	[1]60c.
Maidstone	2,965	87	.....	11,244	1,161	.....	B
Mersea	5,147	153	.....	13,281	364	8,250	[1]60c.
Rochester	2,302	241	.....	18,129	254	1,510	B
Sandwich East	9,808	55	.....	2,057	.....	.....	B
Sandwich South	2,396	159	.....	11,122	.....	3,131	B
Tilbury North	1,767	47	.....	2,946	100	19,496	C
Tilbury West	2,929	30	.....	2,381	102	.....	C
LAMBTON:							
Brooke	1,944	33	.....	1,192	.....	135	A
Dawn	2,136	107	.....	7,960	669	1,888	D
Enniskillen	2,385	141	.....	6,359	.....	1,066	B
Euphemia	1,183	10	.....	405	.....	.....	Y
Moore	3,328	440	.....	29,643	30	554	B
Plympton	2,360	6	.....	255	.....	.....	A
Sombra	2,630	86	.....	5,546	.....	.....	B
KENT:							
Camden	1,791	16	.....	317	.....	1,388	C
Chatham	6,388	117	.....	8,606	.....	945	C
Dover	4,272	427	1	44,535	145	2,281	D
Harwich	4,651	519	.....	42,297	907	348	C
Howard	2,441	146	.....	11,744	.....	1,228	C
Orford	1,432	46	.....	3,940	200	.....	C
Raleigh	4,350	669	.....	57,877	4,388	2,398	D and [1]W
Romney	1,282	103	.....	8,581	8,704	718	D and [1]W
Tilbury East	2,929	251	.....	22,411	16,433	2,568	D and [1]W
Zone	770	27	.....	1,078	.....	2,835	A
ELGIN:							
Aldborough	2,448	17	.....	943	.....	1,045	[1]V
Bayham	2,929	8	.....	502	.....	.....	T and [1]60c.
Dunwich	1,994	51	.....	3,788	.....	.....	[1]V
Malahide	2,661	281	6	11,511	419	540	T
Southwold	2,790	124	.....	7,326	.....	55	B
Yarmouth	5,338	77	.....	2,735	.....	.....	A
MIDDLESEX:							
Caradoc	2,644	12	.....	1,458	.....	1,656	K
Delaware	1,200	3	.....	125	.....	.....	K
Ekfrid	1,770	19	.....	1,052	.....	.....	K
Lobo	1,874	1	.....	21	.....	2,582	K
Mosa	1,345	2	.....	41	.....	135	K
North Dorchester	2,634	17	.....	781	.....	607	E
Westminster	8,798	127	.....	8,007	.....	270	K
NORFOLK:							
Middleton	2,323	74	.....	4,715	.....	.....	[1]60c.
North Walsingham	2,092	1	.....	69	173	.....	[1]60c.
BRANT:							
Brantford	8,724	49	.....	2,480	.....	.....	[1]G
Burford	3,523	8	.....	336	.....	.....	[1]G
Onondaga	1,097	50	1	2,870	453	.....	[1]70c.
South Dumfries	2,371	2	.....	44	.....	.....	[1]80c.
Tuscarora	2,654	20	.....	1,926	.....	.....	25c.

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

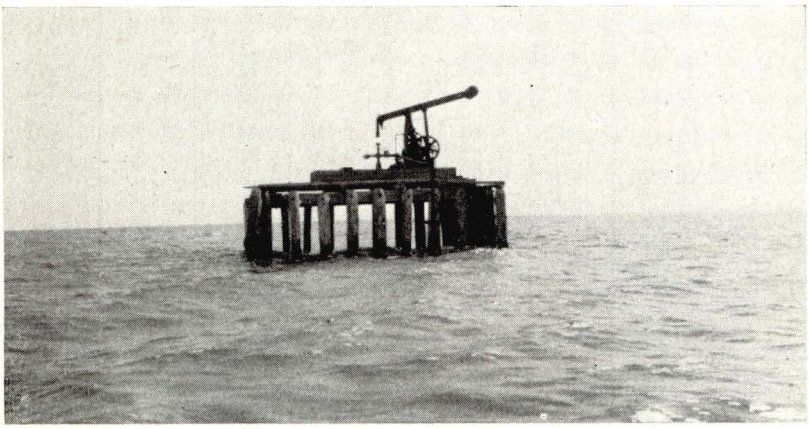
TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1944—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
OXFORD:							
Dereham	3,145	238	.....	16,587	.....	.....	65c. (M.B.[2] $1.00)
East Oxford	1,850	12	.....	612	.....	.....	[1]G
West Oxford	1,982	13	.....	391	.....	.....	[1]G
HALDIMAND:							
Canborough	813	93	.....	6,229	4,039	471	[1]60c. (M.R.[3] 15c.)
Dunn	629	64	.....	3,817	109	254	[1]60c. (M.R. 15c.)
Moulton	1,552	170	.....	10,711	1,289	41	[1]60c. (M.R. 25c.)
North Cayuga	1,161	53	.....	2,661	1,291	1,708	[1]60c.
Oneida	1,056	81	.....	7,126	1,153	.....	[1]60c.
Rainham	1,528	204	.....	13,101	3,998	2,710	[1]60c.
Seneca	1,340	139	5	9,336	3,954	299	[1]60c.
Sherbrooke	262	93	1	6,336	827	.....	[1]60c. (M.R. 15c.)
South Cayuga	525	60	.....	3,698	1,976	2,121	[1]60c. (M.R. 15c.)
Walpole	3,180	306	3	18,302	7,089	300	[1]60c. (M.R. 15c.)
LINCOLN:							
Caistor	1,100	46	.....	2,418	.....	73	50c. (M.B. 65c.)
Gainsborough	1,921	43	18	2,344	2,120	.....	60c.
Grantham	5,684	20	.....	890	.....	.....	[1]75c. (M.R. 25c.)
Louth	3,365	15	.....	668	.....	.....	[1]75c.
WELLAND:							
Bertie	4,050	1,023	43	62,535	6,464	40	F
Crowland	7,717	39	8	1,576	1,194	.....	F
Humberstone	2,957	460	20	25,603	3,794	.....	F
Pelham	2,695	83	.....	3,693	475	.....	L
Wainfleet	2,831	172	2	7,359	1,969	2,497	[1]75c.
Willoughby	842	20	17	1,200	2,516	.....	F
WENTWORTH:							
Ancaster	4,279	203	.....	14,833	.....	1,043	[1]70c. (M.B. $1.00)
Barton	3,302	450	.....	14,188	.....	3,996	[1]60c.
Binbrook	1,192	104	.....	7,161	2,803	50	[1]60c.
East Flamborough	3,848	189	.....	9,890	.....	.....	S (M.R. 50c.)
Glanford	1,442	146	.....	10,800	409	577	[1]60c.
Saltfleet	7,250	322	.....	10,517	.....	.....	M
West Flamborough	2,719	8	.....	179	.....	.....	S (M.R. 50c.)
HALTON:							
Nelson	4,022	17	.....	1,370	.....	.....	S (M.R. 50c.)
WATERLOO:							
North Dumfries	2,917	91	.....	2,020	.....	.....	[1]80c.
Waterloo	8,647	6	.....	324	.....	.....	[1]G
Total	.....	10,588	125	698,877	82,125	89,460	.....

Gas Wells and Their Production

The total number of producing wells in Ontario has been slowly growing until in 1944 the number had reached 3,500, which is 11 less than 1943. There were 314 wells drilled, of which 129 were dry and 186 producing, with an open flow of 24,720 M cubic feet. The wells abandoned totalled 197, which reduced the gross total of wells. Fifteen of these are in Prince Edward county and had been idle for some years and 44 are in the now abandoned fields of Elgin county.

The Haldimand field had the most wells drilled, and these were in the old field and adjacent areas. Some expansion can be claimed in Oneida township, but the wells in other fields were interspaced between old wells. Considering this, the ratio of dry to producing wells (61:100) is high. The average open flow of new wells is pitifully low at 34 M cubic feet; and, as the rock pressure and the area drained by each well is declining each year, it is necessary to space wells



No. 14 well of the Dominion Natural Gas Company, Lake Erie in front of Romney township.

closer in order to recover all the gas underground. Only careful study and experimentation will determine the economic limit in well-spacing.

The production from the Welland county field shows a steady increase owing to new wells and improvements in field collecting and transmission lines.

The Norfolk field can claim a considerable extension in Townsend township where 18 producing wells averaged 130 M cubic feet in open flow, but 14 dry holes indicate very uneven porosity. A very large well in Middleton township, with an open flow of 4,100 M cubic feet, was found at shallow depth. The rock pressure was 55 pounds. This well was successfully used as a storage area and proved to be a most valuable reserve for Tillsonburg. It carried that town over several serious peaks in the months of January and February.

Elgin county was given some attention; 5 exploratory wells proved failures. The Bayham and Malahide fields are exhausted and are in the process of being abandoned. This applies also to the Brownsville field in Oxford township.

In Kent county a new and valuable pool was discovered in the village of Bothwell, Zone township. This well proved a most necessary reserve to supply Chatham and London. Further drilling in Chatham and Zone townships gave average results.

NATURAL GAS RATES, 1945—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
L	Fonthill-Ridgeville Gas Co.	First 100 cu. ft., minimum charge	85c.
		Over 100 cu. ft.	75c. per M cu. ft.
	Dominion Natural Gas Co.		75c. per M cu. ft.
M		Minimum bill	75c.
		Up to 15 M cu. ft.	75c. per M cu. ft.
		Over 15 M cu. ft.	55c. per M cu. ft.
N		1 M cu. ft. or less	85c.
		From 1 M to 10 M cu. ft.	80c. per M cu. ft.
		From 10 M to 25 M cu. ft.	65c. per M cu. ft.
		Over 25 M cu. ft.	55c. per M cu. ft.
O	Port Colborne	Minimum bill	$1.00
		Up to 5 M cu. ft.	80c. per M cu. ft.
		From 5 M to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	Summer residents	Minimum charge	$2.00 per M cu. ft.
P		200 cu. ft. or less	$1.00
		Over 200 cu. ft.	60c. per M cu. ft.
Q	Grimsby and Grimsby Beach	Minimum bill	$1.00
		Up to 5 M cu. ft.	85c. per M cu. ft.
		From 5 M to 10 M cu. ft.	75c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
	Smithville	Minimum bill	90c.
		Up to 5 M cu. ft.	75c. per M cu. ft.
		From 5 M to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
R	November to April	Up to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
S		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft.	90c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
T	Central Pipe Line Co.	Minimum bill	$1.90
		First 200 cu. ft.	55c. per hundred cu. ft.
		Next 800 cu. ft.	10c. per hundred cu. ft.
		Next 1,000 cu. ft.	60c. per M cu. ft.
		Next 4,000 cu. ft.	$1.00 per M cu. ft.
		Over 6,000 cu. ft.	$2.00 per M cu. ft.
U		1 M cu. ft. or less	95c. per M cu. ft.
		From 1 M to 10 M cu. ft.	60c. per M cu. ft.
		From 10 M to 15 M cu. ft.	55c. per M cu. ft.
		Over 15 M cu. ft.	50c. per M cu. ft.
V		1 M cu. ft. or less	80c. per M cu. ft.
		From 1 M to 5 M cu. ft.	60c. per M cu. ft.
		Over 5 M cu. ft.	50c. per M cu. ft.
W	October to April	Up to 10 M cu. ft.	40c. per M cu. ft.
		From 10 M to 20 M cu. ft.	45c. per M cu. ft.
		Over 20 M cu. ft.	55c. per M cu. ft.
	May to September		65c. per M cu. ft.
Y		Up to 200 cu. ft.	40c. per 100 cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	70c. per M cu. ft.
		From 5 M to 10 M cu. ft.	60c. per M cu. ft.
		Over 10 M cu. ft.	45c. per M cu. ft.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1945

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	620	251	....	15,503	.....	.....	K
Ancaster	566	227	....	12,158	.....	.....	[1]70c. (M.B.[2] $1.00)
Appin	125	44	....	2,732	.....	.....	K
Attercliffe	47	35	....	1,000	.....	.....	50c.–60c.
Aylmer	2,474	843	....	31,623	.....	.....	T
Beachville	426	28	....	3,215	.....	.....	65c. (M.B. $1.00)
Belle River	845	258	....	21,105	.....	487	B (M.R.[3] 20c.)
Belmont	500	129	....	6,220	.....	.....	$1.00
Binbrook	195	6	....	507	.....	.....	[1]60c.
Blenheim	1,873	687	....	65,743	.....	1,407	C (M.R. 20c.)
Bothwell	605	187	....	16,552	.....	.....	Y
Brantford	34,372	6,368	....	244,932	.....	22,957	[1]G
Brigden	386	185	....	14,096	.....	1,246	B (M.R. 10c.)
Burlington	4,311	715	....	28,860	.....	944	H
Byron	200	98	....	5,349	.....	307	K
Cainsville	600	35	....	1,130	.....	.....	[1]G
Caledonia	1,395	550	4	43,508	280	1,966	60c.
Cayuga	652	210	....	18,310	.....	809	[1]60c. (M.R. 15c.)
Chatham	17,807	5,338	....	472,999	.....	30,566	J
Chippawa	1,266	349	3	12,896	715	.....	F
Clandrasil	116	31	3	1,576	510	.....	60c.
Comber	484	165	....	16,642	.....	820	C (M.R. 20c.)
Cottam	385	93	1	6,648	140	825	[1]60c. (M.B. 50c.)
Courtland	341	77	....	6,035	.....	.....	[1]60c. (M.B. 50c.)
Courtright	357	141	....	12,171	.....	.....	B (M.R. 20c.)
Delhi	2,093	672	2	53,163	441	.....	60c. (M.B. 60c., M.R. 10c.)
Dorchester	456	145	....	6,792	.....	.....	E (M.B. 50c., M.R. 10c.)
Dresden and Tupperville	1,762	625	....	55,786	.....	2,565	G (M.R. 20c.)
Dundas	5,588	1,399	....	66,694	.....	8,776	70c. (M.B. $1.00)
Dunnville	4,305	1,183	1	106,460	108	6,382	[1]60c. (M.R. 15c.)
Dutton	791	255	1	18,356	140	856	[1]V
Echo Place	735	248	....	7,994	.....	.....	[1]G (M.B. 70c., M.R. 10c.)
Eden	153	35	....	2,437	.....	230	[1]60c. (M.B. 50c., M.R. 10c.)
Essex	1,986	595	....	55,150	.....	3,668	B (M.R. 20c.)
Fenwick	404	136	....	6,659	.....	433	[1]75c. (M.R. 25c.)
Fingal and Shedden	161	143	1	8,267	60	297	[1]B (M.B. 50c.)
Fisherville	171	39	....	2,903	.....	.....	50c.–55c.
Florence	137	73	....	6,723	.....	688	Y
Fonthill	1,009	331	....	12,829	.....	333	L
Fort Erie	7,069	1,958	4	109,890	669	2,456	F
Galt	14,693	2,708	....	92,390	.....	26,401	[1]G (M.B. 80c., M.R. 10c.)
Glencoe	752	260	....	25,153	.....	595	K
Grimsby	1,993	517	....	17,322	.....	2,928	Q
Grimsby Beach	400	130	....	7,375	.....	.....	Q
Hagersville	1,588	507	....	39,355	.....	117	[1]60c. (M.B. 35c., M.R. 15c.)
Hamilton	174,222	13,237	....	434,031	.....	184,721	M
Hespeler	3,021	621	....	21,971	.....	2,959	[1]N
Highgate	301	112	1	8,223	49	.....	[1]C (M.R. 20c.)
Humberstone	3,287	778	....	38,587	.....	508	[1]O
Ingersoll	5,823	1,344	....	64,707	.....	8,186	[1]G

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.B.—Minimum monthly bill.

[3]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1945—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu.ft.	M cu. ft.	
Inwood	175	91	....	5,601	.....	.....	A
Jarvis	557	249	....	22,579	.....	.....	[1]60c. (M.R. 10c.)
Kingsville	2,335	735	....	60,933	.....	1,147	[1]U
Lambeth	475	154	....	10,661	.....	399	[1]K
Leamington	5,456	1,931	....	177,554	.....	3,625	[1]60c.
London	81,158	17,469	....	812,934	.....	131,036	K
Lynedoch	151	75	4	6,642	824	.....	[1]60c.
Merlin	219	167	....	17,204	.....	260	D
Merritton	3,450	649	....	25,328	.....	9,711	[1]75c. (M.R. 25c.)
Mount Brydges	462	134	....	8,732	.....	.....	K
Niagara Falls	19,138	4,634	4	157,844	954	50,842	F
Norwich	1,199	130	....	6,141	.....	.....	65c. (M.B.$1.00)
Oil Springs	426	158	....	10,252	.....	.....	R
Otterville	481	113	....	6,016	.....	.....	65c. (M.B.$1.00)
Paris	4,524	1,052	....	38,944	.....	2,138	[1]G
Petrolia	2,684	858	....	67,736	.....	4,517	T
Port Burwell	513	215	1	7,820	259	.....	T
Port Colborne	7,187	1,749	1	88,607	200	477	[1]O
Port Dover	2,001	672	....	61,231	.....	.....	[1]60c.
Port Rowan	584	261	3	20,138	528	.....	60c.
Port Ryerse	.....	7	7	2,385	1,431	.....	[1]60c.
Preston	6,707	1,215	....	42,190	.....	15,314	[1]G
Putnam	.....	60	....	3,358	.....	1,837	E
Ridgetown	1,911	713	....	70,576	.....	1,913	C
Rodney	718	250	3	19,121	390	.....	[1]V
St. Anns	185	33	....	1,377	.....	.....	60c.–$1.35
St. Catharines	34,541	6,792	3	281,121	453	84,406	[1]75c. (M.R. 25c.)
St. George	486	137	....	5,788	.....	.....	[1]80c.
St. Thomas	17,773	3,233	....	127,927	.....	1,330	[1]K
St. Williams	166	121	....	7,045	.....	419	60c.
Sarnia	20,082	6,211	1	363,317	116	46,888	B (M.R. 10c.)
Selkirk	167	136	....	10,117	.....	.....	[1]60c.
Simcoe	6,047	2,511	2	228,860	191	34,740	[1]60c.
Smithville	529	216	....	10,644	.....	.....	Q
Sombra and Port Lambton	688	202	....	14,291	.....	.....	B (M.R. 20c.)
Springfield	401	115	....	3,884	.....	.....	T
Springford	188	28	....	2,068	.....	.....	65c. (M.B.$1.00)
Stoney Creek	1,051	245	....	11,554	.....	.....	M (M.B. 75c.)
Straffordville	267	120	....	4,748	.....	.....	T
Thamesville	777	277	....	24,758	.....	1,150	Y
Thorold	5,517	1,243	....	48,808	.....	3,211	[1]75c. (M.R. 25c.)
Tilbury	1,995	661	....	63,843	.....	590	C (M.R. 20c.)
Tillsonburg	4,081	1,412	....	109,251	.....	2,709	[1]63c.
Vienna	206	83	2	3,523	488	.....	T
Vittoria	257	103	....	6,273	.....	.....	[1]60c.
Wallaceburg	5,088	1,679	....	145,185	.....	206,561	C (M.R. 20c.)
Wallacetown	175	54	....	3,772	.....	32,770	[1]V
Waterdown	916	75	....	2,497	.....	.....	X
Waterford	1,352	325	....	22,863	.....	.....	[1]P
Welland	15,780	4,452	7	150,096	759	16,274	F
Wellandport	.....	8	3	209	180	.....	60c.
West Lorne	791	197	1	14,472	32	152	[1]V
Wheatley	716	251	....	22,819	.....	.....	[1]60c.
Windsor	117,031	23,132	....	1,345,156	.....	543,034	K
Woodstock	12,916	2,615	....	109,770	.....	1,995	[1]G
Wyoming	480	184	....	11,227	.....	132	A
Total	.....	135,696	63	7,238,517	9,917	1,515,010	.....

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1945

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford	8,724	50	.....	2,803	.....	.....	[1]G
Burford	3,523	10	.....	363	.....	.....	[1]G
Onondaga	1,097	52	2	3,635	329	.....	[1]70c.
South Dumfries	2,371	2	.....	39	.....	.....	[1]80c.
Tuscarora	2,654	21	.....	2,313	.....	.....	25c.
ELGIN:							
Aldborough	2,448	18	.....	1,130	.....	1,741	[1]V
Bayham	2,929	9	.....	567	.....	.....	T and [1]60c.
Dunwich	1,994	52	.....	4,200	.....	.....	[1]V
Malahide	2,661	288	8	12,130	784	.....	T
Southwold	2,790	126	.....	8,164	.....	128	B
Yarmouth	5,338	81	.....	2,892	.....	.....	A
ESSEX:							
Gosfield North	2,186	128	1	7,366	143	.....	[1]60c.
Gosfield South	2,711	650	.....	52,139	.....	13,947	[1]60c.
Maidstone	2,965	87	4	12,887	1,483	.....	B
Mersea	5,147	171	3	14,559	383	7,312	[1]60c.
Rochester	2,302	241	7	17,067	1,194	1,322	B
Sandwich East	9,808	55	.....	2,076	.....	.....	B
Sandwich South	2,396	159	.....	11,268	.....	3,565	B
Tilbury North	1,767	49	2	3,484	446	12,879	C
Tilbury West	2,929	31	1	2,639	117	.....	C
HALDIMAND:							
Canborough	813	96	29	6,997	4,366	295	[1]60c. (M.R.[2] 15c.)
Dunn	629	65	1	4,445	115	335	[1]60c. (M.R. 15c.)
Moulton	1,552	177	6	12,257	1,286	160	[1]60c. (M.R. 15c.)
North Cayuga	1,161	128	9	6,716	1,705	669	[1]60c.
Oneida	1,056	88	8	6,865	1,161	.....	[1]60c.
Rainham	1,528	207	30	14,759	4,459	2,016	[1]60c.
Seneca	1,340	157	24	10,226	3,985	295	[1]60c.
Sherbrooke	262	103	2	6,480	1,013	708	[1]60c. (M.R. 15c.)
South Cayuga	525	68	14	3,903	2,274	1,370	[1]60c. (M.R. 15c.)
Walpole	3,180	318	48	20,754	6,975	348	[1]60c. (M.R. 15c.)
HALTON:							
Nelson	4,022	19	.....	1,561	.....	.....	S (M.R. 50c.)
KENT:							
Camden	1,791	20	.....	1,376	.....	.....	C
Chatham	6,388	128	.....	8,928	.....	1,449	C
Dover	4,272	453	1	49,372	158	2,465	D
Harwich	4,651	549	6	45,311	1,122	163	C
Howard	2,441	153	3	14,223	503	.....	C
Orford	1,432	47	2	4,157	229	.....	C
Raleigh	4,350	1,603	20	62,515	5,051	1,622	D and [1]W
Romney	1,282	116	36	10,458	9,521	1,228	D and [1]W
Tilbury East	2,929	262	66	24,202	16,932	1,385	D and [1]W
Zone	770	38	.....	1,785	.....	3,883	A
LAMBTON:							
Brooke	1,944	35	.....	1,284	.....	.....	A
Dawn	2,136	114	4	8,632	633	385	D
Enniskillen	2,385	138	.....	7,336	.....	866	B
Euphemia	1,183	10	.....	544	.....	.....	Y
Moore	3,328	465	.....	34,653	.....	2,142	B
Plympton	2,360	6	.....	240	.....	.....	A
Sombra	2,630	92	.....	4,898	.....	767	B

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.R.—Meter rental.

[3]M.B.—Minimum monthly bill.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1945—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
LINCOLN:							
Caistor	1,100	45	.....	3,037	.....	112	50c. (M.B. 65c.)
Gainsborough	1,921	55	13	3,561	2,030	.....	60c.
Grantham	5,684	79	.....	3,633	.....	.....	[1]75c. (M.R. 25c.)
Louth	3,365	5	.....	242	.....	.....	[1]75c.
MIDDLESEX:							
Caradoc	2,644	21	.....	1,397	.....	5,514	K
Delaware	1,200	4	.....	153	.....	.....	K
Ekfrid	1,770	22	.....	1,455	.....	.....	K
Lobo	1,874	1	.....	11	.....	.....	K
Mosa	1,345	2	.....	65	.....	.....	K
Westminster	8,798	130	.....	8,504	.....	.....	K
NORFOLK:							
Middleton	2,323	78	.....	5,434	.....	.....	[1]60c.
North Walsingham	2,092	1	2	37	225	.....	[1]60c.
OXFORD:							
Dereham	3,145	107	.....	10,940	.....	.....	65c. (M.B.[3] $1.00)
East Oxford	1,850	6	.....	348	.....	.....	[1]G
South Norwich	.....	8	.....	90	.....	.....	.....
West Oxford	1,982	21	.....	1,109	.....	.....	[1]G
WATERLOO:							
North Dumfries	2,917	91	.....	1,957	.....	.....	[1]80c.
Waterloo	8,647	6	.....	298	.....	.....	[1]G
WELLAND:							
Bertie	4,050	1,042	42	65,833	7,324	.....	F
Crowland	7,717	44	11	1,685	1,307	.....	F
Humberstone	2,957	470	24	26,363	4,170	.....	F
Pelham	2,695	45	3	2,223	589	.....	L
Wainfleet	2,831	271	4	14,054	2,370	3,020	[1]75c.
Willoughby	842	20	16	1,210	2,676	.....	F
WENTWORTH:							
Ancaster	4,279	203	.....	17,016	.....	.....	[1]70c. (M.B. $1.00)
Barton	3,302	496	.....	16,582	.....	1,549	[1]60c.
Binbrook	1,192	82	18	7,561	2,898	6	[1]60c.
East Flamborough	3,848	196	.....	10,850	.....	.....	S (M.R. 50c.)
Glanford	1,442	114	2	11,985	475	591	[1]60c.
Saltfleet	7,250	331	.....	12,434	.....	.....	M
West Flamborough	2,719	9	.....	199	.....	.....	S (M.R. 50c.)
Total	.....	10,490	472	766,864	90,231	74,237	.....

Gas Wells and Their Production

Table VI shows in detail the gas wells in each township in Ontario and the drilling activity for the year. Similar tables have been published annually since the year 1921 and are available for reference.

The total of operating natural gas wells reached 3,612 in 1945, an increase of 112 over 1944, and there were 76 wells abandoned in 1945, which is 121 less than in 1944. Drilling activity was less than in 1944 with 279 wells as against

315 wells. The ratio of dry holes to producers gave a better comparison in 1945, when only 37 per cent. were dry against 41 per cent. in 1944. The open flow of 177 new producers was 27,055 M cubic feet in 1945, which is an average of 153 M cubic feet per well, as against 133 M cubic feet in 1944.

In the seventh figure column of Table VI will be found the average rock pressure throughout each township and in the sixth column the production of all wells in the township. In widely scattered gas fields, where gas is transmitted in many directions, it is out of the question to measure the production by townships. These quantities are, therefore, estimates made by those who are best informed and published only to show the approximate natural gas production. This, coupled with the rock pressure, indicates the natural gas reserves within each township. The extent of acres under lease points to the areas where exploration may be done in the future.

A study of this table shows little change in the production from old natural gas fields. The major development is in the Zone field in Kent county, at the village of Bothwell, where a gas field has been discovered one mile north of the old oil field discovered in 1863. The producing horizon is, however, 1,200 feet deeper than in the old oil field. The gas in Zone township comes from the same horizons as in the Dawn field, and like the Dawn field and unlike the Tilbury field, the gas contains no hydrogen sulphide. The development in Townsend township in Norfolk county has been steadily progressing for the past four years, with a total of 61 producing wells at the end of 1945. In 1945, 23 producing wells were drilled with a total open flow of 3,215 M cubic feet. The original rock pressure of the field was approximately 500 pounds. As the area is suffering from a gas shortage, this is a most opportune discovery.

The drilling in the old Haldimand gas field gave a few more producing wells in 1945 than in 1944 and also a small increase in their open flow, but it is doubtful if this will offset the decline in rock pressure and deliver any more gas into the pipe lines. The reduced production would tend to confirm this.

The old Welland gas field has again seen some activity; 21 producing wells were drilled, which is the same as in 1944, but the open flow of the wells drilled in 1945 was nearly three times that of 1944 and the production shows an increase of 20,538 M cubic feet. In this field, now fifty-six years in production, the porosity of the producing sandstone is not at all uniform, and while the average rock pressure is probably below 100 pounds and in many places little above pipe line pressure, new wells quite often find undrained areas with rock pressures of 200 and 300 pounds. The wholesale price of gas in this old field is now 45 cents per M cubic feet, which makes exploratory drilling very attractive.

There was little "wildcat" drilling in 1945. Two dry wells were drilled in Malden township, both of which had small shows of gas, and more drilling is expected. In East and West Gwillimbury townships, near Lake Simcoe, dry holes were drilled. The West Petroleum Company have continued their drilling one mile off shore in Lake Erie. This company has suffered a series of misfortunes in their operations. As the result of ice action their No. 1 well head was broken off at the bottom of the lake and was full of fresh water for eight months. It has not yet been recovered, although repairs have been made that will assure no further damage to this well or the field. No. 3 well, which promised to be a large one, is incomplete. The drilling tools were broken off and left in the hole shortly after encountering the upper gas pay; autumn storms drove the crew off the lake before the tools could be recovered. This company has shown great courage in pioneering in lake-drilling. The water is 35 feet deep, storms are sudden and frequent, and ice action is severe.

NATURAL GAS RATES, 1944—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
L	Fonthill-Ridgeville Gas Co.	First 100 cu. ft., minimum charge	85c.
		Over 100 cu. ft.	75c. per M cu. ft.
	Dominion Natural Gas Co.		75c. per M cu. ft.
M		Minimum bill	75c.
		Up to 15 M cu. ft.	75c. per M cu. ft.
		Over 15 M cu. ft.	55c. per M cu. ft.
N		1 M cu. ft. or less	85c.
		From 1 M to 10 M cu. ft.	80c. per M cu. ft.
		From 10 M to 25 M cu. ft.	65c. per M cu. ft.
		Over 25 M cu. ft.	55c. per M cu. ft.
O	Port Colborne	Minimum bill	$1.00
		Up to 5 M cu. ft.	80c. per M cu. ft.
		From 5 M to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	Summer residents	Minimum charge	$2.00 per M cu. ft.
P		200 cu. ft. or less	$1.00
		Over 200 cu. ft.	60c. per M cu. ft.
Q	Grimsby and Grimsby Beach	Minimum bill	$1.00
		Up to 5 M cu. ft.	85c. per M cu. ft.
		From 5 M to 10 M cu. ft.	75c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
	Smithville	Minimum bill	90c.
		Up to 5 M cu. ft.	75c. per M cu. ft.
		From 5 M to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
R	November to April	Up to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
S		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft.	90c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
T	Central Pipe Line Co.	Minimum bill	$1.90
		First 200 cu. ft.	55c. per hundred cu. ft.
		Next 800 cu. ft.	10c. per hundred cu. ft.
		Next 1,000 cu. ft.	60c. per M cu. ft.
		Next 4,000 cu. ft.	$1.00 per M cu. ft.
		Over 6,000 cu. ft.	$2.00 per M cu. ft.
U		1 M cu. ft. or less	95c. per M cu. ft.
		From 1 M to 10 M cu. ft.	60c. per M cu. ft.
		From 10 M to 15 M cu. ft.	55c. per M cu. ft.
		Over 15 M cu. ft.	50c. per M cu. ft.
V		1 M cu. ft. or less	80c. per M cu. ft.
		From 1 M to 5 M cu. ft.	60c. per M cu. ft.
		Over 5 M cu. ft.	50c. per M cu. ft.
W	October to April	Up to 10 M cu. ft.	40c. per M cu. ft.
		From 10 M to 20 M cu. ft.	45c. per M cu. ft.
		Over 20 M cu. ft.	55c. per M cu. ft.
	May to September		65c. per M cu. ft.
Y		Up to 200 cu. ft.	40c. per 100 cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	70c. per M cu. ft.
		From 5 M to 10 M cu. ft.	60c. per M cu. ft.
		Over 10 M cu. ft.	45c. per M cu. ft.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1944

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	620	233	....	13,599	.....	.....	K
Ancaster	566	202	....	10,834	.....	.....	[1]70c. (M.B.[2] $1.00)
Appin	125	46	....	2,244	.....	.....	K
Attercliffe	47	35	....	1,837	.....	494	50c.–60c.
Aylmer	2,474	835	....	29,428	.....	.....	T
Beachville	426	54	....	2,614	.....	.....	65c. (M.B. $1.00)
Belle River	845	245	....	18,624	.....	473	B (M.R.[3] 20c.)
Belmont	500	110	....	3,590	.....	585	$1.00
Binbrook	195	6	....	421	200	.....	[1]60c.
Blenheim	1,873	666	....	58,753	127	1,301	C (M.R. 20c.)
Bothwell	605	191	....	14,881	.....	.....	Y
Brantford	34,372	6,257	....	236,979	.....	33,609	[1]G
Brigden	386	170	....	12,148	.....	770	B (M.R. 10c.)
Burlington	4,311	679	....	24,850	.....	856	H
Byron	200	96	....	4,942	.....	372	K
Cainsville	600	33	....	1,023	.....	.....	[1]G
Caledonia	1,395	550	3	39,077	83	2,240	60c.
Canfield	130	60	....	3,202	.....	.....	50c.–60c.
Cayuga	652	219	....	16,078	.....	536	[1]60c. (M.R. 15c.)
Chatham	17,807	5,062	....	437,727	.....	31,127	J
Chippawa	1,266	337	3	7,784	573	.....	F
Clandrasil	116	30	3	1,485	486	.....	60c.
Comber	484	153	....	15,761	.....	932	C (M.R. 20c.)
Cottam	385	92	....	7,071	245	751	[1]60c. (M.B. 50c.)
Courtland	341	59	....	4,825	.....	.....	[1]60c. (M.B. 50c.)
Courtright	357	142	....	10,417	.....	.....	B (M.R. 20c.)
Delhi	2,093	654	....	48,832	416	.....	60c. (M.B.60c., M.R. 10c.)
Dorchester	456	146	....	6,773	.....	543	[1]E (M.B. 50c., M.R. 10c.)
Dresden and Tupperville	1,762	602	....	50,898	.....	2,428	C (M.R. 20c.)
Dundas	5,588	1,375	....	58,865	.....	10,279	70c. (M.B. $1.00)
Dunnville	4,305	1,176	1	102,265	111	6,873	[1]60c. (M.R. 15c.)
Dutton	791	253	....	17,756	213	847	[1]V
Echo Place	735	245	....	7,742	.....	.....	[1]G (M.B. 70c., M.R. 10c.)
Eden	153	35	....	2,849	.....	406	[1]60c. (M.B. 50c., M.R. 10c.)
Essex	1,986	562	....	50,146	.....	3,782	B (M.R. 20c.)
Fenwick	404	148	....	6,692	.....	360	[1]75c. (M.R. 25c.)
Fingal and Shedden	161	142	....	8,241	48	274	[1]B (M.B. 50c.)
Fisherville	171	39	....	3,012	.....	.....	50c.–55c.
Florence	137	70	....	5,979	.....	547	Y
Fonthill	1,009	326	....	11,930	.....	180	L
Fort Erie	7,069	1,914	4	85,580	1,895	2,933	F
Galt	14,693	2,679	....	91,201	.....	32,030	[1]G (M.B. 80c., M.R. 10c.)
Glencoe	752	247	....	21,741	.....	561	K
Grimsby	1,993	477	....	14,121	.....	3,140	Q
Grimsby Beach	400	111	....	6,068	.....	.....	Q
Hagersville	1,588	491	....	36,461	.....	106	[1]60c. (M.B. 35c., M.R. 15c.)
Hamilton	174,222	12,687	....	384,345	.....	192,740	M
Hespeler	3,021	581	....	21,358	.....	2,793	[1]N
Highgate	301	109	....	8,237	30	.....	[1]C (M.R. 20c.)
Humberstone	3,287	771	....	35,074	.....	263	[1]O

[1]Plus a surcharge of 5 cents per M cubic foot for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.B.—Minimum monthly bill.

[3]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1944—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Ingersoll	5,823	1,268	....	63,021	.....	10,752	[1]G
Inwood	175	90	....	5,109	.....	.....	A
Jarvis	557	247	....	21,586	.....	.....	[1]60c. (M.R. 10c.)
Kingsville	2,335	676	....	55,202	.....	1,646	[1]U
Lambeth	475	155	....	10,343	.....	494	[1]K
Leamington	5,456	1,870	....	172,540	.....	3,560	[1]60c.
London	81,158	16,748	....	739,329	.....	123,075	K
Lynedoch	151	75	....	5,533	833	.....	[1]60c.
Merlin	219	159	....	16,096	567	219	D
Merritton	3,450	642	....	23,825	.....	10,522	[1]75c. (M.R. 25c.)
Morpeth	.....	.....	.....	.....	143	.....	.....
Mount Brydges	462	124	....	7,231	.....	.....	K
Niagara Falls	19,138	4,327	4	142,718	768	46,017	F
Norwich	1,199	128	....	5,981	.....	.....	65c. (M.B. $1.00)
Oil Springs	426	151	....	9,353	.....	.....	R
Otterville	481	110	....	5,928	.....	.....	65c. (M.B. $1.00)
Paris	4,524	1,045	....	37,481	.....	2,142	[1]G
Petrolia	2,684	832	....	64,341	.....	3,557	T
Port Burwell	513	219	1	7,239	172	.....	T
Port Colborne	7,187	1,720	....	81,487	200	394	[1]O
Port Dover	2,001	668	....	58,521	.....	.....	[1]60c.
Port Rowan	584	252	....	18,628	504	.....	60c.
Port Ryerse	.....	4	....	2,169	1,380	.....	[1]60c.
Preston	6,707	1,183	....	41,864	.....	18,087	[1]G
Putnam	.....	61	....	3,062	.....	1,969	E
Ridgetown	1,911	702	....	65,419	261	1,843	C
Rodney	718	232	....	17,294	404	.....	[1]V
Ruscomb	.....	.....	.....	.....	298	.....	.....
St. Anns	185	32	....	1,255	.....	.....	60c.–$1.35
St. Catharines	34,541	6,702	....	265,131	.....	130,412	[1]75c. (M.R. 25c.)
St. George	486	150	....	5,374	.....	608	[1]80c.
St. Thomas	17,773	3,161	....	121,008	.....	1,283	[1]K
St. Williams	166	117	....	6,531	.....	253	60c.
Sarnia	20,082	6,003	....	342,753	.....	56,123	B (M.R. 10c.)
Selkirk	167	136	....	9,328	.....	.....	[1]60c.
Simcoe	6,047	2,469	....	210,552	166	38,459	[1]60c.
Smithville	529	202	....	8,305	.....	.....	Q
Sombra and Port Lambton	688	175	....	12,439	.....	.....	B (M.R. 20c.)
Springfield	401	107	....	4,043	.....	.....	T
Springford	188	28	....	2,059	.....	.....	65c. (M.B. $1.00)
Stoney Creek	1,051	242	....	10,305	.....	.....	M (M.B. 75c.)
Straffordville	267	118	....	4,198	.....	.....	T
Thamesville	777	275	....	21,371	.....	1,296	Y
Thorold	5,517	1,228	....	45,825	.....	3,360	[1]75c. (M.R. 25c.)
Tilbury	1,995	657	....	60,943	341	481	C (M.R. 20c.)
Tillsonburg	4,081	1,376	....	98,866	.....	2,396	[1]63c.
Vienna	206	86	4	2,771	648	.....	T
Vittoria	257	99	....	6,054	.....	.....	[1]60c.
Wallaceburg	5,088	1,588	....	132,933	.....	253,594	C (M.R. 20c.)
Wallacetown	175	51	....	3,551	.....	.....	[1]V
Waterdown	916	68	....	2,127	.....	.....	I
Waterford	1,352	314	....	20,087	.....	.....	[1]P
Welland	15,780	4,210	6	131,961	541	15,760	F
Wellandport	.....	8	3	192	196	.....	60c.
West Lorne	791	193	....	13,712	37	418	[1]V
Wheatley	716	244	....	21,370	.....	.....	[1]60c.
Windsor	117,031	22,555	....	1,255,304	.....	720,723	K
Woodstock	12,916	2,562	....	107,840	.....	2,292	[1]G
Wyoming	480	181	....	9,990	.....	797	A
Total	.....	131,427	32	6,685,838	11,886	1,787,666	.....

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1944

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
ESSEX:							
Gosfield North	2,186	121	.....	6,841	154	.....	[1]60c.
Gosfield South	2,711	625	.....	48,925	.....	15,651	[1]60c.
Maidstone	2,965	87	.....	11,244	1,161	.....	B
Mersea	5,147	153	.....	13,281	364	8,250	[1]60c.
Rochester	2,302	241	.....	18,129	254	1,510	B
Sandwich East	9,808	55	.....	2,057	.....	.....	B
Sandwich South	2,396	159	.....	11,122	.....	3,131	B
Tilbury North	1,767	47	.....	2,946	100	19,496	C
Tilbury West	2,929	30	.....	2,381	102	.....	C
LAMBTON:							
Brooke	1,944	33	.....	1,192	.....	135	A
Dawn	2,136	107	.....	7,960	669	1,888	D
Enniskillen	2,385	141	.....	6,359	.....	1,066	B
Euphemia	1,183	10	.....	405	.....	.....	Y
Moore	3,328	440	.....	29,643	30	554	B
Plympton	2,360	6	.....	255	.....	.....	A
Sombra	2,630	86	.....	5,546	.....	.....	B
KENT:							
Camden	1,791	16	.....	317	.....	1,388	C
Chatham	6,388	117	.....	8,606	.....	945	C
Dover	4,272	427	1	44,535	145	2,281	D
Harwich	4,651	519	.....	42,297	907	348	C
Howard	2,441	146	.....	11,744	.....	1,228	C
Orford	1,432	46	.....	3,940	200	.....	C
Raleigh	4,350	669	.....	57,877	4,388	2,398	D and [1]W
Romney	1,282	103	.....	8,581	8,704	718	D and [1]W
Tilbury East	2,929	251	.....	22,411	16,433	2,568	D and [1]W
Zone	770	27	.....	1,078	.....	2,835	A
ELGIN:							
Aldborough	2,448	17	.....	943	.....	1,045	[1]V
Bayham	2,929	8	.....	502	.....	.....	T and [1]60c.
Dunwich	1,994	51	.....	3,788	.....	.....	[1]V
Malahide	2,661	281	6	11,511	419	540	T
Southwold	2,790	124	.....	7,326	.....	55	B
Yarmouth	5,338	77	.....	2,735	.....	.....	A
MIDDLESEX:							
Caradoc	2,644	12	.....	1,458	.....	1,656	K
Delaware	1,200	3	.....	125	.....	.....	K
Ekfrid	1,770	19	.....	1,052	.....	.....	K
Lobo	1,874	1	.....	21	.....	2,582	K
Mosa	1,345	2	.....	41	.....	135	K
North Dorchester	2,634	17	.....	781	.....	607	E
Westminster	8,798	127	.....	8,007	.....	270	K
NORFOLK:							
Middleton	2,323	74	.....	4,715	.....	.....	[1]60c.
North Walsingham	2,092	1	.....	69	173	.....	[1]60c.
BRANT:							
Brantford	8,724	49	.....	2,480	.....	.....	[1]G
Burford	3,523	8	.....	336	.....	.....	[1]G
Onondaga	1,097	50	1	2,870	453	.....	[1]70c.
South Dumfries	2,371	2	.....	44	.....	.....	[1]80c.
Tuscarora	2,654	20	.....	1,926	.....	.....	25c.

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

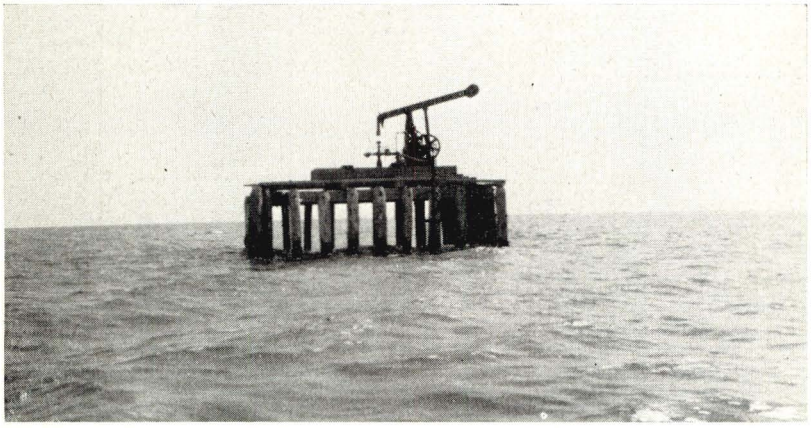
TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1944—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
OXFORD:							
Dereham	3,145	238	.....	16,587	.....	.....	65c. (M.B.[2]$1.00)
East Oxford	1,850	12	.....	612	.....	.....	[1]G
West Oxford	1,982	13	.....	391	.....	.....	[1]G
HALDIMAND:							
Canborough	813	93	.....	6,229	4,039	471	[1]60c. (M.R.[3] 15c.)
Dunn	629	64	.....	3,817	109	254	[1]60c. (M.R. 15c.)
Moulton	1,552	170	.....	10,711	1,289	41	[1]60c. (M.R. 25c.)
North Cayuga	1,161	53	.....	2,661	1,291	1,708	[1]60c.
Oneida	1,056	81	.....	7,126	1,153	.....	[1]60c.
Rainham	1,528	204	.....	13,101	3,998	2,710	[1]60c.
Seneca	1,340	139	5	9,336	3,954	299	[1]60c.
Sherbrooke	262	93	1	6,336	827	.....	[1]60c. (M.R. 15c.)
South Cayuga	525	60	.....	3,698	1,976	2,121	[1]60c. (M.R. 15c.)
Walpole	3,180	306	3	18,302	7,089	300	[1]60c. (M.R. 15c.)
LINCOLN:							
Caistor	1,100	46	.....	2,418	.....	73	50c. (M.B. 65c.)
Gainsborough	1,921	43	18	2,344	2,120	.....	60c.
Grantham	5,684	20	.....	890	.....	.....	[1]75c. (M.R. 25c.)
Louth	3,365	15	.....	668	.....	.....	[1]75c.
WELLAND:							
Bertie	4,050	1,023	43	62,535	6,464	40	F
Crowland	7,717	39	8	1,576	1,194	.....	F
Humberstone	2,957	460	20	25,603	3,794	.....	F
Pelham	2,695	83	.....	3,693	475	.....	L
Wainfleet	2,831	172	2	7,359	1,969	2,497	[1]75c.
Willoughby	842	20	17	1,200	2,516	.....	F
WENTWORTH:							
Ancaster	4,279	203	.....	14,833	.....	1,043	[1]70c. (M.B.$1.00)
Barton	3,302	450	.....	14,188	.....	3,996	[1]60c.
Binbrook	1,192	104	.....	7,161	2,803	50	[1]60c.
East Flamborough	3,848	189	.....	9,890	.....	.....	S (M.R. 50c.)
Glanford	1,442	146	.....	10,800	409	577	[1]60c.
Saltfleet	7,250	322	.....	10,517	.....	.....	M
West Flamborough	2,719	8	.....	179	.....	.....	S (M.R. 50c.)
HALTON:							
Nelson	4,022	17	.....	1,370	.....	.....	S (M.R. 50c.)
WATERLOO:							
North Dumfries	2,917	91	.....	2,020	.....	.....	[1]80c.
Waterloo	8,647	6	.....	324	.....	.....	[1]G
Total	.....	10,588	125	698,877	82,125	89,460	.....

Gas Wells and Their Production

The total number of producing wells in Ontario has been slowly growing until in 1944 the number had reached 3,500, which is 11 less than 1943. There were 314 wells drilled, of which 129 were dry and 186 producing, with an open flow of 24,720 M cubic feet. The wells abandoned totalled 197, which reduced the gross total of wells. Fifteen of these are in Prince Edward county and had been idle for some years and 44 are in the now abandoned fields of Elgin county.

The Haldimand field had the most wells drilled, and these were in the old field and adjacent areas. Some expansion can be claimed in Oneida township, but the wells in other fields were interspaced between old wells. Considering this, the ratio of dry to producing wells (61:100) is high. The average open flow of new wells is pitifully low at 34 M cubic feet; and, as the rock pressure and the area drained by each well is declining each year, it is necessary to space wells



No. 14 well of the Dominion Natural Gas Company, Lake Erie in front of Romney township.

closer in order to recover all the gas underground. Only careful study and experimentation will determine the economic limit in well-spacing.

The production from the Welland county field shows a steady increase owing to new wells and improvements in field collecting and transmission lines.

The Norfolk field can claim a considerable extension in Townsend township where 18 producing wells averaged 130 M cubic feet in open flow, but 14 dry holes indicate very uneven porosity. A very large well in Middleton township, with an open flow of 4,100 M cubic feet, was found at shallow depth. The rock pressure was 55 pounds. This well was successfully used as a storage area and proved to be a most valuable reserve for Tillsonburg. It carried that town over several serious peaks in the months of January and February.

Elgin county was given some attention; 5 exploratory wells proved failures. The Bayham and Malahide fields are exhausted and are in the process of being abandoned. This applies also to the Brownsville field in Oxford township.

In Kent county a new and valuable pool was discovered in the village of Bothwell, Zone township. This well proved a most necessary reserve to supply Chatham and London. Further drilling in Chatham and Zone townships gave average results.

NATURAL GAS RATES, 1945—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
L	Fonthill-Ridgeville Gas Co.	First 100 cu. ft., minimum charge	85c.
		Over 100 cu. ft.	75c. per M cu. ft.
	Dominion Natural Gas Co.		75c. per M cu. ft.
M		Minimum bill	75c.
		Up to 15 M cu. ft.	75c. per M cu. ft.
		Over 15 M cu. ft.	55c. per M cu. ft.
N		1 M cu. ft. or less	85c.
		From 1 M to 10 M cu. ft.	80c. per M cu. ft.
		From 10 M to 25 M cu. ft.	65c. per M cu. ft.
		Over 25 M cu. ft.	55c. per M cu. ft.
O	Port Colborne	Minimum bill	$1.00
		Up to 5 M cu. ft.	80c. per M cu. ft.
		From 5 M to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	Summer residents	Minimum charge	$2.00 per M cu. ft.
P		200 cu. ft. or less	$1.00
		Over 200 cu. ft.	60c. per M cu. ft.
Q	Grimsby and Grimsby Beach	Minimum bill	$1.00
		Up to 5 M cu. ft.	85c. per M cu. ft.
		From 5 M to 10 M cu. ft.	75c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
	Smithville	Minimum bill	90c.
		Up to 5 M cu. ft.	75c. per M cu. ft.
		From 5 M to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
R	November to April	Up to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	70c. per M cu. ft.
		Over 10 M cu. ft.	55c. per M cu. ft.
S		Up to 5 M cu. ft.	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft.	90c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
T	Central Pipe Line Co.	Minimum bill	$1.90
		First 200 cu. ft.	55c. per hundred cu. ft.
		Next 800 cu. ft.	10c. per hundred cu. ft.
		Next 1,000 cu. ft.	60c. per M cu. ft.
		Next 4,000 cu. ft.	$1.00 per M cu. ft.
		Over 6,000 cu. ft.	$2.00 per M cu. ft.
U		1 M cu. ft. or less	95c. per M cu. ft.
		From 1 M to 10 M cu. ft.	60c. per M cu. ft.
		From 10 M to 15 M cu. ft.	55c. per M cu. ft.
		Over 15 M cu. ft.	50c. per M cu. ft.
V		1 M cu. ft. or less	80c. per M cu. ft.
		From 1 M to 5 M cu. ft.	60c. per M cu. ft.
		Over 5 M cu. ft.	50c. per M cu. ft.
W	October to April	Up to 10 M cu. ft.	40c. per M cu. ft.
		From 10 M to 20 M cu. ft.	45c. per M cu. ft.
		Over 20 M cu. ft.	55c. per M cu. ft.
	May to September		65c. per M cu. ft.
Y		Up to 200 cu. ft.	40c. per 100 cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	70c. per M cu. ft.
		From 5 M to 10 M cu. ft.	60c. per M cu. ft.
		Over 10 M cu. ft.	45c. per M cu. ft.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1945

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	620	251	....	15,503	.....	.....	K
Ancaster	566	227	....	12,158	.....	.....	[1]70c. (M.B.[2] $1.00)
Appin	125	44	....	2,732	.....	.....	K
Attercliffe	47	35	....	1,000	.....	.....	50c.–60c.
Aylmer	2,474	843	....	31,623	.....	.....	T
Beachville	426	28	....	3,215	.....	.....	65c. (M.B. $1.00)
Belle River	845	258	....	21,105	.....	487	B (M.R.[3] 20c.)
Belmont	500	129	....	6,220	.....	.....	$1.00
Binbrook	195	6	....	507	.....	.....	[1]60c.
Blenheim	1,873	687	....	65,743	.....	1,407	C (M.R. 20c.)
Bothwell	605	187	....	16,552	.....	.....	Y
Brantford	34,372	6,368	....	244,932	.....	22,957	[1]G
Brigden	386	185	....	14,096	.....	1,246	B (M.R. 10c.)
Burlington	4,311	715	....	28,860	.....	944	H
Byron	200	98	....	5,349	.....	307	K
Cainsville	600	35	....	1,130	.....	.....	[1]G
Caledonia	1,395	550	4	43,508	280	1,966	60c.
Cayuga	652	210	....	18,310	.....	809	[1]60c. (M.R. 15c.)
Chatham	17,807	5,338	....	472,999	.....	30,566	J
Chippawa	1,266	349	3	12,896	715	.....	F
Clandrasil	116	31	3	1,576	510	.....	60c.
Comber	484	165	....	16,642	.....	820	C (M.R. 20c.)
Cottam	385	93	1	6,648	140	825	[1]60c. (M.B. 50c.)
Courtland	341	77	....	6,035	.....	.....	[1]60c. (M.B. 50c.)
Courtright	357	141	....	12,171	.....	.....	B (M.R. 20c.)
Delhi	2,093	672	2	53,163	441	.....	60c. (M.B. 60c., M.R. 10c.)
Dorchester	456	145	....	6,792	.....	.....	E (M.B. 50c., M.R. 10c.)
Dresden and Tupperville	1,762	625	....	55,786	.....	2,565	G (M.R. 20c.)
Dundas	5,588	1,399	....	66,694	.....	8,776	70c. (M.B. $1.00)
Dunnville	4,305	1,183	1	106,460	108	6,382	[1]60c. (M.R. 15c.)
Dutton	791	255	1	18,356	140	856	[1]V
Echo Place	735	248	....	7,994	.....	.....	[1]G (M.B. 70c., M.R. 10c.)
Eden	153	35	....	2,437	.....	230	[1]60c. (M.B. 50c., M.R. 10c.)
Essex	1,986	595	....	55,150	.....	3,668	B (M.R. 20c.)
Fenwick	404	136	....	6,659	.....	433	[1]75c. (M.R. 25c.)
Fingal and Shedden	161	143	1	8,267	60	297	[1]B (M.B. 50c.)
Fisherville	171	39	....	2,903	.....	.....	50c.–55c.
Florence	137	73	....	6,723	.....	688	Y
Fonthill	1,009	331	....	12,829	.....	333	L
Fort Erie	7,069	1,958	4	109,890	669	2,456	F
Galt	14,693	2,708	....	92,390	.....	26,401	[1]G (M.B. 80c., M.R. 10c.)
Glencoe	752	260	....	25,153	.....	595	K
Grimsby	1,993	517	....	17,322	.....	2,928	Q
Grimsby Beach	400	130	....	7,375	.....	.....	Q
Hagersville	1,588	507	....	39,355	.....	117	[1]60c. (M.B. 35c., M.R. 15c.)
Hamilton	174,222	13,237	....	434,031	.....	184,721	M
Hespeler	3,021	621	....	21,971	.....	2,959	[1]N
Highgate	301	112	1	8,223	49	.....	[1]C (M.R. 20c.)
Humberstone	3,287	778	....	38,587	.....	508	[1]O
Ingersoll	5,823	1,344	....	64,707	.....	8,186	[1]G

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.B.—Minimum monthly bill.

[3]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1945—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu.ft.	M cu. ft.	
Inwood	175	91	....	5,601	.....	.....	A
Jarvis	557	249	....	22,579	.....	.....	[1]60c. (M.R. 10c.)
Kingsville	2,335	735	....	60,933	.....	1,147	[1]U
Lambeth	475	154	....	10,661	.....	399	[1]K
Leamington	5,456	1,931	....	177,554	.....	3,625	[1]60c.
London	81,158	17,469	....	812,934	.....	131,036	K
Lynedoch	151	75	4	6,642	824	.....	[1]60c.
Merlin	219	167	....	17,204	.....	260	D
Merritton	3,450	649	....	25,328	.....	9,711	[1]75c. (M.R. 25c.)
Mount Brydges	462	134	....	8,732	.....	.....	K
Niagara Falls	19,138	4,634	4	157,844	954	50,842	F
Norwich	1,199	130	....	6,141	.....	.....	65c. (M.B.$1.00)
Oil Springs	426	158	....	10,252	.....	.....	R
Otterville	481	113	....	6,016	.....	.....	65c. (M.B.$1.00)
Paris	4,524	1,052	....	38,944	.....	2,138	[1]G
Petrolia	2,684	858	....	67,736	.....	4,517	T
Port Burwell	513	215	1	7,820	259	.....	T
Port Colborne	7,187	1,749	1	88,607	200	477	[1]O
Port Dover	2,001	672	....	61,231	.....	.....	[1]60c.
Port Rowan	584	261	3	20,138	528	.....	60c.
Port Ryerse	.....	7	7	2,385	1,431	.....	[1]60c.
Preston	6,707	1,215	....	42,190	.....	15,314	[1]G
Putnam	.....	60	....	3,358	.....	1,837	E
Ridgetown	1,911	713	....	70,576	.....	1,913	C
Rodney	718	250	3	19,121	390	.....	[1]V
St. Anns	185	33	....	1,377	.....	.....	60c.–$1.35
St. Catharines	34,541	6,792	3	281,121	453	84,406	[1]75c. (M.R. 25c.)
St. George	486	137	....	5,788	.....	.....	[1]80c.
St. Thomas	17,773	3,233	....	127,927	.....	1,330	[1]K
St. Williams	166	121	....	7,045	.....	419	60c.
Sarnia	20,082	6,211	1	363,317	116	46,888	B (M.R. 10c.)
Selkirk	167	136	....	10,117	.....	.....	[1]60c.
Simcoe	6,047	2,511	2	228,860	191	34,740	[1]60c.
Smithville	529	216	....	10,644	.....	.....	Q
Sombra and Port Lambton	688	202	....	14,291	.....	.....	B (M.R. 20c.)
Springfield	401	115	....	3,884	.....	.....	T
Springford	188	28	....	2,068	.....	.....	65c. (M.B.$1.00)
Stoney Creek	1,051	245	....	11,554	.....	.....	M (M.B. 75c.)
Straffordville	267	120	....	4,748	.....	.....	T
Thamesville	777	277	....	24,758	.....	1,150	Y
Thorold	5,517	1,243	....	48,808	.....	3,211	[1]75c. (M.R. 25c.)
Tilbury	1,995	661	....	63,843	.....	590	C (M.R. 20c.)
Tillsonburg	4,081	1,412	....	109,251	.....	2,709	[1]63c.
Vienna	206	83	2	3,523	488	.....	T
Vittoria	257	103	....	6,273	.....	.....	[1]60c.
Wallaceburg	5,088	1,679	....	145,185	.....	206,561	C (M.R. 20c.)
Wallacetown	175	54	....	3,772	.....	32,770	[1]V
Waterdown	916	75	....	2,497	.....	.....	X
Waterford	1,352	325	....	22,863	.....	.....	[1]P
Welland	15,780	4,452	7	150,096	759	16,274	F
Wellandport	.....	8	3	209	180	.....	60c.
West Lorne	791	197	1	14,472	32	152	[1]V
Wheatley	716	251	....	22,819	.....	.....	[1]60c.
Windsor	117,031	23,132	....	1,345,156	.....	543,034	K
Woodstock	12,916	2,615	....	109,770	.....	1,995	[1]G
Wyoming	480	184	....	11,227	.....	132	A
Total	.....	135,696	63	7,238,517	9,917	1,515,010	.....

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1945

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford	8,724	50	.....	2,803	.....	.....	[1]G
Burford	3,523	10	.....	363	.....	.....	[1]G
Onondaga	1,097	52	2	3,635	329	.....	[1]70c.
South Dumfries	2,371	2	.....	39	.....	.....	[1]80c.
Tuscarora	2,654	21	.....	2,313	.....	.....	25c.
ELGIN:							
Aldborough	2,448	18	.....	1,130	.....	1,741	[1]V
Bayham	2,929	9	.....	567	.....	.....	T and [1]60c.
Dunwich	1,994	52	.....	4,200	.....	.....	[1]V
Malahide	2,661	288	8	12,130	784	.....	T
Southwold	2,790	126	.....	8,164	.....	128	B
Yarmouth	5,338	81	.....	2,892	.....	.....	A
ESSEX:							
Gosfield North	2,186	128	1	7,366	143	.....	[1]60c.
Gosfield South	2,711	650	.....	52,139	.....	13,947	[1]60c.
Maidstone	2,965	87	4	12,887	1,483	.....	B
Mersea	5,147	171	3	14,559	383	7,312	[1]60c.
Rochester	2,302	241	7	17,067	1,194	1,322	B
Sandwich East	9,808	55	.....	2,076	.....	.....	B
Sandwich South	2,396	159	.....	11,268	.....	3,565	B
Tilbury North	1,767	49	2	3,484	446	12,879	C
Tilbury West	2,929	31	1	2,639	117	.....	C
HALDIMAND:							
Canborough	813	96	29	6,997	4,366	295	[1]60c. (M.R.[2] 15c.)
Dunn	629	65	1	4,445	115	335	[1]60c. (M.R. 15c.)
Moulton	1,552	177	6	12,257	1,286	160	[1]60c. (M.R. 15c.)
North Cayuga	1,161	128	9	6,716	1,705	669	[1]60c.
Oneida	1,056	88	8	6,865	1,161	.....	[1]60c.
Rainham	1,528	207	30	14,759	4,459	2,016	[1]60c.
Seneca	1,340	157	24	10,226	3,985	295	[1]60c.
Sherbrooke	262	103	2	6,480	1,013	708	[1]60c. (M.R. 15c.)
South Cayuga	525	68	14	3,903	2,274	1,370	[1]60c. (M.R. 15c.)
Walpole	3,180	318	48	20,754	6,975	348	[1]60c. (M.R. 15c.)
HALTON:							
Nelson	4,022	19	.....	1,561	.....	.....	S (M.R. 50c.)
KENT:							
Camden	1,791	20	.....	1,376	.....	.....	C
Chatham	6,388	128	.....	8,928	.....	1,449	C
Dover	4,272	453	1	49,372	158	2,465	D
Harwich	4,651	549	6	45,311	1,122	163	C
Howard	2,441	153	3	14,223	503	.....	C
Orford	1,432	47	2	4,157	229	.....	C
Raleigh	4,350	1,603	20	62,515	5,051	1,622	D and [1]W
Romney	1,282	116	36	10,458	9,521	1,228	D and [1]W
Tilbury East	2,929	262	66	24,202	16,932	1,385	D and [1]W
Zone	770	38	.....	1,785	.....	3,883	A
LAMBTON:							
Brooke	1,944	35	.....	1,284	.....	.....	A
Dawn	2,136	114	4	8,632	633	385	D
Enniskillen	2,385	138	.....	7,336	.....	866	B
Euphemia	1,183	10	.....	544	.....	.....	Y
Moore	3,328	465	.....	34,653	.....	2,142	B
Plympton	2,360	6	.....	240	.....	.....	A
Sombra	2,630	92	.....	4,898	.....	767	B

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.R.—Meter rental.

[3]M.B.—Minimum monthly bill.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1945—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
LINCOLN:							
Caistor	1,100	45	.....	3,037	.....	112	50c. (M.B. 65c.)
Gainsborough	1,921	55	13	3,561	2,030	.....	60c.
Grantham	5,684	79	.....	3,633	.....	.....	[1]75c. (M.R. 25c.)
Louth	3,365	5	.....	242	.....	.....	[1]75c.
MIDDLESEX:							
Caradoc	2,644	21	.....	1,397	.....	5,514	K
Delaware	1,200	4	.....	153	.....	.....	K
Ekfrid	1,770	22	.....	1,455	.....	.....	K
Lobo	1,874	1	.....	11	.....	.....	K
Mosa	1,345	2	.....	65	.....	.....	K
Westminster	8,798	130	.....	8,504	.....	.....	K
NORFOLK:							
Middleton	2,323	78	.....	5,434	.....	.....	[1]60c.
North Walsingham	2,092	1	2	37	225	.....	[1]60c.
OXFORD:							
Dereham	3,145	107	.....	10,940	.....	.....	65c. (M.B.[3] $1.00)
East Oxford	1,850	6	.....	348	.....	.....	[1]G
South Norwich	.....	8	.....	90	.....	.....	.....
West Oxford	1,982	21	.....	1,109	.....	.....	[1]G
WATERLOO:							
North Dumfries	2,917	91	.....	1,957	.....	.....	[1]80c.
Waterloo	8,647	6	.....	298	.....	.....	[1]G
WELLAND:							
Bertie	4,050	1,042	42	65,833	7,324	.....	F
Crowland	7,717	44	11	1,685	1,307	.....	F
Humberstone	2,957	470	24	26,363	4,170	.....	F
Pelham	2,695	45	3	2,223	589	.....	L
Wainfleet	2,831	271	4	14,054	2,370	3,020	[1]75c.
Willoughby	842	20	16	1,210	2,676	.....	F
WENTWORTH:							
Ancaster	4,279	203	.....	17,016	.....	.....	[1]70c. (M.B. $1.00)
Barton	3,302	496	.....	16,582	.....	1,549	[1]60c.
Binbrook	1,192	82	18	7,561	2,898	6	[1]60c.
East Flamborough	3,848	196	.....	10,850	.....	.....	S (M.R. 50c.)
Glanford	1,442	114	2	11,985	475	591	[1]60c.
Saltfleet	7,250	331	.....	12,434	.....	.....	M
West Flamborough	2,719	9	.....	199	.....	.....	S (M.R. 50c.)
Total	.....	10,490	472	766,864	90,231	74,237	.....

Gas Wells and Their Production

Table VI shows in detail the gas wells in each township in Ontario and the drilling activity for the year. Similar tables have been published annually since the year 1921 and are available for reference.

The total of operating natural gas wells reached 3,612 in 1945, an increase of 112 over 1944, and there were 76 wells abandoned in 1945, which is 121 less than in 1944. Drilling activity was less than in 1944 with 279 wells as against

315 wells. The ratio of dry holes to producers gave a better comparison in 1945, when only 37 per cent. were dry against 41 per cent. in 1944. The open flow of 177 new producers was 27,055 M cubic feet in 1945, which is an average of 153 M cubic feet per well, as against 133 M cubic feet in 1944.

In the seventh figure column of Table VI will be found the average rock pressure throughout each township and in the sixth column the production of all wells in the township. In widely scattered gas fields, where gas is transmitted in many directions, it is out of the question to measure the production by townships. These quantities are, therefore, estimates made by those who are best informed and published only to show the approximate natural gas production. This, coupled with the rock pressure, indicates the natural gas reserves within each township. The extent of acres under lease points to the areas where exploration may be done in the future.

A study of this table shows little change in the production from old natural gas fields. The major development is in the Zone field in Kent county, at the village of Bothwell, where a gas field has been discovered one mile north of the old oil field discovered in 1863. The producing horizon is, however, 1,200 feet deeper than in the old oil field. The gas in Zone township comes from the same horizons as in the Dawn field, and like the Dawn field and unlike the Tilbury field, the gas contains no hydrogen sulphide. The development in Townsend township in Norfolk county has been steadily progressing for the past four years, with a total of 61 producing wells at the end of 1945. In 1945, 23 producing wells were drilled with a total open flow of 3,215 M cubic feet. The original rock pressure of the field was approximately 500 pounds. As the area is suffering from a gas shortage, this is a most opportune discovery.

The drilling in the old Haldimand gas field gave a few more producing wells in 1945 than in 1944 and also a small increase in their open flow, but it is doubtful if this will offset the decline in rock pressure and deliver any more gas into the pipe lines. The reduced production would tend to confirm this.

The old Welland gas field has again seen some activity; 21 producing wells were drilled, which is the same as in 1944, but the open flow of the wells drilled in 1945 was nearly three times that of 1944 and the production shows an increase of 20,538 M cubic feet. In this field, now fifty-six years in production, the porosity of the producing sandstone is not at all uniform, and while the average rock pressure is probably below 100 pounds and in many places little above pipe line pressure, new wells quite often find undrained areas with rock pressures of 200 and 300 pounds. The wholesale price of gas in this old field is now 45 cents per M cubic feet, which makes exploratory drilling very attractive.

There was little "wildcat" drilling in 1945. Two dry wells were drilled in Malden township, both of which had small shows of gas, and more drilling is expected. In East and West Gwillimbury townships, near Lake Simcoe, dry holes were drilled. The West Petroleum Company have continued their drilling one mile off shore in Lake Erie. This company has suffered a series of misfortunes in their operations. As the result of ice action their No. 1 well head was broken off at the bottom of the lake and was full of fresh water for eight months. It has not yet been recovered, although repairs have been made that will assure no further damage to this well or the field. No. 3 well, which promised to be a large one, is incomplete. The drilling tools were broken off and left in the hole shortly after encountering the upper gas pay; autumn storms drove the crew off the lake before the tools could be recovered. This company has shown great courage in pioneering in lake-drilling. The water is 35 feet deep, storms are sudden and frequent, and ice action is severe.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1946

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	645	268	....	14,740	.....	.....	K
Ancaster	566	235	....	12,147	.....	.....	[1]70c. ([2]M.B. $1.00)
Appin	125	47	....	2,619	.....	.....	K
Attercliffe	47	42	2	2,200	300	.....	50c.–60c.
Aylmer	2,245	906	....	33,513	.....	.....	T
Beachville	426	36	....	2,588	.....	.....	65c. (M.B. $1.00)
Belle River	1,019	262	....	21,201	.....	452	B (M.R.[3] 20c.)
Belmont	500	129	....	7,420	.....	.....	$1.00
Binbrook	195	6	....	460	.....	.....	[1]60c.
Blenheim	1,873	723	....	65,191	.....	1,856	C (M.R. 20c.)
Bothwell	661	206	....	18,022	.....	.....	Y
Brantford	34,409	6,412	....	242,320	.....	21,104	[1]G
Brigden	386	188	....	14,306	.....	35	B (M.R. 10c.)
Burlington	4,379	737	....	29,639	.....	645	H
Byron	200	98	....	5,572	.....	301	K
Cainsville	600	35	....	1,086	.....	.....	[1]G
Caledonia	1,465	563	4	37,012	346	1,769	60c.
Cayuga	608	221	....	18,565	.....	296	[1]60c. (M.R. 20c.)
Chatham	18,035	5,523	....	463,357	.....	33,044	J
Chippawa	1,311	369	4	14,185	827	.....	F
Comber	484	169	....	17,569	.....	872	C (M.R. 20c.)
Cottam	385	93	1	6,002	148	702	[1]60c. (M.B. 50c.)
Courtland	341	84	....	6,896	.....	.....	[1]60c. (M.B. 50c.)
Courtright	345	152	....	11,793	.....	.....	B (M.R. 20c.)
Delhi	2,166	692	3	54,320	358	.....	60c. (M.B. 60c., M.R. 10c.)
Dorchester	456	153	....	7,152	.....	.....	E (M.B. 50c., M.R. 10c.)
Dresden and Tupperville	1,762	664	....	57,681	.....	2,629	G (M.R. 20c.)
Dundas	5,597	1,407	....	65,245	.....	10,383	70c. (M.B. $1.00)
Dunnville	4,178	1,217	1	103,445	100	1,724	[1]60c. (M.R. 15c.)
Dutton	807	262	2	18,767	135	814	[1]V
Echo Place	735	229	....	7,799	.....	.....	[1]G (M.B. 70c., M.R. 10c.)
Eden	153	37	....	2,786	.....	226	[1]60c. (M.B. 50c., M.R. 10c.)
Essex	1,897	607	....	55,292	.....	2,403	B (M.R. 20c.)
Fenwick	404	142	....	7,222	.....	467	[1]75c. (M.R. 25c.)
Fingal and Shedden	161	150	1	8,534	62	355	[1]B (M.B. 50c.)
Fisherville	171	36	....	2,926	.....	.....	50c.–55c.
Florence	137	75	....	6,954	.....	845	Y
Fonthill	1,108	340	....	10,480	.....	350	L
Fort Erie	7,412	2,008	4	114,042	1,409	1,329	F
Galt	14,598	2,700	....	93,871	.....	29,138	[1]G (M.B. 80c., M.R. 10c.)
Glencoe	749	276	....	26,468	.....	556	K
Grimsby	1,990	542	....	19,601	.....	3,218	Q
Grimsby Beach	400	141	....	8,934	.....	.....	Q
Hagersville	1,471	512	....	39,233	.....	124	[1]60c. (M.B. 35c., M.R. 15c.)
Hamilton	175,039	13,515	....	455,901	.....	159,652	M
Hespeler	2,939	639	....	22,042	.....	2,572	[1]N
Highgate	323	116	2	8,490	61	.....	[1]C (M.R. 20c.)
Humberstone	3,287	833	....	38,102	.....	.....	[1]O
Ingersoll	5,823	1,359	....	62,233	.....	7,749	[1]G

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.

[2]M.B.—Minimum monthly bill.

[3]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1946—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu.ft.	M cu. ft.	
Inwood	175	91	....	5,174	.....	.....	A
Jarvis	616	255	....	20,689	.....	.....	[1]60c. (M.R. 10c.)
Kingsville	2,384	801	....	58,226	.....	706	[1]U
Lambeth	475	164	....	10,855	.....	277	[1]K
Leamington	6,235	1,974	....	169,213	.....	3,183	[1]60c.
London	79,277	17,961	....	837,124	.....	132,911	K
Lynedoch	151	76	5	6,691	590	.....	[1]60c.
Merlin	219	169	....	17,185	.....	297	D
Merritton	3,407	660	....	26,666	.....	6,282	[1]75c. (M.R. 25c.)
Mount Brydges	462	144	....	9,881	.....	.....	K
Niagara Falls	20,234	4,800	4	174,468	962	55,520	F
Norwich	1,297	119	....	5,275	.....	.....	65c. (M.B. $1.00)
Oil Springs	377	140	....	8,946	.....	.....	R
Otterville	481	105	....	4,850	.....	.....	65c. (M.B. $1.00)
Paris	4,639	1,067	....	39,129	.....	1,787	[1]G
Petrolia	2,578	884	....	69,168	.....	3,912	T
Port Burwell	513	245	1	7,622	290	.....	T
Port Colborne	7,043	1,750	1	87,763	118	1,755	[1]O
Port Dover	2,092	695	....	60,601	.....	.....	[1]60c.
Port Rowan	632	268	4	19,603	537	301	60c.
Port Ryerse	.....	7	10	2,747	1,306	.....	[1]60c.
Preston	6,955	1,240	....	42,155	.....	17,547	[1]G
Putnam	.....	64	....	5,463	.....	1,811	E
Ridgetown	1,999	743	....	70,236	.....	1,961	C
Rodney	755	270	1	19,384	372	.....	[1]V
St. Anns	185	34	....	1,417	.....	.....	60c.–$1.35
St. Catharines	34,644	6,878	....	282,640	.....	75,114	[1]75c. (M.R. 25c.)
St. George	486	138	....	5,764	.....	.....	[1]80c.
St. Thomas	18,342	3,297	....	122,913	.....	1,064	[1]K
St. Williams	166	123	....	6,747	.....	228	60c.
Sarnia	20,567	6,195	....	366,613	.....	54,663	B (M.R. 10c.)
Selkirk	167	135	....	9,614	.....	.....	[1]60c.
Simcoe	6,147	2,553	2	225,926	174	39,550	[1]60c.
Smithville	529	227	....	11,637	.....	.....	Q
Sombra and Port Lambton	688	213	....	14,979	.....	.....	B (M.R. 20c.)
Springfield	376	128	....	4,283	.....	.....	T
Springford	188	31	....	2,572	.....	.....	65c. (M.B. $1.00)
Stoney Creek	1,104	256	....	12,459	.....	.....	M (M.B. 75c.)
Straffordville	267	120	....	4,870	.....	.....	T
Thamesville	737	306	....	25,487	.....	910	Y
Thorold	5,543	1,254	....	49,937	.....	4,216	[1]75c. (M.R. 25c.)
Tilbury	2,073	675	....	65,066	.....	1,096	C (M.R. 20c.)
Tillsonburg	4,064	1,458	....	105,771	.....	2,810	[1]63c.
Vienna	224	90	4	3,090	630	.....	T
Vittoria	257	103	....	7,213	.....	.....	[1]60c.
Wallaceburg	5,631	1,756	....	152,967	.....	185,017	C (M.R. 20c.)
Wallacetown	175	57	....	3,588	.....	.....	[1]V
Waterdown	975	78	....	2,558	.....	.....	X
Waterford	1,398	348	....	24,424	.....	.....	[1]P
Welland	14,781	4,611	7	156,827	761	13,620	F
Wellandport	.....	7	3	172	188	.....	60c.
West Lorne	830	208	2	14,999	30	293	[1]V
Wheatley	724	264	....	24,049	.....	.....	[1]60c.
Windsor	117,432	23,865	....	1,369,582	.....	528,685	K
Woodstock	13,021	2,713	....	108,009	.....	2,180	[1]G
Wyoming	574	192	....	10,812	.....	28	A
Total	700,304	139,161	68	7,322,022	9,704	1,423,334	.....

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1946

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford	9,228	50	.....	2,845	.....	.....	[1]G
Burford	3,731	10	.....	369	.....	.....	[1]G
Onondaga	918	51	2	2,952	341	.....	[1]70c.
South Dumfries	2,358	2	.....	39	.....	.....	[1]80c.
Tuscarora	2,654	24	.....	2,608	.....	.....	25c.
ELGIN:							
Aldborough	2,533	20	.....	1,419	.....	2,625	[1]V
Bayham	3,100	11	.....	723	.....	.....	T and [1]60c.
Dunwich	2,033	53	.....	3,628	.....	.....	[1]V
Malahide	2,647	286	6	12,306	602	.....	T
Southwold	3,115	131	.....	8,503	.....	118	B
Yarmouth	5,462	91	.....	3,280	.....	.....	A
ESSEX:							
Gosfield North	2,214	134	1	7,185	162	.....	[1]60c.
Gosfield South	2,753	663	.....	50,578	.....	14,010	[1]60c.
Maidstone	2,970	187	5	14,444	1,277	.....	B
Mersea	5,068	183	3	15,507	320	9,891	[1]60c.
Rochester	2,315	242	6	20,872	904	1,916	B
Sandwich East	9,436	45	.....	2,488	.....	.....	B
Sandwich South	2,335	156	.....	11,987	.....	3,783	B
Tilbury North	1,763	53	2	3,776	433	5,966	C
Tilbury West	1,435	33	1	2,714	105	.....	C
HALDIMAND:							
Canborough	732	142	29	7,927	3,944	825	[1]60c. (M.R.[2] 15c.)
Dunn	609	67	1	4,402	105	1,331	[1]60c. (M.R. 15c.)
Moulton	1,483	197	10	11,864	1,263	.....	[1]60c. (M.R. 15c.)
North Cayuga	1,133	146	7	7,904	1,198	1,029	[1]60c.
Oneida	1,082	95	8	8,207	1,094	325	[1]60c.
Rainham	1,525	219	22	14,580	3,346	2,789	[1]60c.
Seneca	1,286	162	24	10,099	3,803	346	[1]60c.
Sherbrooke	283	97	1	6,747	394	1,698	[1]60c. (M.R. 15c.)
South Cayuga	513	86	14	4,018	2,406	867	[1]60c. (M.R. 15c.)
Walpole	2,803	306	46	20,486	6,438	273	[1]60c. (M.R. 15c.)
HALTON:							
Nelson	4,174	25	.....	1,562	.....	.....	S (M.R. 50c.)
KENT:							
Camden	1,874	28	.....	1,513	.....	.....	C
Chatham	5,825	127	.....	9,350	.....	2,136	C
Dover	4,291	459	2	47,207	125	3,410	D
Harwich	4,724	564	6	45,899	998	148	C
Howard	2,476	161	4	14,116	637	.....	C
Orford	1,474	44	2	4,203	157	.....	C
Raleigh	4,387	719	20	62,039	5,158	1,744	D and [1]W
Romney	1,357	122	36	10,966	8,730	1,057	D and [1]W
Tilbury East	2,902	271	63	25,591	16,669	1,768	D and [1]W
Zone	817	52	.....	2,638	.....	9,113	A
LAMBTON:							
Brooke	2,000	32	.....	1,526	.....	.....	A
Dawn	2,020	115	4	9,012	611	409	D
Enniskillen	2,259	150	.....	7,320	.....	825	B
Euphemia	1,243	12	.....	600	.....	.....	Y
Moore	3,438	493	.....	36,101	.....	1,333	B
Plympton	2,382	8	.....	340	.....	.....	A
Sombra	2,519	100	.....	4,993	.....	1,275	B

[1]Plus a surcharge of 5 cents per M cubic feet for all gas distributed by the Dominion Natural Gas Company, Limited, except on the Port Rowan system.
[2]M.R.—Meter rental.
[3]M.B.—Minimum monthly bill.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1946—*Continued*

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
LINCOLN:							
Caistor	1,038	49	.....	3,206	.....	3	50c. (M.B. 65c.)
Gainsborough	1,921	56	13	3,769	2,244	.....	60c.
Grantham	6,550	79	.....	3,713	.....	.....	[1]75c. (M.R. 25c.)
Louth	3,495	5	.....	235	.....	.....	[1]75c.
MIDDLESEX:							
Caradoc	2,548	18	.....	2,009	.....	3,702	K
Delaware	1,005	4	.....	152	.....	.....	K
Ekfrid	1,828	22	.....	1,604	.....	.....	K
Lobo	1,789	1	.....	18	.....	3,824	K
Mosa	1,349	2	.....	69	.....	.....	K
Westminster	8,376	137	.....	8,596	.....	.....	K
NORFOLK:							
Middleton	2,323	88	.....	6,077	.....	.....	[1]60c.
North Walsingham	2,001	.....	1	.....	180	.....	[1]60c.
OXFORD:							
Dereham	3,120	166	.....	8,196	.....	31	65c. (M.B.[3] $1.00)
East Oxford	2,249	11	.....	569	.....	.....	[1]G
South Norwich	2,127	9	.....	1,368	.....	.....	.....
West Oxford	1,965	14	.....	788	.....	.....	[1]G
WATERLOO:							
North Dumfries	2,770	91	.....	2,038	.....	.....	[1]80c.
Waterloo	8,581	7	.....	457	.....	.....	[1]G
WELLAND:							
Bertie	4,035	1,234	39	72,246	6,042	143	F
Crowland	7,860	49	13	1,574	1,295	.....	F
Humberstone	2,995	475	23	27,738	3,768	.....	F
Pelham	2,850	45	4	2,115	472	.....	L
Wainfleet	2,707	212	8	16,200	2,280	4,679	[1]75c.
Willoughby	837	25	16	1,331	2,750	.....	F
WENTWORTH:							
Ancaster	4,993	203	.....	17,635	.....	.....	[1]70c. (M.B. $1.00)
Barton	3,538	512	.....	18,056	.....	5,926	[1]60c.
Binbrook	1,192	109	19	8,074	2,970	4	[1]60c.
East Flamborough	3,872	209	.....	11,616	.....	.....	S (M.R. 50c.)
Glanford	1,420	158	2	12,120	395	335	[1]60c.
Saltfleet	7,591	362	.....	13,499	.....	.....	M
West Flamborough	2,779	10	.....	208	.....	.....	S (M.R. 50c.)
Total	.....	11,786	463	794,709	83,616	89,657	.....

Gas Wells and Their Production

Table VI gives the summary of the activities in the gas fields. Similar tables have been published since 1921. The number of active natural gas wells in Ontario in 1946 was 3,696, a net gain of 84 over 1945. The number of gas wells drilled was 336, an increase of 57 over 1945. Of these, 129 were dry holes and 207 producing wells. Unfortunately these wells did not produce as much gas as the 177 producers drilled in 1945. The footage of dry holes drilled was 139,828 and of producing wells, 190,828; a total of 330,656. The open flow of the producing wells was 24,442 M cubic feet, which is 2,613 M cubic feet less than in

Tables IV and V, which have been published each year since 1922, record the consumption of gases of all kinds in all municipalities in Ontario, the number of consumers, and the amount of gas used in the industries of the municipality. The rates in each municipality are detailed in the last column or indicated by a letter that refers back to the table of rates.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1947

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu.ft.	M cu. ft.	
Alvinston	645	270	....	18,702	.....	.....	K
Ancaster	566	230	....	10,157	.....	.....	92½c. (M.B.[1] $1.00)
Appin	125	49	....	3,379	.....	.....	K
Attercliffe	47	42	....	2,400	.....	.....	72½c.–82½c.
Aylmer	2,245	906	....	35,425	.....	.....	T
Beachville	426	37	....	2,999	.....	.....	65c. (M.B. $1.00)
Belle River	1,019	278	....	26,916	.....	490	B (M.R.[2] 20c.)
Belmont	500	133	....	7,747	.....	.....	$1.00
Binbrook	195	6	1	340	160	.....	72½c.
Blenheim	1,873	739	....	75,962	.....	1,727	C (M.R.[2] 20c.)
Bothwell	661	212	....	21,459	.....	.....	Y
Brantford	34,409	6,363	....	240,290	.....	22,667	G
Brigden	386	182	....	17,487	.....	.....	B (M.R. 10c.)
Brownsville	175	70	....	3,033	.....	.....	90c.net (M.B.[1] $1.25)
Burlington	4,379	736	....	22,151	.....	438	[3]
Byron	200	98	....	6,355	.....	317	K
Cainsville	600	31	....	1,020	.....	.....	G
Caledonia	1,465	565	4	38,713	229	1,802	80c.net (M.B.[1] $1.00)
Cayuga	608	230	....	20,589	.....	174	82½c. (M.R.[2] 20c.)
Chatham	18,035	5,530	....	531,233	.....	36,517	J
Chippawa	1,311	394	3	15,685	766	.....	F
Comber	484	170	....	20,031	.....	1,072	C (M.R.[2] 20c.)
Cottam	385	99	1	5,867	152	570	82½c.
Courtright	345	154	....	14,446	.....	.....	B (M.R.[1] 20c.)
Delhi	2,166	676	3	53,431	358	.....	82½c. (M.R.[1] 10c.)
Dorchester	456	151	....	6,386	.....	.....	E
Dresden and Tupperville	1,762	674	....	69,028	.....	20,333	G (M.R.[1] 20c.)
Dundas	5,597	1,370	....	48,892	.....	6,447	[3]
Dunnville	4,178	1,239	1	107,131	100	1,353	82½c. (M.R.[2] 15c.)
Dutton	807	264	2	18,865	166	773	V
Echo Place	735	221	....	7,625	.....	.....	G (M.R.[2] 10c.)
Essex	1,897	640	....	64,440	.....	2,546	B (M.R.[2] 20c.)
Fenwick	404	143	....	6,956	.....	391	97½c. (M.R. 25c.)
Fingal and Shedden	161	150	1	9,013	66	334	B
Fisherville	171	36	....	2,961	.....	.....	50c.–55c.
Florence	137	75	....	7,646	.....	916	Y
Fonthill	1,108	351	....	12,288	.....	1,355	L
Fort Erie	7,412	2,110	5	122,362	1,484	4,096	F
Galt	14,598	2,611	....	94,484	.....	21,483	G (M.R.[2] 10c.)
Glencoe	749	299	....	33,869	.....	782	K
Grimsby	1,990	560	....	19,817	.....	3,325	Q
Grimsby Beach	400	153	....	9,098	.....	13	Q
Hagersville	1,471	526	....	39,802	.....	156	82½c. (M.R.[2] 15c.)
Hamilton	175,039	12,161	....	309,112	.....	114,118	[3]
Hespeler	2,939	630	....	22,848	.....	2,536	N
Highgate	323	120	2	8,824	42	.....	C (M.R.[2] 20c.)
Humberstone	3,287	831	....	39,617	.....	.....	O
Ingersoll	5,823	1,349	....	62,461	.....	8,716	G

[1]M.B.—Minimum monthly bill.
[2]M.R.—Meter rental.
[3]Changed from natural to manufactured gas August 31, 1947.

NATURAL GAS RATES, 1947—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
M		Minimum bill	97½c.
		Up to 15 M cu. ft	97½c. per M cu. ft.
		Over 15 M cu. ft	77½c. per M cu. ft.
N		1 M cu. ft. or less	$1.07½
		From 1 M to 10 M cu. ft	$1.02½ per M cu. ft.
		From 10 M to 25 M cu. ft	87½c. per M cu. ft.
		Over 25 M cu. ft	77½c. per M cu. ft.
O	Port Colborne	Minimum bill	$1.17½
		Up to 5 M cu. ft	$1.17½ per M cu. ft.
		From 5 M to 10 M cu. ft	92½c. per M cu. ft.
		Over 10 M cu. ft	77½c. per M cu. ft.
	Summer residents	Minimum charge	$2.22½ per M cu. ft.
P		200 cu. ft. or less	$1.22½
		Over 200 cu. ft	82½c. per M cu. ft.
Q	Grimsby and Grimsby Beach	Minimum bill	$1.00
		Meter rental	15c.
		Up to 5 M cu. ft	85c. per M cu. ft.
		From 5 M to 10 M cu. ft	75c. per M cu. ft.
		Over 10 M cu. ft	60c. per M cu. ft.
	Smithville	Minimum bill	90c.
		Meter rental	15c.
		Up to 5 M cu. ft	75c. per M cu ft.
		From 5 M to 10 M cu. ft	70c. per M cu. ft.
		Over 10 M cu. ft	60c. per M cu. ft.
R	November to April	Up to 10 M cu. ft	65c. per M cu. ft.
		Over 10 M cu. ft	55c. per M cu. ft.
	May to October	Up to 10 M cu. ft	70c. per M cu. ft.
		Over 10 M cu. ft	55c. per M cu. ft.
S		Up to 5 M cu. ft	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft	90c. per M cu. ft.
		Over 10 M cu. ft	60c. per M cu. ft.
T	Central Pipe Line Co.	Minimum bill	$1.90
		First 200 cu. ft	55c. per hundred cu. ft.
		Next 800 cu. ft	10c. per hundred cu. ft.
		Next 1,000 cu. ft	60c. per M cu. ft.
		Next 4,000 cu. ft	$1.00 per M cu. ft.
		Over 6,000 cu. ft	$2.00 per M cu. ft.
U		1 M cu. ft. or less	$1.17½ per M cu. ft.
		From 1 M to 10 M cu. ft	82½c. per M cu. ft.
		From 10 M to 15 M cu. ft	77½c. per M cu. ft.
		Over 15 M cu. ft	72½c. per M cu. ft.
V		1 M cu. ft. or less	$1.02½ per M cu. ft.
		From 1 M to 5 M cu. ft	87½c. per M cu. ft.
		Over 5 M cu. ft	72½c. per M cu. ft.
W	October to April	Up to 10 M cu. ft	62½c. per M cu. ft.
		From 10 M to 20 M cu. ft	67½c. per M cu. ft.
		Over 20 M cu. ft	77½c. per M cu. ft.
	May to September		87½c. per M cu. ft.
Y		Up to 200 cu. ft	40c. per hundred cu. ft.
		From 200 cu. ft. to 5 M cu. ft	70c. per M cu. ft.
		From 5 M to 10 M cu. ft	60c. per M cu. ft.
		Over 10 M cu. ft	45c. per M cu. ft.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1947—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu.ft.	M cu. ft.	
Inwood	175	93	....	6,672	.....	.....	A
Jarvis	616	255	....	21,943	.....	.....	82½c. (M.R.[2] 10c.)
Kingsville	2,384	761	....	57,487	.....	679	U
Lambeth	475	169	....	11,042	.....	323	K
Leamington	6,235	1,992	....	166,631	.....	3,684	60c.
London	79,277	17,816	....	896,096	.....	138,995	K
Lynedoch	151	43	4	4,807	602	.....	82½c.
Merlin	219	170	....	19,455	.....	206	D
Merritton	3,407	676	....	26,303	.....	3,939	97½c. (M.R.[2] 25c.)
Mount Brydges	462	150	....	12,259	.....	.....	K
Niagara Falls	20,234	4,860	4	178,945	975	52,346	F
Norwich	1,297	139	....	6,297	.....	.....	90c. (M.B.[1] $1.00)
Oil Springs	377	140	....	4,323	.....	.....	R
Otterville	481	111	....	5,466	.....	.....	90c. (M.B.[1] $1.00)
Paris	4,639	1,060	....	39,798	.....	1,409	G
Petrolia	2,578	886	....	76,193	.....	5,637	E
Port Burwell	513	241	1	7,955	333	.....	T
Port Colborne	7,043	1,755	1	90,001	145	1,791	O
Port Dover	2,092	703	....	60,906	.....	.....	82½c.
Port Rowan	632	254	4	19,135	528	.....	60c.
Port Ryerse	.....	11	10	2,776	1,434	.....	82½c.
Preston	6,955	1,213	....	41,960	.....	19,384	G
Putnam	.....	57	....	2,925	.....	1,379	E
Ridgetown	1,999	753	....	78,927	.....	1,889	C
Rodney	755	279	1	21,145	410	.....	V
St. Anns	185	36	....	1,403	.....	.....	60c.–$1.35
St. Catharines	34,644	6,868	....	281,453	.....	74,896	97½c. (M.R.[2] 25c.)
St. George	486	153	....	5,875	.....	.....	$1.02½
St. Thomas	18,342	3,270	....	121,918	.....	1,187	K
St. Williams	166	99	....	5,161	.....	125	60c.
Sarnia	20,567	6,198	....	398,154	.....	65,073	B (M.R.[2] 10c.)
Selkirk	167	138	....	10,276	.....	.....	82½c.
Simcoe	6,147	2,117	1	192,169	198	28,611	82½c.
Smithville	529	228	....	11,813	.....	.....	Q
Sombra and Port Lambton	688	220	....	18,141	.....	.....	B (M.R.[2] 20c.)
Springfield	376	132	....	5,089	.....	.....	T
Springford	188	36	....	2,192	.....	.....	90c. (M.B.[1] $1.00)
Stoney Creek	1,104	251	....	9,675	.....	.....	M
Straffordville	267	135	....	5,075	.....	.....	T
Thamesville	737	316	....	31,248	.....	609	Y
Thorold	5,543	1,270	....	49,902	.....	3,608	97½c. (M.R.[2] 25c.)
Tilbury	2,073	676	....	70,928	.....	1,759	C
Tillsonburg	4,064	1,453	....	102,768	.....	1,428	82½c.
Vienna	224	99	4	3,247	692	.....	T
Vittoria	257	91	....	7,282	.....	.....	82½c.
Wallaceburg	5,641	1,760	....	165,615	.....	236,014	C (M.R.[2] 20c.)
Wallacetown	175	58	....	3,765	.....	.....	V
Waterdown	975	80	....	1,990	.....	.....	[3]
Waterford	1,398	330	....	23,543	.....	.....	P
Welland	14,781	4,662	7	169,778	819	12,560	F
Wellandport	.....	8	2	179	154	.....	60c.
West Lorne	830	212	2	15,940	35	269	V
Wheatley	724	267	....	25,650	.....	.....	82½c.
Windsor	117,432	23,870	....	1,538,998	.....	625,712	K
Woodstock	13,021	2,638	....	105,656	.....	2,179	G
Wyoming	574	193	....	13,046	.....	.....	A
Total	699,985	137,314	64	7,604,327	9,848	1,541,273	.....

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1947

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu.ft.	M cu. ft.	
BRANT:							
Brantford	9,229	52	....	2,770	.....	.....	G
Burford	3,731	10	....	458	.....	.....	G
Onondaga	918	51	2	2,998	289	.....	80c. (M.R.[1] 15c.)
South Dumfries	2,358	2	....	47	.....	.....	$1.02½
Tuscarora	2,654	24	....	2,754	.....	.....	25c.
ELGIN:							
Aldborough	2,533	24	....	1,540	.....	2,362	V
Bayham	3,100	180	....	9,358	.....	.....	T and 82½c.
Dunwich	2,033	53	....	3,633	.....	.....	V
Malahide	2,647	133	5	5,423	673	.....	T
Southwold	3,115	131	....	8,391	.....	101	B
Yarmouth	5,462	94	....	3,181	.....	.....	A
ESSEX:							
Gosfield North	2,214	139	1	7,295	153	.....	82½c.
Gosfield South	2,753	414	....	53,375	.....	6,096	82½c.
Maidstone	2,970	248	4	23,474	1,444	.....	B
Mersea	5,068	459	1	16,982	361	9,376	82½c.
Rochester	2,315	232	7	19,669	1,148	1,848	B
Sandwich East	9,436	25	....	2,653	.....	.....	B
Sandwich South	2,335	174	....	15,110	.....	4,295	B
Tilbury North	1,763	52	2	4,538	464	4,754	C
Tilbury West	1,435	33	1	3,155	122	.....	C
HALDIMAND:							
Canborough	732	111	29	7,851	4,098	361	82½c. (M.R.[1] 15c.)
Dunn	609	72	1	4,826	133	1,560	82½c. (M.R.[1] 15c.)
Moulton	1,483	179	10	11,788	1,522	210	82½c. (M.R.[1] 15c.)
North Cayuga	1,133	142	7	9,002	1,299	189	82½c.
Oneida	1,082	109	8	8,794	1,144	.....	82½c.
Rainham	1,525	222	22	16,951	3,912	2,799	82½c.
Seneca	1,286	166	23	10,902	4,039	343	82½c.
Sherbrooke	283	95	1	6,617	403	1,600	82½c. (M.R.[1] 15c.)
South Cayuga	513	75	15	4,443	2,444	1,454	82½c. (M.R.[1] 15c.)
Walpole	2,803	294	46	20,958	6,943	.....	82½c. (M.R.[1] 15c.)
HALTON:							
Nelson	4,174	20	....	1,038	.....	.....	[3]
KENT:							
Camden	1,874	38	....	2,454	.....	.....	C
Chatham	5,825	139	....	11,033	.....	2,464	C
Dover	4,291	470	1	57,735	186	2,821	C and D
Harwich	4,724	594	5	55,886	1,022	107	C
Howard	2,476	168	3	16,472	553	.....	C
Orford	1,474	43	2	4,015	278	.....	C
Raleigh	4,387	748	21	75,722	5,227	1,929	D and W
Romney	1,357	127	22	12,814	9,924	1,027	D and W
Tilbury East	2,902	272	61	29,217	18,234	1,525	D and W
Zone	817	63	....	3,859	.....	130	A
LAMBTON:							
Brooke	2,000	31	....	1,862	.....	.....	A
Dawn	2,020	117	4	11,468	695	674	D
Enniskillen	2,259	162	....	9,729	.....	791	B
Euphemia	1,243	11	....	773	.....	.....	Y
Moore	3,438	522	1	43,935	65	1,090	B
Plympton	2,382	8	....	438	.....	.....	A
Sombra	2,519	111	....	6,289	.....	10,174	B

[1]M.R.—Meter rental.
[2]M.B.—Minimum monthly bill.
[3]Changed from natural gas to manufactured gas August 31, 1947.

TABLE III—PRODUCTION AND PRESSURES OF NATURAL GAS WELLS BY TOWNSHIPS, 1955—*Continued*

County	Township	Total Wells as of December 31, 1955		Production in M cu. ft.	Average shut-in well-head pressure, psi.
		Producing	Idle		
Norfolk	Charlotteville	50	.....	730,013	327
	Houghton	7	.....		275
	Middleton	57	.....		227
	North Walsingham	93	2		344
	South Walsingham	28	.....		323
	Townsend	57	2		194
	Windham	54	.....		304
	Woodhouse	123	9		180
Wentworth	Binbrook	9	1		50
	Glanford	.....	.....		39
Lincoln	Caistor	95	.....		68
	Gainsborough	4	.....		58
Haldimand	Canborough	94	3	1,312,640	88
	Dunn	164	7		140
	Moulton	149	.....		125
	North Cayuga	131	4		183
	Oneida	68	3		86
	Seneca	58	.....		65
	Sherbrooke	24	.....		145
	Rainham	192	4		147
	South Cayuga	97	4		129
	Walpole	417	1		153
Welland	Wainfleet	29	2		70
	Bertie	243	3	431,757	80
	Crowland	59	1		40
	Humberstone	162	3		75
	Stamford	5	.....		30
	Thorold	17	12		76
	Willoughby	91	3		70
	Pelham	2	.....		90
Total		3,103	177	10,852,857	.....

Supplemental Gas:

In this publication, the term "supplemental gas" is used to cover those quantities of fuel gas, other than natural gas produced in Ontario, which are introduced into our natural gas pipeline systems.

TABLE IV—SUPPLEMENTAL GAS, 1955

Type and Source	Volume, M cu. ft.	Percent
Imported natural gas, Windsor	5,413,717	46.2
Imported natural gas, Niagara	5,758,156	49.1
Imported mixed gas, Fort Erie	179,945	1.5
Gas from storage, Dawn tp.	313,647	2.7
Manufactured gas, Toronto	72,669	.7
Propane-air, Brantford	76	.....
Oil gas, Port Stanley	7,954	.1
Sub-total	11,746,164	100.3
Less gas to storage, Humberstone tp.	37,990	.3
Total	11,708,174	100.0

TABLE X—ESTIMATED RECOVERABLE RESERVES OF NATURAL GAS BY COUNTIES AS OF DECEMBER, 1955

County	Billions of Cubic Feet
Brant	.10
Elgin and Middlesex	5.25
Essex	.72
Haldimand, Lincoln, Wentworth	12.90
Halton	.25
Huron	.30
Kent	47.40
Lambton	109.50
Norfolk	12.50
Oxford	.50
Welland	4.80
Total	194.22

TABLE III—PRODUCTION AND PRESSURES OF NATURAL GAS WELLS BY TOWNSHIPS, 1955

County	Township	Total Wells as of December 31, 1955		Production in M cu. ft.	Average shut-in well-head pressure, psi.
		Producing	Idle		
Brant	Onondaga	3	.....	840	53
	Tuscarora	17	.....	14,290	66
Essex	Gosfield South	16	4	13,131	162
	Malden	.....	5	.....	395
	Mersea	3	.....	3,000	263
	Tilbury West	5	2	36,118	465
Halton	Esquesing	.....	3	.....	377
Huron	Hay	.....	1	.....	409
	Stephen	.....	1	.....	403
Kent	Camden Gore	14	3	39,935	603
	Chatham	21	.....	80,495	437
	Chatham Gore	.....	2	.....	736
	Dover	9	2	81,720	130
	Harwich	2	.....	16,218	801
	Howard	4	2	55,745	1,217
	Raleigh (D'Clute)	27	3	133,993	225
	Raleigh	15	.....	2,058,574	248
	Romney	107	5		130
	Tilbury East	88	.....		133
	Zone	49	.....	132,570	399
Lambton	Dawn	15	13	3,722	479
	Enniskillen	.....	2	.....	857
	Moore	36	4	4,841,792	709
	Sombra	6	22	444,631	782
	Warwick	.....	1	.....	.....
Middlesex	Ekfrid	.....	1	357,092	350
	Mosa	15	4		384
Elgin	Aldborough	21	6		401
	Dunwich	1	5		633
	Bayham	28	5	16,083	150
	Malahide	2	12	.....	320
	Yarmouth	.....	5	.....	320
	Bayham (Brownsville)	5	.....	15,815	325
Oxford	Dereham (Brownsville)	6	.....		340
	Norwich South	9	.....	32,683	415

TABLE XX—COMPLETION SUMMARY, EASTERN CANADA, 1955

EXPLORATORY TESTS

	Oil	Gas	Dry	Total	% Successful
Southwestern Ontario:					
Devonian Tests			23	23	0.0
Salina-Guelph Tests	2	4	70	76	7.9
Clinton-Medina Tests		2	6	8	25.0
Trenton-Basal Tests			16	16	0.0
Totals	2	6	115	123	6.5

DEVELOPMENT WELLS

	Oil	Gas	Dry	Total	% Successful
Southwestern Ontario:					
Devonian Tests	46		14	60	76.7
Salina-Guelph Tests	3	20	11	34	67.7
Clinton-Medina Tests		116	53	169	68.7
Trenton-Basal Tests		2	2	4	50.0
Totals	49	138	80	267	70.0

(b) Exploratory Drilling: As in previous years, a high percentage of the exploratory completions were in the counties of Kent, Elgin, Lambton, Middlesex, Huron and Bruce, in which 105 of the 123 exploratory wells were drilled.

Of particular significance is the fact that no less than 44, or more than a third, of the exploratory completions were in the area north of a line from Sarnia to Hamilton. Thirty-four were Salina-Guelph tests, the other 10 Trenton-Basal. Only two discoveries were made both Guelph reefs in the Grand Bend area. All but one of the Guelph tests were based on gravity surveys. Such a low success ratio is not particularly encouraging to the operators in the area, and probably will have its effect on future activity. Since reef discoveries have been confined to the area relatively close to the lake shore, exploration in the off-shore area presents an interesting challenge. Over the entire northern area, Trenton-Basal exploration also presents a challenge, this series as yet being relatively untested.

In the Norfolk-Haldimand-Welland area, only 9 exploratory wells were drilled, including one test into the Cambrian near Welland. Two of the nine, both in Norfolk county, extended the productive area of the Clinton-Medina series.

In the area southwest of a line from Forest to St. Thomas, there were 70 exploratory completions; 23 Devonian, 42 Salina-Guelph, and 5 Trenton-Basal. Only four were successful, all Salina-Guelph. One obtained oil from a new Salina pool in Aldborough township, Elgin county, another established the existence of Guelph gas under Lake St. Clair, and the other two considerably extended the off-shore limists of the Tilbury field in Kent county.

It will be seen that only two oil discoveries were made, both in the Salina-Guelph formations. One was the new oil-bearing pool in the Mosald field in Aldborough township, Elgin county. Production is from the lower pay of the lower Salina. The importance of the pool can not be assessed until further drilling is done.

The other discovery was of particular interest. It is an oil-bearing Guelph reef in the Grand Bend area, located by gravity survey. Strangely enough, it is owned by a gas-distributing utility, and was their first exploratory well in the area. Production was improved by an acid injection, and has remained quite constant.

TABLE XIX—SUMMARY OF WELL COMPLETIONS, 1955—*Continued*

County, Township	Dry		Gas			Oil			Total Wells			
	E	D	E	D	Open flow	E	D	Bbls.-day	E	Footage	D	Footage
LAMBTON												
Bosanquet	1								1	2.477		
Dawn	2	1		4	10.990		3	85	2	2.528	8	15.524
Enniskillen	5	[4]2							5	11.045	2	740
Euphemia	4	4							4	6.344	4	1.484
Moore	13	1		1	590				13	31.151	2	2.927
Plympton	1								1	2.680		
Sarnia	2								2	5.559		
Sombra	5	1		1	292				5	10.777	2	4.350
LINCOLN												
Caistor				1	30						1	392
Grantham	1								1	458		
MIDDLESEX												
Biddulph	3								3	6.896		
McGillivray	6	1				1		40	7	13.032	1	2.021
Mosa		[5]5		1	46						6	4.800
Williams E.	1								1	1.760		
NORFOLK												
Charlotteville	3	8	1	10	1.194				4	4.856	18	22.703
Middleton		9		6	522						15	18.462
Walsingham N.		9		27	3.148						36	45.979
Walsingham S.		2	1	4	386				1	1.349	6	8.390
Windham		8		5	416						13	14.470
Woodhouse	1			2	66				1	976	2	2.187
OXFORD												
Norwich S.		1									1	1.076
PERTH												
Logan	3								3	4.266		
SIMCOE												
Nottawasaga	1								1	895		
WELLAND												
Bertie		1		9	129						10	7.816
Crowland	[3]1	2		6	100				1	3.197	8	5.083
Humberstone		4		12	436						16	12.225
Willoughby				3	32						3	1.990
WELLINGTON												
Guelph	1								1	2.303		
	115	80	6	138		2	49		123	211.334	267	264.639
Totals	195		144		39.915	51		865	Grand 390			Totals 475.973

Notes: [1]Six wells in Lake St. Clair.

[2]Seven wells in Lake Erie.

[3]An unsuccessful deeper-pool test to Trenton was completed as a successful development well.

[4]Two secondary recovery injection wells.

[5]Four secondary recovery injection wells.

TABLE XIX—SUMMARY OF WELL COMPLETIONS, 1955

County, Township	Dry		Gas			Oil			Total Wells			
	E	D	E	D	Open flow	E	D	Bbls.-day	E	Footage	D	Footage
BRANT												
Tuscarora	1								1	701		
BRUCE												
Albemarle	1								1	1.479		
Amabel	1								1	1.645		
Huron	1								1	1.665		
Lindsay	1								1	1.438		
St. Edmund	1								1	1.615		
ELGIN												
Aldborough	11	1				1	46	700	12	7.977	47	19.759
Bayham				1	27						1	1.412
Dunwich	1								1	523		
ESSEX												
Maidstone	1								1	3.500		
Malden	1								1	2.500		
Tilbury W.		1		3	500			40			4	4.696
GREY												
Keppel	1								1	1.632		
Proton	1								1	2.300		
HALDIMAND												
Canborough				2	70						2	1.379
Cayuga N.				2	33						2	1.553
Cayuga S.				1	10						1	712
Dunn		2		6	489						8	6.529
Moulton		2		5	82						7	5.511
Oneida		1		4	56						5	3.571
Rainham				3	56						3	2.663
Seneca				2	110						2	1.094
Walpole		4		5	155						9	8.264
HALTON												
Esquesing		2		2	510						4	7.826
HURON												
Ashfield	2								2	4.016		
Goderich	1								1	3.704		
Hay		2									2	3.935
Hullett	1								1	1.850		
McKillop	2								2	3.076		
Morris	1								1	1.430		
Stanley	3								3	5.778		
Stephen	4	2	1		736				5	9.435	2	3.941
Usborne	1								1	1.726		
Wawanosh	1								1	1.810		
KENT												
Camden	4	2							4	1.642	2	2.157
Chatham	2	1							2	4.161	1	471
Dover[1]	6		1		3.832				7	15.284		
Harwich	2								2	2.494		
Howard	[3]7	1		5	3.980				7	10.115	6	10.411
Orford	1								1	1.955		
Romney[2]			2	5	10.892				2	2.601	5	6.136
Zone	1								1	733		

TABLE XVIII—OWNERS OF LICENSED DRILLING MACHINES, 1955—*Continued*

Name	Address	No. Rigs
Hodgson, W.	Vittoria, Ont.	1
Hoover, A. E. Estate of	Selkirk, Ont.	2
Hussey, G.	Petrolia, Ont.	1
Irving, D.	Simcoe, Ont.	2
Jackson, P. L.	Dunnville, Ont.	1
Kiser, W. G. and Son	Chatham, Ont.	3
Kin Mar Syndicate	Fort Erie, Ont.	1
Kiser Drilling Co.	Chatham, Ont.	1
Knight and Neale	Dunnville, Ont.	1
Kys, F.	Fletcher, Ont.	1
Laramie, C.	Kingsville, Ont.	1
Lejeune, L.	Ridgeway, Ont.	1
Lymburner and Webber	Dunnville, Ont.	1
Lyons, S. and Son	Simcoe, Ont.	3
Manley, R. and Son	Dunnville, Ont.	4
Meier and Shaw	Chatham, Ont.	2
Montgomery Bros.	Selkirk, Ont.	1
McGaffey, E.	Bothwell, Ont.	1
McKillop, W. and Sons	Tillsonburg, Ont.	1
McMaster, R. and Sons Co., Ltd.	Caledonia, Ont.	4
McPherson, R.	Riverside, Ont.	6
Nagel, E.	Stevensville, Ont.	1
Nauman, H.	Fisherville, Ont.	1
Nauman, J.	Fisherville, Ont.	2
Palenkas, J.	Highgate, Ont.	1
Palenkas, P.	West Lorne, Ont.	1
Parnell, R.	Wallaceburg, Ont.	1
Patterson and Culver	Dunnville, Ont.	3
Patterson, L.	Wallaceburg, Ont.	1
Rawlings Drilling Co.	Chatham, Ont.	1
Reicheld, F. W.	Jarvis, Ont.	1
Ricker, E. A.	Canborough, Ont.	2
Robert, Howard Exploration Ltd.	Sombra, Ont.	1
Roth, H.	Dunnville, Ont.	1
Ruch, K.	Stevensville, Ont.	1
Schweyer, G.	Fisherville, Ont.	1
Shank, E.	Port Dover, Ont.	1
Sider, R.	Ridgeway, Ont.	1
Smelser I. and Sons	Jarvis, Ont.	1
Stewart, E.	Jarvis, Ont.	1
Strader, H. Drilling Co.	Houston, Texas	1
Stubble and Stubble	Merlin, Ont.	3
Stubble, H. H. and Son	Chatham, Ont.	2
Union Gas Co. of Canada, Ltd.	Chatham, Ont.	3
Warren, C.	Blenheim, Ont.	1
Werner, D.	Fisherville, Ont.	1
Western Ashley Minerals Ltd.	Toronto, Ont.	1

Table XIX shows the geographical distribution of the 390 completions, their classification as exploratory or development, and the initial production of the successful completions. In Table XX this drilling is classified by target formation, and success ratios are given. Table XXI lists successful exploratory wells and Table XXII lists the more important dry exploratory tests. The wells listed in Tables XXI and XXII are located on the map in figure 2.

In number of completions, the year has the third largest total in the post-war period, being exceeded only by 1946 and 1953. The total footage of the 390 completions was nearly 476,000.

Cable tools remained the type of drilling equipment in favour, principally because of costs. Only 7 wells were completed by rotary equipment, six of these being in Lake St. Clair, using a barge-mounted rig.

TABLE II—ONTARIO NATURAL GAS PRODUCTION BY FIELDS, 1955

County	Field	Producing Formation	Quantity in M cu. ft.
Brant	Brant	Clinton, Whirlpool	15,130
Elgin, East	Bayham	Clinton	16,083
Essex	Kingsville and Leamington	Guelph	52,249
Haldimand, Lincoln, Wentworth	Haldimand	Clinton, Grimsby, Whirlpool	1,312,640
Kent	Camden Gore	Salina	39,935
	Chatham	Salina, Guelph	80,495
	D'Clute	Salina, Guelph	133,993
	Dover	Trenton	81,720
	Harwich	Salina	16,218
	Howard	Salina	55,745
	Tilbury	Salina, Guelph	2,058,574
	Zone	Salina, Guelph	132,570
Lambton	Becher	Salina, Guelph	152,619
	Colinville	Salina, Guelph	354,564
	Corunna	Salina, Guelph	181,142
	Dawn	Salina, Guelph	3,722
	Duthill	Guelph	2,017
	Kimball	Salina, Guelph	2,156,385
	Payne	Guelph	1,490,032
	Seckerton	Salina, Guelph	245,085
	Sombra	Guelph	289,995
	Waubuno	Guelph	414,584
Middlesex and Elgin	Mosald	Salina, Guelph	357,092
Norfolk	Norfolk	Clinton, Grimsby	730,013
Oxford	Brownsville	Guelph	15,815
	Norwich South	Clinton	32,683
Welland	Welland	Clinton, Grimsby and Whirlpool	431,757
Total gas produced			10,852,857

TABLE VI—GAS DISTRIBUTION[1] 1951–1955
(expressed in M cu. ft.)

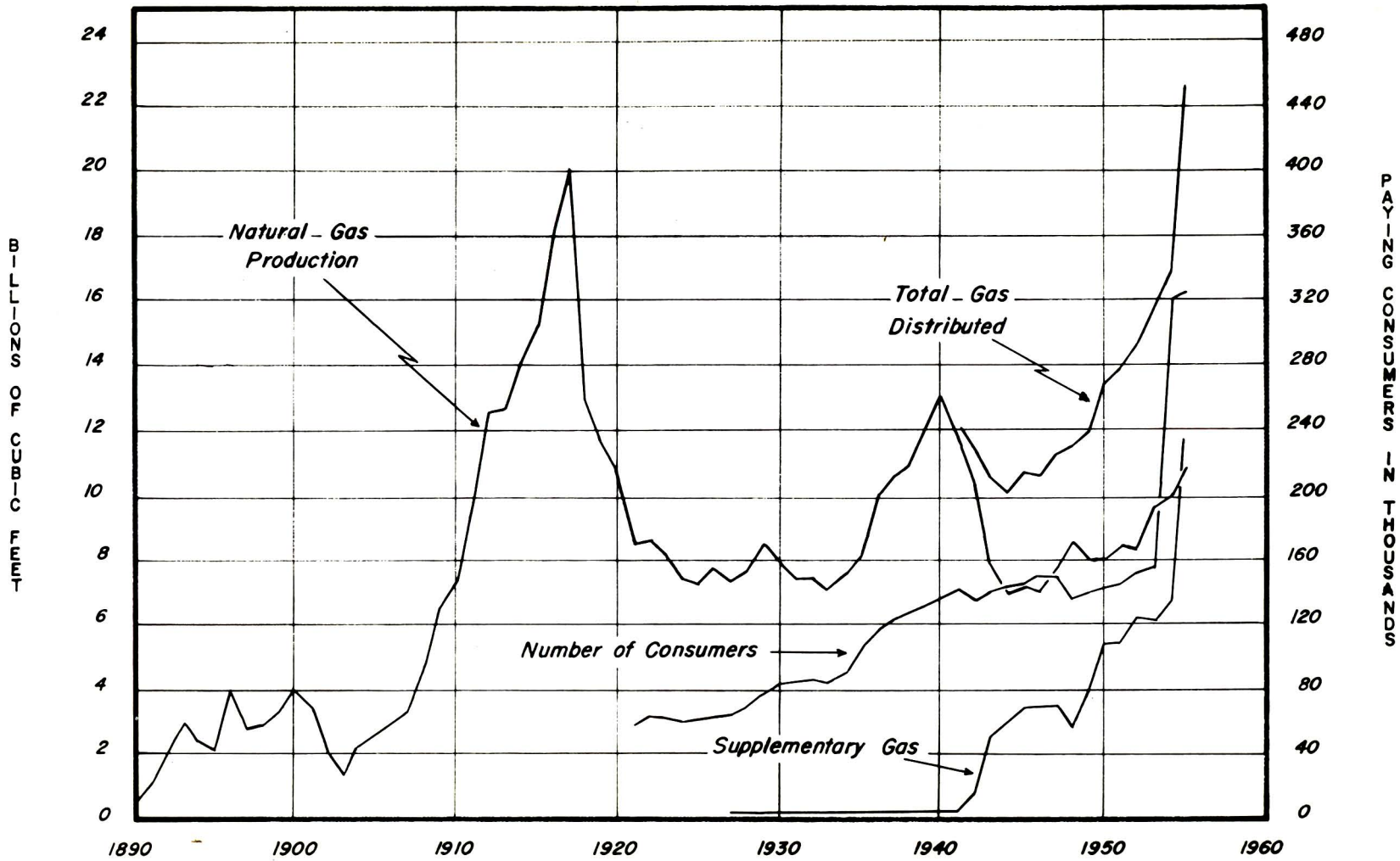
Utilization	1951	1952	1953	1954	1955
Residential Sales	9,175,866	9,619,670	10,303,121	10,697,585	14,435,846
Commercial Sales				1,713,660	2,742,342
Industrial Sales	1,929,567	1,994,953	2,207,988	2,178,613	3,487,682
Total Sales	11,105,433	11,614,623	12,511,109	14,589,858	20,665,870
Used by Companies	603,300	542,069	226,610	359,907	376,240
Free Gas	101,008	68,150	91,729	92,998	83,629
Gas to Storage	1,114,271	1,748,624	2,164,619	940,733	
Gas Unaccounted for	809,329	428,228	835,837	730,564	1,435,292
Total Distribution	13,733,341	14,401,694	15,829,904	16,714,060	22,561,031

[1]Estimates of private consumption eliminated ... main the major sources

TABLE I—GAS BALANCE SHEET, 1955

		M CU. FT.	PERCENT
SUPPLY			
Ontario production		10,852,857	48.2
Supplemental gas (imports, mixed gas, etc.)		11,708,174	51.8
Total supply		22,561,031	100.0
DISTRIBUTION			
Residential sales	14,435,846		
Commercial sales	2,742,342		
Industrial sales	3,487,682		
Total sales to customers		20,665,870	91.6
Free gas		83,629	.3
Company use and drilling		376,240	1.7
Unaccounted for		1,435,292	6.4
Total distribution		22,561,031	100.0

FIGURE No. 1.



The Development of the Natural Gas Industry in Ontario from 1890 to 1956

Windsor			858	133	9,231	5	81[redacted]	
Peel County								
Other			1,940		9,009	7,080	46,549	14,343
Sub-total	11	1,840	2,843	1,373	24,224	9,982	55,659	14,470

Part I

TABLE VII—GAS CONSUMPTION IN URBAN AREAS—1955—*Continued*

City Town or Village	Population	No. of Consumers			Consumption—M cu. ft.			Rate index reference Table VIII
		Res.	Com.	Ind.	Res.	Com.	Ind.	
Straffordville	450	147			4,833			G
Thamesville	1,017	353	72	7	34,423	9,639	6,029	N
Thorold	7,616	1,270	58	1	47,768	5,771	2,011	G
Tilbury	3,147	793	138	17	76,923	20,777	29,198	N
Tillsonburg	6,016	1,418	141	1	76,226	13,602	77	G
Toronto Metro	1,302,758	144,760	5,218	1,825	2,839,841	714,772	921,102	D
Vienna	335	114			3,630			G
Wallaceburg	7,799	2,446	235	29	227,307	30,214	97,095	N
Wardsville	287	84	22	1	8,584	3,540	485	N
Waterford	1,865	378	25		20,541	1,510		G
Welland	16,256	6,621	153	10	337,178	21,987	45,658	L
West Lorne	1,050	253	24		19,919	2,442		G
Wheatley	1,138	286	33		24,444	3,718		G
Windsor	127,641	31,166	2,371	373	2,716,542	427,062	1,026,047	N
Woodstock	17,068	2,312	177	11	108,379	20,041	2,945	G
Wyoming	783	208	35	2	18,369	5,270	1,067	N
Total	1,961,623	286,212	16,709	2,903	13,146,738	2,523,093	3,258,794	

AVERAGE ANNUAL CONSUMPTION PER CONSUMER

	M cu. ft.
1. Residential	45.9
2. Commercial	151.0
3. Industrial	1,122.6

TABLE VIII—GAS CONSUMPTION IN RURAL AREAS—1955

County	Number of Consumers			Quantity consumed—M cu. ft.			Total Consumption
	Res.	Com.	Ind.	Res.	Com.	Ind.	
Brant	605	27	2	49,420	5,987	919	56,326
Elgin	727	11	1	46,049	12,105	49	58,203
Essex	2,548	114	17	196,244	28,074	10,205	234,523
Haldimand	2,506	128	1	162,401	11,280	286	173,967
Kent	3,289	184	46	317,357	30,700	184,220	532,277
Lambton	1,366	100	7	124,870	14,158	3,308	142,336
Lincoln	284	10		14,071	820		14,891
Middlesex	284	4	34	28,270	469	24,631	53,370
Norfolk	1,080	108	1	73,102	77,372	426	150,900
Oxford	123	12		8,008	17,582		25,590
Waterloo	5			124			124
Welland	2,760	40	3	242,043	15,088	3,574	260,705
Wentworth	448	32	2	27,149	5,614	1,270	34,033
Total	16,025	770	114	1,289,108	219,249	228,888	1,737,245

AVERAGE ANNUAL CONSUMPTION PER CONSUMER

	M cu. ft.
1. Residential	80.4
2. Commercial	284.7
3. Industrial	2,007.8

The average consumption per consumer for the year, in each classification

TABLE VII—GAS CONSUMPTION IN URBAN AREAS—1955

City Town or Village	Population	No. of Consumers			Consumption—M cu. ft.			Rate index reference Table VIII
		Res.	Com.	Ind.	Res.	Com.	Ind.	
Alvinston	673	241	51	2	21,830	6,977	944	N
Ancaster	9,608	105	7		5,357	1,001		G
Appin	250	55	12	1	5,456	812	345	N
Aylmer	4,190	855			39,292			G
Beachville	821	46			2,969			A
Belle River	1,680	390	58	1	33,625	6,575	426	N
Belmont	788	176			8,272			O
Blenheim	2,753	843	116	7	86,031	17,245	3,769	N
Bothwell	784	206	47	4	20,384	6,019	740	N
Brantford	50,592	5,942	312	31	263,575	35,423	23,221	G
Brigden	467	180	35	1	17,699	4,245	77	N
Brownsville	321	113			8,437			M
Byron	3,015	218	20	1	16,543	2,507	358	N
Cainsville		247	5		11,376	780		G
Caledonia	2,037	567	81	3	28,737	8,331	896	K
Canfield	137	61			3,088			B
Chatham	22,973	7,205	837	82	709,265	161,563	55,525	N
Chippawa & Stamford	1,911	2,736	55	6	149,292	11,659	29,721	L
Comber	597	157	42	7	16,401	6,199	1,791	N
Courtright	572	169	26		18,026	2,954		N
Crystal Beach	3,907	930	38		87,363	8,430		L
Delhi	2,985	632	77		39,553	11,693		G
Dorchester & Middlesex	758	169	13		9,515	2,295		G
Dresden	2,195	701	124	16	65,855	14,932	17,161	N
Dunnville	4,886	1,359	134		94,951	14,204		G
Dutton & Wallacetown	814	318	35		22,308	2,523		G
Essex	3,217	849	90	15	81,201	12,037	17,909	N
Fenwick	630	148	8	1	5,831	437	255	G
Fisherville	245	58			3,592			H
Florence	185	69	18	1	6,618	1,659	452	N
Fonthill & Ridgeville	1,788	324	7		10,977	294		G
Fort Erie	8,523	2,388	55	9	241,545	11,055	13,784	L
Galt	22,764	2,540	151	29	118,947	20,952	12,499	G
Glencoe	1,062	341	57	4	39,025	7,086	1,471	N
Grimsby	3,452	626	52	6	32,699	4,940	4,942	I
Grimsby Beach	597	203	5		14,055	351		I
Hagersville	1,920	515	66	1	33,147	8,293	16	G
Highgate	389	121	14		9,354	1,011		G
Ingersoll	6,747	1,417	87	5	74,697	8,152	9,476	G
Inwood	217	80	26		7,263	2,178		N
Jarvis	656	186	24		11,857	2,639		G
Kingsville	2,922	809	53	3	59,154	7,451	897	G
Lambeth	1,510	216	7	1	18,969	712	270	G
Leamington	8,109	2,010	203	3	135,220	21,694	1,029	G
London	97,676	19,706	2,315	234	1,647,429	437,836	356,446	N
Merlin	542	151	42	2	16,673	4,926	330	N
Merritton	5,384	680	19	2	26,220	1,821	8,376	G
Mount Brydges	774	204	30	1	18,078	4,162	450	N
Newbury	311	87	10		6,919	1,058		N
Niagara Falls	24,408	3,279	249	10	178,919	45,056	52,548	L
Norwich	1,547	160	25		8,158	1,918		J
Oil Springs	497	94	24		9,716	1,635		N
Otterville	662	128	14		8,830	5,054		J
Paris	5,429	1,010	66	4	41,228	5,032	414	G
Petrolia	3,409	952	86	12	94,737	10,127	24,460	N
Port Burwell	688	331			7,532			G
Port Colborne	13,832	3,083	151	1	129,638	14,459	193	G
Port Dover	2,648	695	59	1	42,056	6,021	8	G
Port Lambton	370	270	43	3	24,987	5,688	974	N

M cu. ft.

Residential	47.8
Commercial	156.9
Industrial	1,156.0

NATURAL GAS RATES, 1948—*Continued*

	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
M		Minimum bill	97½c.
		Up to 15 M cu. ft	97½c. per M cu. ft.
		Over 15 M cu. ft	77½c. per M cu. ft.
N		1 M cu. ft. or less	$1.07½
		From 1 M to 10 M cu. ft	$1.02½ per M cu. ft.
		From 10 M to 25 M cu. ft	87½c. per M cu. ft.
		Over 25 M cu. ft	77½c. per M cu. ft.
O	Port Colborne	Minimum bill	$1.17½
		Up to 5 M cu. ft	$1.17½ per M cu. ft.
		From 5 M to 10 M cu. ft	92½c. per M cu. ft.
		Over 10 M cu. ft	77½c. per M cu. ft.
	Summer residents	Minimum charge	$2.22½ per M cu. ft.
P		200 cu. ft. or less	$1.22½
		Over 200 cu. ft	82½c. per M cu. ft.
Q	Grimsby and Grimsby Beach	Minimum bill	$1.00
		Meter rental	15c.
		Up to 5 M cu. ft	85c. per M cu. ft.
		From 5 M to 10 M cu. ft	75c. per M cu. ft.
		Over 10 M cu. ft	60c. per M cu. ft.
	Smithville	Minimum bill	90c.
		Meter rental	15c.
		Up to 5 M cu. ft	75c. per M cu. ft.
		From 5 M to 10 M cu. ft	70c. per M cu. ft.
		Over 10 M cu. ft	60c. per M cu. ft.
R	November to April	Up to 10 M cu. ft	65c. per M cu. ft.
		Over 10 M cu. ft	55c. per M cu. ft.
	May to October	Up to 10 M cu. ft	70c. per M cu. ft.
		Over 10 M cu. ft	55c. per M cu. ft.
S		Up to 5 M cu. ft	$1.00 per M cu. ft.
		From 5 M to 10 M cu. ft	90c. per M cu. ft.
		Over 10 M cu. ft	60c. per M cu. ft.
T	Central Pipe Line Co.	Minimum bill	$1.90
		First 200 cu. ft	55c. per hundred cu. ft.
		Next 800 cu. ft	10c. per hundred cu. ft.
		Next 1,000 cu. ft	60c. per M cu. ft.
		Next 4,000 cu. ft	$1.00 per M cu. ft.
		Over 6,000 cu. ft	$2.00 per M cu. ft.
U		1 M cu. ft. or less	$1.17½ per M cu. ft.
		From 1 M to 10 M cu. ft	82½c. per M cu. ft.
		From 10 M to 15 M cu. ft	77½c. per M cu. ft.
		Over 15 M cu. ft	72½c. per M cu. ft.
		1 M cu. ft. or less	$1.02½ per M cu. ft.
		From 1 M to 5 M cu. ft	87½c. per M cu. ft.
		Over 5 M cu. ft	72½c. per M cu. ft.
W	October to April	Up to 10 M cu. ft	62½c. per M cu. ft.
		From 10 M to 20 M cu. ft	67½c. per M cu. ft.
		Over 20 M cu. ft	77½c. per M cu. ft.
	May to September		87½c. per M cu. ft.
		Up to 200 cu. ft	40c. per hundred cu. ft.
		From 200 cu. ft. to 5 M cu. ft	70c. per M cu. ft.
		From 5 M to 10 M cu. ft	60c. per M cu. ft.
		Over 10 M cu. ft	45c. per M cu. ft.

The municipalities served by the Union Natural Gas Company and the Dominion Natural Gas Company have a new schedule of rates that does not take effect until the end of October, 1948. The rates in the municipalities served by the Dominion Natural Gas Company is increased 17½c. per thousand and those in the municipalities served by the Union Company are as follows:—

Up to	200 cu. ft.	50 cents per C cu. ft.
Next	1,800 cu. ft.	95 cents per M cu. ft.
Next	8,000 cu. ft.	$1.05 per M cu. ft.
Over	10,000 cu. ft.	$1.00 per M cu. ft.

Tables IV and V give the distribution of gas used in all municipalities Ontario, the number of domestic consumers, the quantity used by them and by industries, and the rates charged in these municipalities. This table has been published since the year 1922 and will be found useful for purposes of comparison.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1948

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	645	273	....	18,741	.....	72	K
Ancaster	566	90	....	3,718	.....	.....	92½c. (M.B.[1] $1.00)
Appin	125	48	....	3,299	.....	.....	K
Attercliffe	47	42	3	2,500	275	.....	72½c.–82½c.
Aylmer	2,245	860	....	29,263	.....	.....	T
Beachville	426	37	....	2,757	.....	.....	65c. (M.B. $1.00)
Belle River	1,019	286	....	27,609	.....	541	B (M.R.[2] 20c.)
Belmont	500	133	....	7,747	.....	.....	$1.00
Binbrook	195	6	1	340	160	.....	72½c.
Blenheim	1,873	775	....	69,789	.....	2,045	C (M.R. 20c.)
Bothwell	661	213	....	20,506	.....	585	Y
Brantford	34,409	6,338	....	222,010	.....	18,846	G
Brigden	386	193	....	16,534	.....	.....	B (M.R. 10c.)
Brownsville	.....	77	....	3,233	.....	386	90c. net (M.B. $1.25)
Byron	200	102	....	6,019	.....	315	K
Caledonia	1,465	576	4	36,693	223	1,748	80c. net (M.B. $1.00)
Cayuga	608	231	....	18,826	.....	150	82½c. (M.R. 20c.)
Chatham	18,035	5,885	....	515,126	.....	34,976	J
Chippawa	1,311	398	3	15,000	642	.....	F
Comber	484	169	....	17,637	.....	2,198	C (M.R. 20c.)
Cottam	385	96	1	5,380	154	372	82½c.
Courtright	345	165	....	13,748	.....	.....	B (M.R. 20c)
Crystal Beach	618	378	....	34,950	.....	.....	$1.00
Delhi	2,166	669	1	47,631	110	.....	82½c. (M.R. 10c.)
Dorchester	456	151	....	5,462	.....	296	E
Dresden and Tupperville	1,762	691	....	65,244	.....	25,501	G (M.R. 20c.)
Dunnville	4,178	1,273	1	99,296	100	1,760	82½c. (M.R. 15c.)
Dutton	807	265	1	17,518	132	797	V
Essex	1,897	672	....	64,954	.....	4,177	B (M.R. 20c.)
Fenwick	404	151	....	6,698	.....	269	97½c. (M.R. 25c.)
Fingal and Shedden	161	154	1	7,960	66	257	B
Fisherville	171	40	....	3,027	.....	.....	50c.–55c.
Florence	137	77	....	7,554	.....	479	Y
Fonthill	1,108	350	....	12,860	.....	.....	L
Fort Erie	7,412	2,154	3	128,270	1,272	2,520	F
Galt	14,598	2,618	....	89,050	.....	13,191	G. (M.R. 10c.)
Glencoe	749	313	....	31,866	.....	818	K
Grimsby	1,990	570	1	23,419	134	3,471	Q
Grimsby Beach	400	148	....	8,013	.....	49	Q

[1]M.B.—Minimum monthly bill.
[2]M.R.—Meter rental.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1948—*Continued*

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu.ft.	M cu. ft.	
...ersville	1,471	528	....	36,327	.....	113	82½c. (M.R. 15c.)
...peler	2,939	644	....	20,565	.....	1,256	N
Highgate	323	119	2	8,227	40	.....	C (M.R. 20c.)
...mberstone	3,287	842	..	37,740	.....	1,223	O
...rsoll	5,823	1,345	....	56,853	.....	5,395	G
Inwood	175	90	....	6,842	.....	164	A
Jarvis	616	211	....	15,461	.....	.....	82½c. (M.R. 10c.)
Kingsville	2,384	760	....	50,311	.....	481	U
Lambeth	475	170	....	10,806	.....	350	K
Leamington	6,235	2,007	....	152,989	.....	3,479	60c.
London	79,277	18,189	....	887,755	.....	144,778	K
...medoch	151	45	....	3,789	.....	.....	82½c.
...lin	219	165	....	17,663	.....	327	D
...rritton	3,407	675	....	24,945	.....	5,942	97½c. (M.R. 25c.)
Mount Brydges	462	155	....	11,842	.....	.....	K
Niagara Falls	20,234	4,872	4	172,199	907	43,307	F
Norwich	1,297	154	....	9,033	.....	.....	90c. (M.B. $1.00)
Oil Springs	377	140	....	7,841	.....	.....	R
Otterville	481	129	....	8,720	.....	.....	90c. (M.B. $1.00)
Paris	4,639	1,064	....	37,308	.....	1,034	G
Petrolia	2,598	912	....	73,960	.....	7,353	E
Port Burwell	513	226	1	7,753	341	.....	T
Port Colborne	7,043	1,793	1	84,922	143	123	O
Port Dover	2,092	714	....	55,378	.....	.....	82½c.
Port Rowan	632	240	....	17,696	.....	.....	60c.
...reston	6,955	1,208	....	39,545	.....	19,855	82½c.
...dgetown	1,999	775	....	74,032	.....	2,019	G
...dney	755	291	1	20,664	389	.....	C
...Anns	185	37	....	1,319	.....	.....	V
t. Catharines	34,644	6,839	....	270,340	.....	45,004	60c.–$1.35
St. George	486	154	....	5,853	.....	.....	97½c. (M.R. 25c.)
St. Thomas	18,342	3,248	....	117,750	.....	1,670	$1.02½
St. Williams	166	104	....	4,929	.....	642	60c.
Sarnia	20,567	6,385	1	390,521	24	75,552	B (M.R. 10c.)
Selkirk	167	124	....	9,057	.....	.....	82½c.
Simcoe	6,147	2,114	....	179,001	.....	26,775	82½c.
Smithville	529	228	....	12,873	.....	.....	Q
Sombra and Port Lambton	688	226	....	17,484	.....	78	B (M.R. 20c.)
Springfield	376	130	....	4,313	.....	.....	T
...ringford	188	41	....	2,718	.....	.....	90c. (M.B. $1.00)
...affordville	267	137	....	4,967	.....	.....	T
Thamesville	737	314	....	30,547	.....	698	Y
Thorold	5,543	1,282	....	48,217	.....	1,653	97½c. (M.R. 25c.)
Tilbury	2,073	689	....	69,511	.....	2,830	C
Tillsonburg	4,064	1,452	....	94,833	.....	1,186	82½c.
Vienna	224	126	4	3,425	882	.....	T
Vittoria	257	88	....	6,523	.....	.....	82½c.
Wallaceburg	5,631	1,859	....	165,709	.....	333,337	C (M.R. 20c.)
...allacetown	175	59	....	3,277	.....	.....	V
Waterford	1,398	351	....	21,579	.....	.....	P
Welland	14,781	4,789	6	170,478	853	10,289	F
Wellandport	.....	8	2	134	131	.....	60c.
West Lorne	830	220	2	15,282	39	123	V
Wheatley	724	272	....	22,570	.....	.....	82½c.
Windsor	117,432	24,869	....	1,471,171	.....	625,809	K
Woodstock	13,021	2,609	....	99,952	.....	1,253	G
...oming	574	191	....	12,634	.....	64	A
Total	.....	125,075	44	6,918,380	7,017	1,479,961	.....

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1948

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford	9,228	282	.....	11,062	.....	.....	G
Burford	3,731	13	.....	1,087	.....	.....	G
Onondaga	918	50	2	2,945	306	.....	80c. (M.R.[1] 15
South Dumfries	2,358	8	.....	50	.....	.....	$1.02½
Tuscarora	2,654	36	.....	3,765	.....	.....	25c.
ELGIN:							
Aldborough	2,533	25	.....	1,320	.....	2,500	V
Bayham	3,100	48	.....	3,178	.....	17	T and 82½c.
Dunwich	2,033	56	.....	3,614	.....	.....	V
Malahide	2,647	323	6	12,503	602	.....	T
Southwold	3,115	131	.....	7,799	.....	66	B
Yarmouth	5,462	95	.....	3,114	.....	.....	A
ESSEX:							
Gosfield North	2,214	140	1	7,264	156	.....	82½c.
Gosfield South	2,753	410	.....	30,170	.....	2,132	82½c.
Maidstone	2,970	285	5	23,182	1,199	.....	B
Mersea	5,068	482	3	33,789	360	9,540	82½c.
Rochester	2,315	261	7	23,015	1,166	1,614	B
Sandwich East	9,436	21	.....	1,892	.....	.....	B
Sandwich South	2,335	155	.....	14,533	.....	3,474	B
Tilbury North	1,763	52	2	4,528	411	3,526	C
Tilbury West	1,435	35	1	2,849	84	.....	C
HALDIMAND:							
Canborough	732	114	29	7,144	4,180	446	82½c. (M.R. 15c.)
Dunn	609	142	7	9,021	536	795	82½c. (M.R. 15c.)
Moulton	1,483	183	10	10,974	1,435	325	82½c. (M.R. 15c.)
North Cayuga	1,133	156	5	8,836	1,213	268	82½c.
Oneida	1,082	103	8	8,639	1,143	107	82½c.
Rainham	1,525	231	22	16,201	3,729	1,664	82½c.
Seneca	1,286	158	23	8,997	3,911	261	82½c.
Sherbrooke	283	50	1	2,750	400	.....	82½c. (M.R. 15c.)
South Cayuga	513	80	11	4,307	2,618	1,898	82½c. (M.R. 15c.)
Walpole	2,803	335	40	21,677	5,698	126	82½c. (M.R. 15c.)
KENT:							
Camden	1,874	41	.....	3,002	.....	.....	C
Chatham	5,825	139	.....	10,849	.....	1,375	C
Dover	4,291	483	1	53,938	175	3,767	C and D
Harwich	4,724	602	5	53,174	956	72	C
Howard	2,476	167	3	15,560	464	33	C
Orford	1,474	46	2	4,082	164	.....	C
Raleigh	4,387	773	21	71,144	5,376	2,317	D and W
Romney	1,357	122	24	11,574	9,047	734	D and W
Tilbury East	2,902	275	60	26,182	17,777	1,585	D and W
Zone	817	63	.....	3,748	.....	.....	A
LAMBTON:							
Brooke	2,000	34	.....	1,942	.....	.....	A
Dawn	2,020	116	4	9,866	698	828	D
Enniskillen	2,259	168	.....	10,050	.....	933	B
Euphemia	1,243	12	.....	768	.....	.....	Y
Moore	3,438	549	.....	43,985	.....	705	B
Plympton	2,382	8	.....	460	.....	.....	A
Sombra	2,519	125	.....	7,124	.....	720	B

[1]M.R.—Meter rental.
[2]M.B.—Minimum monthly bill.
[3]Changed from natural gas to manufactured gas August 31, 1947.

NATURAL GAS RATES, 1949—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
O[1]	Dominion Natural Gas Co.	Minimum bill	$1.17½
		Up to 5 M cu. ft.	97½c. per M cu. ft.
		From 5 M to 10 M cu. ft.	87½c. per M cu. ft.
		Over 10 M cu. ft.	72½c. per M cu. ft.
P[1]	Dominion Natural Gas Co.	Minimum bill	$1.02
		200 cu. ft. or less	$1.02
		Over 200 cu. ft.	77½c. per M cu. ft.
Q	Grimsby Natural Gas Co.	Minimum bill	$1.15
	Smithville	Minimum bill	$1.05
R	Union Gas Co. of Canada, Ltd.		
	November to April	Up to 10 M cu. ft.	80c. per M cu. ft.
		Over 10 M cu. ft.	70c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	85c. per M cu. ft.
		Over 10 M cu. ft.	70c. per M cu. ft.
T	Central Pipe Line Co.	Minimum bill	$1.90
		First 200 cu. ft.	55c. per hundred cu. ft.
		Next 800 cu. ft.	10c. per hundred cu. ft.
		Next 1,000 cu. ft.	60c. per M cu. ft.
		Next 4,000 cu. ft.	$1.00 per M cu. ft.
		Over 6,000 cu. ft.	$2.00 per M cu. ft.
U	Union Gas Co.		
	January to October	First 200 cu. ft.	50c. per hundred cu. ft.
		Next 1,000 cu. ft.	95c. per M cu. ft.
		Next 8,000 cu. ft.	$1.05 per M cu. ft.
		Over 10,000 cu. ft.	$1.00 per M cu. ft.
	November	1,000 to 8,000 cu. ft.	$1.08 per M cu. ft.
		Over 10,000 cu. ft.	$1.03 per M cu. ft.
	December	1,000 to 8,000 cu. ft.	$1.06½ per M cu. ft.
		Over 10,000 cu. ft.	$1.01½ per M cu. ft.
V[1]	Dominion Natural Gas Co.	1 M cu. ft. or less	87½c. per M cu. ft.
		From 1 M to 5 M cu. ft.	77½c. per M cu. ft.
		Over 5 M cu. ft.	67½c. per M cu. ft.
W[1]	Dominion Natural Gas Co.		
	October to April	Up to 10 M cu. ft.	57½c. per M cu. ft.
	October to April	From 10 M to 20 M cu. ft.	62½c. per M cu. ft.
		Over 20 M cu. ft.	72½c. per M cu. ft.
	May to September		82½c. per M cu. ft.

In the municipalities served by the Dominion Natural Gas Company a surcharge is authorized during the winter months to cover the cost of materials used in making oil gas at their manufacturing plant at Port Stanley, which was described in last year's report. This was estimated at 27 cents per M cubic feet for the first year until the experience of one year could be used for estimating the next year's cost. Effective for one year, commencing October 2, 1949, this rate has been reduced to 22 cents per M cubic feet.

Tables IV and V give the distribution of gas used in all municipalities in Ontario, the number of domestic consumers, and the quantity of gas used by them and by the industries, and the rates charged in these municipalities. The table has been published since 1922 and will be found useful as a basis of comparison.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1949

Town or city	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	668	269	....	17,079	.....	45	U
Aylmer	3,280	910	....	30,823	.....	.....	T
Beachville	426	40	....	3,280	.....	.....	$1.00 (M.B.[1] $1.50)
Belle River	1,250	317	....	24,780	.....	438	U
Belmont	500	182	....	6,856	950	.....	$1.35
Blenheim	2,272	812	....	63,185	.....	1,446	U
Bothwell	704	215	....	17,278	.....	505	U
Brantford[2]	35,807	6,336	....	216,036	.....	21,538	G
Brownsville	221	77	....	4,871	.....	492	90c. net (M.B. $1.20)
Caledonia	1,500	604	4	36,312	237	1,796	80c. net (M.B. $1.00)
Cayuga[2]	710	231	....	16,904	.....	131	77½c.
Chatham	20,263	6,028	....	466,128	.....	33,486	U
Comber	484	170	....	15,800	.....	1,521	U
Chippewa	1,504	418	4	16,413	692	.....	F
Cottam[2]	385	101	1	5,543	149	334	77½c.
Courtright	455	173	....	13,010	.....	.....	U
Crystal Beach	1,307	535	....	36,450	.....	.....	$1.00
Delhi[2]	2,410	692	1	45,986	144	.....	77½c.
Dresden	2,065	710	....	58,735	.....	4,469	U
Dunnville[2]	3,997	1,308	1	92,824	100	1,575	77½c.
Dutton	825	267	2	17,056	162	702	V
Essex	2,253	723	....	53,222	.....	2,978	U
Fenwick[2]	404	130	....	5,206	.....	180	92½c.
Fisherville	171	44	....	2,973	.....	.....	$1.00
Fonthill	1,182	352	....	14,000	.....	.....	L
Fort Erie	7,451	2,085	2	127,140	1,291	3,387	F
Galt[2]	16,952	2,621	....	86,557	.....	14,964	G
Glencoe	1,000	342	....	28,005	.....	738	U
Grimsby	2,457	570	1	22,702	141	3,670	Q
Grimsby Beach	400	163	....	8,309	.....	140	Q
Hagersville[2]	1,624	543	....	35,709	.....	87	77½c.
Hespeler[2]	3,527	660	....	20,492	.....	1,291	N
Highgate[2]	400	121	2	7,924	94	.....	C
Humberstone[2]	3,620	894	....	36,605	.....	1,985	O
Ingersoll[2]	8,234	1,368	....	59,537	.....	4,687	G
Jarvis[2]	588	206	....	14,472	.....	.....	77½c.
Kingsville[2]	2,489	748	....	47,515	.....	381	M
Lambeth	475	171	....	10,944	.....	445	K
Leamington	7,221	2,028	....	143,438	.....	2,373	$1.05
London	93,021	18,852	....	889,598	.....	163,091	U and K
Merlin	525	170	....	14,319	.....	285	U
Merritton	3,868	693	....	23,405	.....	6,157	92½c.
Mount Brydges	462	158	....	10,530	.....	412	U
Niagara Falls	21,674	4,939	4	174,347	854	45,026	F
Norwich	1,369	189	....	10,961	.....	.....	M.B. $1.50
Oil Springs	422	139	....	9,923	.....	.....	R
Otterville	481	146	....	9,397	.....	.....	M.B. $1.50
Paris[2]	4,980	1,081	....	37,568	.....	926	G
Petrolia	3,017	909	....	63,301	.....	6,074	U
Port Burwell	744	215	1	7,875	210	.....	T
Port Colborne[2]	7,613	1,820	1	78,435	152	94	O
Port Dover[2]	2,201	745	....	51,876	.....	.....	77½c.
Port Rowan[2]	718	250	....	17,577	.....	125	77½c.
Preston	7,239	1,195	....	38,859	.....	16,605	G
Ridgetown	2,209	801	....	63,704	.....	2,118	U
Rodney[2]	859	292	1	19,683	432	.....	V
Sarnia[2]	23,284	6,476	....	355,257	.....	97,291	U
Simcoe	6,908	2,139	....	164,197	.....	23,586	77½c.

[1]M.B.—Minimum Monthly bill.
[2]These towns and cities are liable to the surcharge discussed on page 11.

TABLE IV—GAS CONSUMPTION IN TOWNS AND CITIES, 1949—*Continued*

wn or city	Popu-lation	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Indus-trial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Smithville	529	231	....	11,299	.....	.....	Q
Sombra and Port Lambton	688	252	....	16,309	.....	368	U
Springfield	455	120	....	4,485	.....	.....	T
St. Catharines[2]	35,436	6,855	....	255,566	.....	64,101	92½c.
St. George[2]	486	163	....	5,619	.....	.....	97½c.
St. Thomas[2]	19,135	3,217	....	116,101	.....	2,137	K
Thamesville	857	327	....	25,737	.....	664	U
Thorold[2]	6,173	1,284	....	44,980	.....	1,946	92½c.
Tilbury	2,205	709	....	60,902	.....	5,138	U
Tillsonburg[2]	4,727	1,479	....	91,202	.....	1,256	80½c.
Vienna[2]	335	98	2	3,839	393	.....	T
Wallaceburg	6,920	1,975	....	143,374	.....	252,603	U
Waterford[2]	1,546	370	....	20,459	.....	.....	P
Welland	16,004	5,037	6	178,738	876	9,717	F
West Lorne[2]	960	223	2	14,803	950	155	V
Wheatley[2]	969	281	....	21,711	.....	.....	77½c.
Windsor	118,702	25,009	....	1,324,780	.....	647,695	U
Woodstock[2]	13,533	2,587	....	97,791	.....	1,909	G
Wyoming	644	185	....	11,723	.....	40	U
Total	549,379	125,773	35	6,420,329	7,827	1,455,303	.....

Photograph by courtesy of Jack H. Fleming.



Cementing the casing of a well in Sombra township.

TABLE V—GAS CONSUMPTION IN TOWNSHIPS, 1949

County and township	Population	No. of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford[1]	11,439	289	.....	10,732	.....	.....	G
Burford[1]	4,216	16	.....	593	.....	6,328	G
Onondaga[1]	944	50	3	2,207	242	.....	87½c.
South Dumfries[1]	2,897	8	.....	42	.....	.....	97½c.
Tuscarora	2,654	44	.....	4,654	.....	.....	25c.
ELGIN:							
Aldborough	2,554	26	.....	1,339	.....	4,986	V
Bayham	3,141	366	.....	14,315	.....	3,662	T and 82½c.
Dunwich	2,151	117	.....	6,974	.....	.....	V
Malahide	3,187	197	5	6,002	418	.....	T
Southwold	3,424	294	1	16,442	65	341	B
Yarmouth	6,385	98	.....	32,840	.....	.....	A
ESSEX:							
Gosfield North[1]	2,602	144	1	6,966	144	.....	77½c.
Gosfield South[1]	3,146	458	.....	26,599	.....	7,574	77½c.
Maidstone	3,229	374	5	27,060	1,175	2,288	U
Mersea[1]	5,539	467	3	37,097	347	8,932	77½c.
Rochester	2,261	219	7	13,895	1,164	417	U
Sandwich East	12,819	22	.....	1,843	.....	.....	U
Sandwich South	2,792	183	.....	11,433	.....	2,619	U
Tilbury North	1,733	58	2	3,574	431	9,681	U
Tilbury West	1,526	35	1	2,782	94	.....	U
HALDIMAND:							
Canborough[1]	867	157	32	9,160	4,742	49	77½c.
Dunn[1]	632	149	7	7,226	1,118	.....	77½c.
Moulton[1]	1,629	199	10	10,346	1,936	60	77½c.
North Cayuga[1]	1,326	163	7	9,572	1,277	.....	77½c.
Oneida[1]	1,133	104	7	7,598	1,486	.....	77½c.
Rainham[1]	1,373	285	21	20,051	3,762	1,525	77½c.
Seneca[1]	1,383	165	22	9,443	3,639	210	77½c.
Sherbrooke[1]	280	46	1	1,524	412	.....	77½c.
South Cayuga[1]	607	85	15	4,197	3,338	400	77½c.
Walpole[1]	2,864	420	40	28,377	5,992	185	77½c.
KENT:							
Camden	2,056	41	.....	2,810	.....	.....	U
Chatham	6,303	154	.....	9,854	.....	973	U
Dover	4,679	488	1	45,276	164	3,095	U, C, and D
Harwich	5,652	702	5	45,547	962	67	U and C
Howard	2,463	171	3	13,010	416	31	U and C
Orford	1,515	47	2	3,990	215	.....	C
Raleigh	4,710	793	21	61,116	5,015	1,505	U and W
Romney	1,419	124	35	10,461	8,510	843	U and W
Tilbury East	2,897	285	62	21,908	16,551	1,901	U and W
Zone	841	66	.....	3,205	.....	.....	U
LAMBTON:							
Brooke	1,984	126	.....	7,865	.....	121	U
Dawn	2,034	194	5	15,072	630	1,571	U
Enniskillen	2,380	165	.....	8,790	.....	861	U
Euphemia	1,260	11	.....	684	.....	.....	U
Moore	3,914	790	.....	56,955	.....	.....	U
Plympton	2,515	8	.....	397	.....	.....	U
Sombra	2,742	127	.....	6,494	.....	823	U
LINCOLN:							
Caistor[1]	1,162	54	.....	3,013	.....	31	77½c. (M.B.[2]83c.)
Gainsborough[1]	2,085	111	15	5,670	1,629	.....	77½c.
Grantham[1]	9,342	102	.....	4,230	.....	.....	92½c.
Louth[1]	3,345	8	.....	330	.....	.....	92½c.

TABLE IV—NATURAL GAS RATES, 1950—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
N[1]	Dominion Natural Gas Co.	Minimum bill	$1.02
		1 M cu. ft. or less	$1.02½ per M cu. ft.
		From 1 M to 10 M cu. ft.	97½c. per M cu. ft.
		From 10 M to 25 M cu. ft.	82½c. per M cu. ft.
		Over 25 M cu. ft.	72½c. per M cu. ft.
O[1]	Dominion Natural Gas Co.	Minimum bill	$1.17½
		Up to 5 M cu. ft.	97½c. per M cu. ft.
		From 5 M to 10 M cu. ft.	87½c. per M cu. ft.
		Over 10 M cu. ft.	72½c. per M cu. ft.
P[1]	Dominion Natural Gas Co.	Minimum bill	$1.02
		200 cu. ft. or less	$1.02
		Over 200 cu. ft.	77½c. per M cu. ft.
Q	Grimsby Natural Gas Co.	Minimum bill	$1.15
	Smithville	Minimum bill	$1.05
R	Union Gas Co.		
	November to April	Up to 10 M cu. ft	80c. per M cu. ft.
		Over 10 M cu. ft.	70c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	85c. per M cu. ft.
		Over 10 M cu. ft.	70c. per M cu. ft.
T	Central Pipe Line Co.	Minimum bill	$1.90
		First 200 cu. ft.	55c. per hundred cu. ft.
		Next 800 cu. ft.	10c. per hundred cu. ft.
		Next 1,000 cu. ft.	60c. per M cu. ft.
		Next 4,000 cu. ft.	$1.00 per M cu. ft.
		Over 6,000 cu. ft.	$2.00 per M cu. ft.
U	Union Gas Co.		
	January to October	First 200 cu. ft.	50c. per hundred cu. ft.
		Next 1,000 cu. ft.	95c. per M cu. ft.
		Next 8,000 cu. ft.	$1.05 per M cu. ft.
		Over 10,000 cu. ft.	$1.00 per M cu. ft.
	November	1,000 to 8,000 cu. ft.	$1.08 per M cu. ft.
		Over 10,000 cu. ft.	$1.03 per M cu. ft.
	December	1,000 to 8,000 cu. ft.	$1.06½ per M cu. ft.
		Over 10,000 cu. ft.	$1.01½ per M cu. ft.
V[1]	Dominion Natural Gas Co.	1 M cu. ft. or less	87½c. per M cu. ft.
		From 1 M to 5 M cu. ft.	77½c. per M cu. ft.
		Over 5 M cu. ft.	67½c. per M cu. ft.
W[1]	Dominion Natural Gas Co.		
	October to April	Up to 10 M cu. ft.	57½c. per M cu. ft.
		From 10 M to 20 M cu. ft.	62½c. per M cu. ft.
		Over 20 M cu. ft.	72½c. per M cu. ft.
	May to September		82½c. per M cu. ft.

[1]These classifications are liable to a surcharge mentioned in a previous report (Vol. LIX, pt. 3).

Tables V and VI give the distribution of gas used in all municipalities in Ontario, the number of domestic consumers and the quantity of gas used by them and by industries. The rate charged in each municipality is indicated by a letter which refers to the several rates set out on pages 6-7.

TABLE V—GAS CONSUMPTION IN TOWNS AND CITIES, 1950

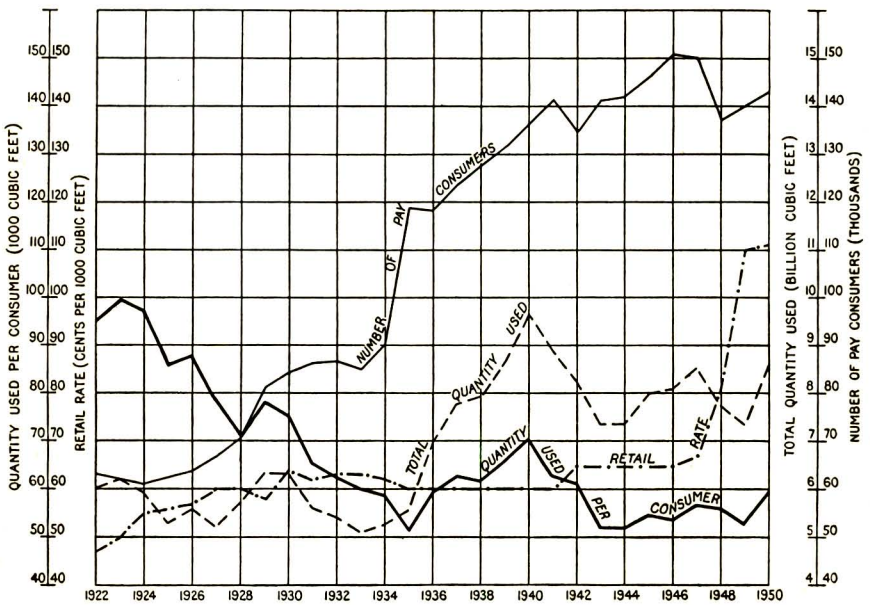
Town or city	Population	Number of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	668	274	....	21,383	.....	20	U
Aylmer	3,280	910	....	29,681	.....	.....	T
Beachville	426	40	....	3,148	.....	.....	$1.00 (M.B.[1] $1.50)
Belle River	1,250	330	....	28,529	.....	485	U
Belmont	500	175	....	6,221	.....	.....	$1.35
Blenheim	2,272	840	....	77,078	.....	1,156	U
Bothwell	704	225	....	20,374	.....	546	U
Brantford[2]	35 807	6,306	....	232,462	.....	22,506	G
Brownsville	221	78	....	5,469	.....	623	90c. net (M.B.[1] $1.20)
Caledonia	1,500	608	4	38,597	373	1,566	80c. net (M.B.[1] $1.00)
Cayuga[2]	710	240	....	18,594	.....	133	77½c.
Chatham	20,263	6,290	....	545,683	.....	28 560	U
Chippawa	1 504	438	....	17,913	.....	690	F
Comber	484	182	....	17,993	.....	1,506	U
Cottam[2]	385	103	2	6,605	229	455	77½c.
Courtright	455	182	....	14,622	.....	.....	U
Crystal Beach	1,307	570	....	47,450	.....	.....	$1.00
Delhi[2]	2,410	702	1	51,504	166	496	77½c.
Dresden	2,065	735	....	65,590	.....	5,393	U
Dunnville[2]	3,997	1,352	1	103,212	483	1,502	77½c.
Dutton	825	270	2	19,469	116	785	V
Essex	2,253	769	....	63,661	.....	3,186	U
Fenwick[2]	404	132	....	5,472	.....	246	92½c.
Fisherville	171	46	....	3,500	.....	.....	$1.00
Fonthill	1,182	350	....	12,233	.....	.....	L
Fort Erie	7,451	2,113	10	161,140	1,000	4,005	F
Galt[2]	16,952	2,593	....	93,935	.....	13,004	G
Glencoe	1,000	355	....	33,227	.....	743	U
Grimsby	2,457	570	....	24,025	.....	3,357	Q
Grimsby Beach	400	165	....	9,210	.....	265	Q
Hagersville[2]	1,624	548	....	39,990	.....	91	77½c.
Hespeler[2]	3,527	670	....	15,545	.....	1,231	N
Highgate[2]	400	133	2	9,835	242	.....	C
Humberstone[2]	3,620	921	....	39,918	.....	1,891	O
Ingersoll[2]	8,234	1,402	....	64,191	.....	4,735	G
Jarvis[2]	588	213	....	16,208	.....	.....	77½c.
Kingsville[2]	2,489	744	....	55,182	.....	1,275	M
Lambeth	475	178	....	13,152	.....	443	K
Leamington	7,221	2,035	....	157,443	.....	2,886	$1.05
London	93,021	19,564	....	1,181,985	.....	184,247	U and K
Merlin	525	176	....	17,142	.....	197	U
Merritton	3,868	706	....	25,534	.....	8,975	92½c.
Mount Brydges	462	166	....	13,352	.....	557	U
Niagara Falls	21,674	4,963	5	189,635	960	41,629	F
Norwich	1,369	188	....	8,591	.....	.....	M.B.[1] $1.50
Oil Springs	422	140	....	10,443	.....	.....	R
Otterville	481	147	....	8,223	.....	.....	M.B.[1] $1.50
Paris[2]	4,980	1,082	....	39,883	.....	965	G
Petrolia	3,017	922	....	69,268	.....	6,535	U
Port Burwell	744	215	1	7,798	147	.....	T
Port Colborne[2]	7,613	1,914	1	83,162	98	60	O
Port Dover[2]	2,201	760	....	58,101	.....	.....	77½c.
Port Rowan[2]	718	252	....	19,680	.....	271	77½c.
Preston	7,239	1,202	....	50,827	.....	17,113	G
Ridgetown	2,209	819	....	75,046	.....	3,069	U

TABLE V—GAS CONSUMPTION IN TOWNS AND CITIES, 1950—*Continued*

Town or city	Population	Number of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Rodney[2]	859	306	1	22,469	427	.....	V
St. Catharines[2]	35,436	6,880	....	264,934	.....	108,442	92½c.
St. George[2]	486	146	....	6,303	.....	.....	97½c.
St. Thomas[2]	19,135	3,198	....	141,705	.....	1,886	K
Sarnia[2]	23,284	6,636	....	408,785	.....	165,544	U
Simcoe	6,908	2,166	....	184,866	.....	21,047	77½c.
Smithville	529	239	....	12,917	.....	.....	Q
Sombra and Port Lambton	688	270	....	19,731	.....	595	U
Springfield	455	120	....	4,523	.....	.....	T
Thamesville	857	347	....	31,158	.....	558	U
Thorold[2]	6,173	1,309	....	47,342	.....	2,141	92½c.
Tilbury	2,205	732	....	68,074	.....	23,531	U
Tillsonburg[2]	4.727	1 522	....	100,692	.....	1,753	80½c.
Vienna[2]	335	98	3	4,062	486	.....	T
Wallaceburg	6,920	2,118	....	170,598	.....	301,303	U
Waterford[2]	1,546	378	....	22,914	.....	.....	P
Welland	16,004	5,217	6	202,031	823	12,463	F
West Lorne[2]	960	235	2	17,651	228	81	V
Wheatley[2]	969	296	....	25,339	.....	.....	77½c.
Windsor	118,702	25,630	....	1,577,628	.....	694,506	U
Woodstock[2]	13,533	2,564	....	105,522	.....	2,437	G
Wyoming	644	195	....	12,975	.....	61	U
Total	553,379	128,605	41	7,500,333	5,778	1,703,746	

[1]M.B.—Minimum monthly bill.

[2]These towns and cities are liable to the surcharge mentioned in a previous report (Vol. LIX pt. 3).



Data relating to the domestic use of natural gas in Ontario, 1922–1950

TABLE VI—GAS CONSUMPTION IN TOWNSHIPS, 1950

County and township	Population	Number of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
BRANT:							
Brantford[1]	11,439	355	.....	10,988	.....	.....	G
Burford[1]	4,216	20	.....	5,538	.....	.....	G
Onondaga[1]	944	50	2	2,301	223	.....	87½c.
South Dumfries[1]	2,897	12	.....	982	.....	.....	97½c.
Tuscarora	2,654	47	.....	5,767	.....	.....	25c.
ELGIN:							
Aldborough	2,554	26	.....	1,840	.....	8,898	V
Bayham	3,141	372	2	15,098	213	.....	T and 82½c.
Dunwich	2,151	122	.....	8,259	.....	.....	V
Malahide	3,187	197	.....	6,320	.....	.....	T
Southwold	3,424	305	2	19,268	143	324	B
Yarmouth	6,385	98	.....	3,808	.....	.....	A
ESSEX:							
Gosfield North[1]	2,602	150	1	8,051	123	.....	77½c.
Gosfield South[1]	3,146	450	.....	34,679	.....	7,473	77½c.
Maidstone	3,229	404	4	32,915	1,311	2,474	U
Mersea	5,539	487	3	36,254	365	11,925	77½c.
Rochester	2,261	209	7	16,278	1,462	430	U
Sandwich East	12,819	20	.....	1,844	.....	.....	U
Sandwich South	2,792	180	.....	12,878	.....	2,394	U
Tilbury North	1,733	55	2	4,113	454	334	U
Tilbury West	1,526	34	1	2,863	119	.....	U
HALDIMAND:							
Canborough[1]	867	163	29	10,423	4,784	.....	77½c.
Dunn[1]	632	142	8	11,496	3,041	151	77½c.
Moulton[1]	1,629	198	10	11,740	2,363	.....	77½c.
North Cayuga[1]	1,326	114	8	9,207	1,360	.....	77½c.
Oneida[1]	1,133	61	6	6,330	1,128	30	77½c.
Rainham[1]	1,373	273	19	21,457	3,201	1,506	77½c.
Seneca[1]	1,383	169	22	10,046	3,498	154	77½c.
Sherbrooke[1]	280	44	1	3,017	414	194	77½c.
South Cayuga[1]	607	79	15	4,736	2,761	158	77½c.
Walpole[1]	2,864	455	40	33,301	6,721	359	77½c.
KENT:							
Camden	2,056	46	.....	3,544	.....	.....	U
Chatham	6,303	161	.....	12,400	.....	945	U
Dover	4,679	492	1	49,715	173	2,354	U, C, and D
Harwich	5,652	717	7	52,820	1,761	125	U and C
Howard	2,463	175	3	15,152	831	30	U and C
Orford	1,515	50	2	4,688	433	.....	C
Raleigh	4,710	827	22	69,053	5,726	1,520	U and W
Romney	1,419	128	35	12,374	8,695	703	U and W
Tilbury East	2,897	289	63	25,398	17,609	2,157	U and W
Zone	841	70	.....	4,100	.....	807	U
LAMBTON:							
Brooke	1,984	133	.....	9,562	.....	60	U
Dawn	2,034	206	4	16,659	759	1,588	U
Enniskillen	2,380	168	.....	9,672	.....	1,045	U
Euphemia	1,260	13	.....	1,015	.....	.....	U
Moore	3,914	823	.....	67,348	.....	.....	U
Plympton	2,515	8	.....	459	.....	.....	U
Sombra	2,742	139	1	7,902	21	754	U
LINCOLN:							
Caistor[1]	1,162	54	.....	3,553	.....	39	77½c. (M.B.[2] & ...)
Gainsborough[1]	2,085	98	10	5,063	1,390	.....	77½c.
Grantham[1]	9,342	109	.....	4,516	.....	.....	92½c.
Louth[1]	3,345	11	.....	455	.....	.....	92½c.

TABLE VI—GAS CONSUMPTION IN TOWNSHIPS, 1950—*Continued*

County and township	Population	Number of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
MIDDLESEX:							
Caradoc	3,002	32	.....	2,925	.....	6,114	U
Delaware	1,116	6	.....	271	.....	2,152	U
Ekfrid	1,804	80	.....	6,446	.....	.....	U
Lobo	1,875	1	.....	123	.....	8,002	U
Mosa	1,395	2	.....	92	.....	.....	U
North Dorchester[1]	2,857	195	.....	7,613	.....	3,584	E
Westminster	10,484	234	.....	16,313	.....	1,067	U and K
NORFOLK:							
Charlotteville[1]	3,840	274	5	16,613	927	6,442	77½c.
Houghton	1,733	48	.....	1,575	.....	.....	T
Middleton[1]	2,651	236	2	16,526	394	12,215	77½c.
North Walsingham[1]	2,203	24	1	1,637	789	5,940	77½c.
South Walsingham[1]	1,876	109	4	4,590	508	850	77½c.
Townsend[1]	4,095	112	1	3,880	144	1,504	77½c.
Windham[1]	3,958	101	1	6,642	477	2,091	77½c.
Woodhouse[1]	2,643	336	10	22,420	2,114	2,527	77½c.
OXFORD:							
Dereham[1]	3,379	44	.....	3,500	.....	.....	80½c. (M.B.[2] 80c.)
East Oxford[1]	2,033	15	.....	811	.....	.....	G
North Oxford[1]	1,175	3	.....	125	.....	.....	G
South Norwich[1]	2,318	51	.....	4,958	.....	.....	80½c. (M.B.[2] 80c.)
West Oxford[1]	2,211	53	.....	3,782	.....	.....	G
WATERLOO:							
North Dumfries[1]	3,850	98	.....	2,454	.....	.....	G
Waterloo[1]	11,157	12	.....	801	.....	.....	G
WELLAND:							
Bertie	4,616	1,066	38	87,058	7,438	24	F
Crowland	9,601	79	15	4,206	2,134	.....	F
Humberstone	3,620	471	24	36,145	3,332	.....	F
Pelham	3,435	74	1	3,067	200	.....	L and 92½c.
Wainfleet[1]	3,130	251	11	18,838	1,758	5,634	82½c.
Willoughby	931	52	17	3,168	1,882	.....	$1.05
WENTWORTH:							
Ancaster[1]	5,170	317	.....	22,381	.....	.....	87½c. (M.B.[2] 92c.)
Barton[1]	3,252	45	.....	2,068	.....	.....	77½c.
Binbrook[1]	1,250	122	10	8,430	2,329	.....	77½c.
Glanford[1]	1,767	182	2	10,867	384	434	77½c.
Total	264,458	14,733	472	1,047,570	95,892	[3]107,511	

[1]These townships are liable to the surcharge mentioned in a previous report (Vol. LIX, pt. 3).

[2]M.B.—Minimum monthly bill.

[3]Included in this figure is 74,891 M cu. ft. used in tobacco curing and 2,896 M cu. ft. used in drilling.

Gas Wells and Their Production

Table VII gives information on every gas field in Ontario. This table has been published every year since 1922, and the development of these fields may easily be followed.

TABLE VII—GAS WELLS AND THEIR PRODUCTION, 1950

County	Township	Number of producing wells	Number of abandoned wells	Wells drilled			Production	Rock pressure, lb. per sq. in.	Acres under lease	Rental paid
				Number dry	Number producing	Open flow				
						M cu. ft.	M cu. ft.			
Essex	Gosfield South	27						150	583	$910
	Malden	5					14,866	395	3,000	
	Mersea	3	1		1	3		385		
	Tilbury West	3						494	600	
Kent	Camden gore	17		2	1	259	95,646	531	16,965	
	Chatham	24		1	1	200	167,267	439	9,394	
	Chatham gore	1			1	1,085			12,475	
	Dover	14					139,121	203	13,610	1,025
	Orford			1					6,855	
	Raleigh (Declute)	38					231,950	268	4,313	615
	Raleigh	19						233	201	36
	Romney	128	2		1	300	1,746,782	146	10,391	11,996
	Tilbury East	106	3					137	8,560	900
	Zone	49			1	222	439,299	411	7,733	
Lambton	Brooke								17,139	
	Dawn	26		2			4,959	321	25,216	
	Enniskillen	4						150	7,926	340
	Moore	17		9	3	17,100	2,212,905	820	55,336	
	Sarnia								4,500	
	Sombra	9		3	2	900	157,756	810	54,556	
	Warwick								3,203	
Middlesex	Adelaide								12,337	
	Caradoc								3,649	
	Ekfrid								5,344	
	Lobo								20,818	
	Metcalfe		1	1					14,827	

TABLE IV—NATURAL GAS RATES, 1951—*Continued*

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
K[1]	Dominion Natural Gas Co.	Up to 200 cu. ft.	41½c. per hundred cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	92½c. per M cu. ft.
		From 5 M to 10 M cu. ft.	82½c. per M cu. ft.
		Over 10 M cu. ft.	67½c. per M cu. ft.
	Oct. to Apr., discount	On bills under $5.00	15 percent
		On bills between $5.00 and $10.00	10 percent
	May to Sept., discount	On bills under $5.00	10 percent
L	Fonthill-Ridgeville Gas Co.	1 M cu. ft. or less	$1.50
		Over 1 M cu. ft.	92½c. per M cu. ft.
M[1]	Dominion Natural Gas Co.	1 M cu. ft. or less	$1.12½
		Next 9 M cu. ft.	77½c. per M cu. ft.
		Next 5 M cu. ft.	77½c. per M cu. ft.
		Over 15 M cu. ft.	67½c. per M cu. ft.
N[1]	Dominion Natural Gas Co.	1 M cu. ft. or less	$1.02½
		From 1 M to 10 M cu. ft.	97½c. per M cu. ft.
		From 10 M to 25 M cu. ft.	82½c. per M cu. ft.
		Over 25 M cu. ft.	72½c. per M cu. ft.
O[1]	Dominion Natural Gas Co.	Minimum bill	$1.17½
		Up to 5 M cu. ft.	97½c. per M cu. ft.
		From 5 M to 10 M cu. ft.	87½c. per M cu. ft.
		Over 10 M cu. ft.	72½c. per M cu. ft.
P[1]	Dominion Natural Gas Co.	200 cu. ft. or less	$1.02
		Over 200 cu. ft.	77½c. per M cu. ft.
Q	Grimsby Natural Gas Co.	Minimum bill	$1.15
	Smithville	Minimum bill	$1.05
R	Union Gas Co.		
	November to April	Up to 10 M cu. ft	80c. per M cu. ft.
		Over 10 M cu. ft.	70c. per M cu. ft.
	May to October	Up to 10 M cu. ft.	85c. per M cu. ft.
		Over 10 M cu. ft.	70c. per M cu. ft.
T	Central Pipe Line Co.	Minimum bill	$2.00
		First 1,000 cu. ft.	$2.00 per M cu. ft.
		Second 1,000 cu. ft.	$1.10 per M cu. ft.
		Third 1,000 cu. ft.	$1.25 per M cu. ft.
		Fourth 1,000 cu. ft.	$1.25 per M cu. ft.
		Fifth 1,000 cu. ft.	$1.75 per M cu. ft.
		Sixth 1,000 cu. ft.	$1.75 per M cu. ft.
		Seventh 1,000 cu. ft.	$1.75 per M cu. ft.
		Over 7,000 cu. ft.	$2.00 per M cu. ft.
U	Union Gas Co.		
	January to October	First 200 cu. ft.	50c. per hundred cu. ft.
		Next 1,000 cu. ft.	95c. per M cu. ft.
		Next 8,000 cu. ft.	$1.05 per M cu. ft.
		Over 10,000 cu. ft.	$1.00 per M cu. ft.
	November	1,000 to 8,000 cu. ft.	$1.08 per M cu. ft.
		Over 10,000 cu. ft.	$1.03 per M cu. ft.
	December	1,000 to 8,000 cu. ft.	$1.06½ per M cu. ft.
		Over 10,000 cu. ft.	$1.01½ per M cu. ft.
V[1]	Dominion Natural Gas Co.	1 M cu. ft. or less	87½c.
		From 1 M to 5 M cu. ft.	77½c. per M cu. ft.
		Over 5 M cu. ft.	67½c. per M cu. ft.
W[1]	Dominion Natural Gas Co.		
	October to April	Up to 10 M cu. ft.	57½c. per M cu. ft.
		From 10 M to 20 M cu. ft.	62½c. per M cu. ft.
		Over 20 M cu. ft.	72½c. per M cu. ft.
	May to September		82½c. per M cu. ft.

Consumption

In previous reports Table V contained information since the year 1921. As the table grew it was found too cumbersome to present the information and show the comparison over the past years. Two graphs shown on page 18 give the comparison at a glance. If the actual figures are required, they can be obtained from the tables in earlier publications. In these graphs can be seen the growth of the industry as reflected in the number of pay consumers, the average rate paid, and the average quantity used per consumer.

TABLE V—DOMESTIC CONSUMPTION AND EMPLOYMENT STATISTICS, 1951[1]

Average retail rate per M cu. ft.		$1.18
Number of pay consumers		147,424
Total consumption	M cu. ft.	9,175,866
Consumption per consumer	M cu. ft.	62.2
Consumption by industry	M cu. ft.	1,929,567
Total employees		1,468
Salaries and wages paid		$3,763,241

[1]Complete figures for all years from 1922 will be found in Table III, Vol. LX, pt. 3, and in previous reports. This information is now shown graphically, on page 18.

Table VI and VII give the distribution of gas in all municipalities in Ontario, the number of domestic consumers, and the quantity used by them and by the industries in each municipality. The rate per M cubic foot in each municipality is indicated by a letter and can be found in detail in the section corresponding to this letter in Table IV on page 12. This table has been published every year since 1922.

TABLE VI—GAS CONSUMPTION IN CITIES AND TOWNS, 1951

City or town	Population	Number of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Alvinston	668	281	....	22,157	.....	32	U
Aylmer	3,280	1,060	....	30,309	.....	.....	T
Beachville	426	42	....	3,721	.....	.....	$1.00 (M.B.[1] $1.50)
Belle River	1,250	339	....	30,018	.....	433	U
Belmont	500	178	....	7,401	.....	.....	$1.35
Blenheim	2,272	862	....	80,921	.....	1,124	U
Bothwell	704	228	....	21,502	.....	586	U
Brantford[2]	35,807	6,203	....	234,150	.....	23,655	G
Brownsville	221	80	....	7,210	.....	261	90¢ net (M.B.[1] $1.20)
Caledonia	1,500	626	4	36,435	474	1,448	80¢ net (M.B.[1] $1.00)
Cayuga[2]	710	241	....	18,184	.....	180	77½¢
Chatham	20,263	6,587	....	589,006	.....	33,171	U
Chippawa	1,504	438	3	17,783	465	.....	F
Comber[2]	484	179	....	20,242	.....	1,453	U
Cottam	385	112	2	6,973	243	433	77½¢
Courtright	455	182	....	16,089	.....	.....	U
Crystal Beach	1,307	629	....	53,402	.....	.....	$1.00
Delhi[2]	2,410	710	1	52,049	150	405	77½¢
Dresden	2,065	755	....	69,011	.....	6,312	U
Dunnville[2]	3,997	1,406	1	104,786	470	1,226	77½¢
Dutton	825	275	2	19,129	137	697	V
Essex	2,253	800	....	68,709	.....	6,123	U

TABLE VI—GAS CONSUMPTION IN CITIES AND TOWNS, 1951—*Continued*

City or town	Population	Number of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
Fenwick[2]	404	148	....	6,385	.....	237	92½¢
Fisherville	171	50	....	4,011	.....	.....	$1.00
Fonthill	1,182	324	....	13,057	.....	.....	L
Fort Erie	7,451	2,135	10	181,345	1,561	6,696	F
Galt[2]	16,952	2,584	....	96,396	.....	13,146	G
Glencoe	1,000	363	....	36,464	.....	710	U
Grimsby	2,457	572	1	22,375	149	3,045	Q
Grimsby Beach	400	173	....	10,087	.....	2	Q
Hagersville[2]	1,624	554	....	40,189	.....	153	77½¢
Hespeler[2]	3,527	675	....	24,084	.....	1,349	N
Highgate[2]	400	134	2	10,217	376	.....	C
Humberstone[2]	3,620	953	....	41,777	.....	2,157	O
Ingersoll[2]	8,234	1,402	....	63,483	.....	4,524	G
Jarvis[2]	588	216	....	16,694	.....	.....	77½¢
Kingsville[2]	2,489	753	....	57,804	.....	1,236	M
Lambeth	475	185	....	13,539	.....	488	K
Leamington	7,221	2,081	....	157,752	.....	2,609	$1.05
London	93,021	20,024	....	1,357,344	.....	220,696	U and K
Merlin	525	176	....	18,101	.....	266	U
Merritton	3,868	708	....	25,326	.....	10,776	92½¢
Mount Brydges	462	170	....	14,323	.....	497	U
Niagara Falls	21,674	5,095	5	207,004	776	49,783	F
Norwich	1,369	168	....	9,167	.....	.....	M.B.[1] $1.50
Oil Springs	422	109	....	8,256	.....	.....	R
Otterville	481	145	....	9,817	.....	.....	M.B.[1] $1.50
Paris[2]	4,980	1,095	....	40,970	.....	896	G
Petrolia	3,017	925	....	69,520	.....	6,931	U
Port Burwell	744	338	....	7,582	.....	.....	T
Port Colborne[2]	7,613	1,950	1	90,142	120	56	O
Port Dover[2]	2,201	768	....	58,844	.....	.....	77½¢
Port Rowan[2]	718	253	....	19,770	.....	.....	77½¢
Preston	7,239	1,210	....	44,054	.....	16,950	G
Ridgetown	2,209	833	....	76,725	.....	3,487	U
Rodney[2]	859	303	1	22,525	405	.....	V
St. Catharines[2]	35,436	6,875	....	261,449	.....	143,261	92½¢
St. George[2]	486	153	....	6,567	.....	.....	97½¢
St. Thomas[2]	19,135	3,205	....	145,818	.....	1,889	K
Sarnia[2]	23,284	6,761	....	449,390	.....	89,432	92½¢
Simcoe	6,908	2,181	....	186,614	.....	23,418	77½¢
Smithville	529	244	....	13,582	.....	.....	Q
Sombra and Port Lambton	688	277	....	21,783	.....	554	U
Springfield	455	133	....	4,140	.....	.....	T
Thamesville	857	356	....	35,932	.....	595	U
Thorold[2]	6,173	1,336	....	46,483	.....	2,487	92½¢
Tilbury	2,205	779	....	74,363	.....	22,990	U
Tillsonburg[2]	4,727	1,555	....	96,537	.....	1,395	80½¢
Vienna	335	129	3	3,941	523	.....	T
Wallaceburg	6,920	2,290	....	190,675	.....	303,015	U
Waterford[2]	1,546	385	....	23,601	.....	.....	P
Welland	16,004	5,431	6	221,556	1,061	17,127	F
West Lorne[2]	960	248	2	18,546	214	.....	V
Wheatley[2]	969	302	....	27,138	.....	.....	77½¢
Windsor	118,702	26,543	....	1,739,201	.....	734,712	U
Woodstock[2]	13,533	2,513	....	105,240	.....	2,389	G
Wyoming	644	300	....	13,339	.....	74	U
Total	553,379	131,781	44	8,070,211	7,124	1,767,567	.....

[1]M.B.—minimum monthly bill.

[2]These cities and towns are liable to the surcharge mentioned in a previous report (Vol. LIX pt. 3).

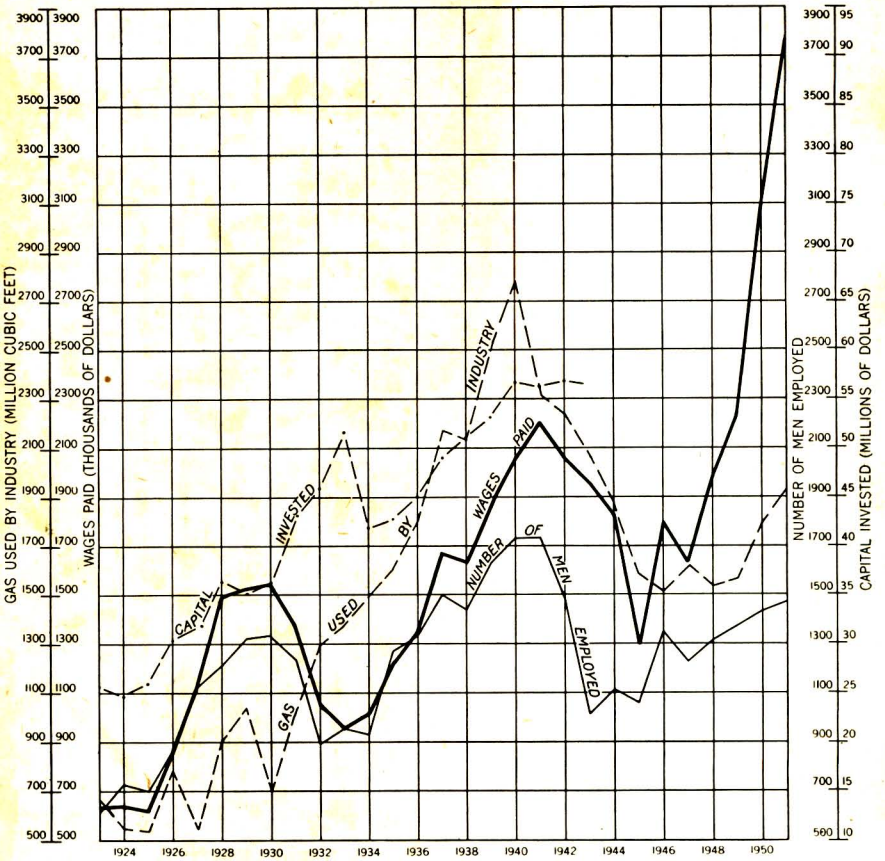
TABLE VII—GAS CONSUMPTION IN TOWNSHIPS, 1951

County and township	Population	Number of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
BRANT:							
Brantford[1]	11,439	427	.....	10,756	.....	.....	G
Burford[1]	4,216	33	.....	1,698	.....	11,889	G
Onondaga[1]	944	51	2	2,319	152	.....	87½¢
South Dumfries[1]	2,897	11	.....	644	.....	.....	97½¢
Tuscarora	2,654	47	.....	5,426	.....	.....	25¢
ELGIN:							
Aldborough	2,554	24	.....	2,109	.....	10,931	V
Bayham	3,141	387	.....	12,935	.....	4,266	T and 82½¢
Dunwich	2,151	124	.....	8,168	.....	.....	V
Malahide	3,187	207	2	5,122	342	.....	T
Southwold	3,424	302	1	18,972	61	308	B
Yarmouth	6,385	96	.....	3,694	.....	.....	A
ESSEX:							
Gosfield North[1]	2,602	154	1	8,252	128	.....	77½¢
Gosfield South[1]	3,146	469	.....	36,011	.....	8,281	77½¢
Maidstone	3,229	430	4	36,061	1,451	2,550	U
Mersea	5,539	501	3	36,836	359	15,153	77½¢
Rochester	2,261	221	7	17,820	1,687	341	U
Sandwich East	12,819	23	.....	2,085	.....	.....	U
Sandwich South	2,792	190	.....	13,813	.....	2,417	U
Tilbury North	1,733	56	2	4,148	510	327	U
Tilbury West	1,526	35	1	3,051	86	.....	U
HALDIMAND:							
Canborough[1]	867	164	30	11,703	6,526	.....	77½¢
Dunn[1]	632	139	7	11,512	1,489	296	77½¢
Moulton[1]	1,629	214	10	12,882	2,456	66	77½¢
North Cayuga[1]	1,326	144	7	9,133	1,193	.....	77½¢
Oneida[1]	1,133	68	6	5,872	976	48	77½¢
Rainham[1]	1,373	296	22	24,107	3,209	1,522	77½¢
Seneca[1]	1,383	170	16	9,639	2,328	92	77½¢
Sherbrooke[1]	280	48	1	3,409	314	33	77½¢
South Cayuga[1]	607	79	15	4,674	2,502	53	77½¢
Walpole[1]	2,864	458	39	33,016	5,542	.....	77½¢
KENT:							
Camden	2,056	50	.....	4,039	.....	.....	U
Chatham	6,303	167	.....	14,085	.....	672	U
Dover	4,679	513	1	52,659	171	2,392	U, C, and D
Harwich	5,652	763	9	57,549	2,429	115	U and C
Howard	2,463	178	3	15,503	1,445	42	U and C
Orford	1,515	52	2	4,922	364	.....	C
Raleigh	4,710	899	22	75,998	6,106	1,536	U and W
Romney	1,419	130	35	12,952	8,549	684	U and W
Tilbury East	2,897	295	55	26,958	16,783	1,133	U and W
Zone	841	72	.....	4,591	.....	3,370	U
LAMBTON:							
Brooke	1,984	134	.....	9,858	.....	.....	U
Dawn	2,034	204	4	17,790	751	1,692	U
Enniskillen	2,380	204	.....	11,177	.....	1,002	U
Euphemia	1,260	14	.....	1,201	.....	.....	U
Moore	3,914	856	.....	72,867	.....	.....	U
Plympton	2,515	7	.....	379	.....	.....	U
Sombra	2,742	146	1	9,160	18	580	U

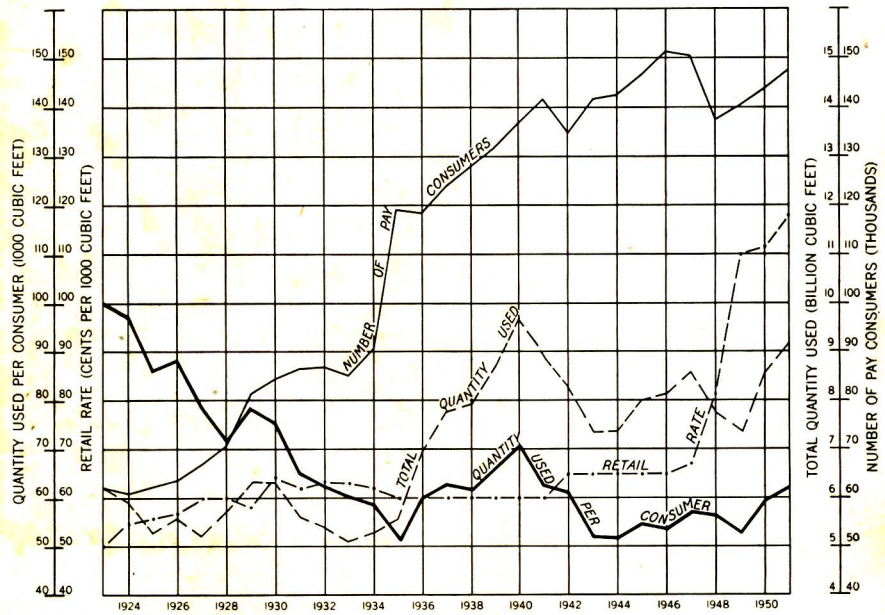
TABLE VII—GAS CONSUMPTION IN TOWNSHIPS, 1951—*Continued*

County and township	Population	Number of consumers		Quantity consumed			Net rate per M cu. ft.
		Pay	Free	Pay	Free	Industrial	
				M cu. ft.	M cu. ft.	M cu. ft.	
LINCOLN:							
Caistor[1]	1,162	53	.....	3,763	.....	38	77½¢ (M.B.[2] 83¢)
Gainsborough[1]	2,085	100	8	5,475	1,273	.....	77½¢
Grantham[1]	9,342	135	.....	5,737	.....	.....	92½¢
Louth[1]	3,345	8	.....	340	.....	.....	92½¢
MIDDLESEX:							
Caradoc	3,002	35	.....	2,907	.....	8,834	U
Delaware	1,116	6	.....	448	.....	3,080	U
Ekfrid	1,804	84	.....	6,789	.....	.....	U
Lobo	1,875	1	.....	154	.....	8,016	U
Mosa	1,395	45	.....	677	.....	.....	U
North Dorchester[1]	2,857	195	.....	8,397	.....	6,144	E
Westminster	10,484	252	.....	17,449	.....	1,077	U and K
NORFOLK:							
Charlotteville[1]	3,840	285	5	17,001	850	11,433	77½¢
Houghton	1,733	69	.....	1,792	.....	.....	T
Middleton[1]	2,651	275	2	18,300	552	21,451	77½¢
North Walsingham[1]	2,203	36	7	1,873	839	11,365	77½¢
South Walsingham[1]	1,876	109	4	4,609	742	815	77½¢
Townsend[1]	4,095	119	1	3,996	70	3,719	77½¢
Windham[1]	3,958	110	2	6,841	813	2,677	77½¢
Woodhouse[1]	2,643	354	10	23,092	2,843	5,305	77½¢
OXFORD:							
Dereham[1]	3,379	37	.....	3,514	.....	.....	80½¢ (M.B.[2] 80¢)
East Oxford[1]	2,033	19	.....	912	.....	.....	G
North Oxford[1]	1,175	3	.....	125	.....	.....	G
South Norwich[1]	2,318	57	.....	5,349	.....	.....	80½¢ (M.B.[2] 80¢)
West Oxford[1]	2,211	63	.....	3,121	.....	.....	G
WATERLOO:							
North Dumfries[1]	3,850	88	.....	2,762	.....	.....	G
Waterloo[1]	11,157	13	.....	894	.....	.....	G
WELLAND:							
Bertie	4,616	1,153	36	98,482	5,763	29	F
Crowland	9,601	110	15	6,996	1,835	.....	F
Humberstone	3,620	511	23	36,858	3,687	.....	F
Pelham	3,435	59	2	2,598	164	.....	L and 92½¢
Wainfleet[1]	3,130	257	10	18,563	1,971	5,728	82½¢
Willoughby	931	55	15	4,669	2,341	.....	$1.05
WENTWORTH:							
Ancaster[1]	5,170	342	.....	21,737	.....	.....	87½¢ (M.B.[2] 92¢)
Barton[1]	3,252	43	.....	2,152	.....	.....	77½¢
Binbrook[1]	1,250	123	9	9,163	1,605	.....	77½¢
Glanford[1]	1,767	187	2	10,565	609	498	77½¢
Total	264,458	15,643	459	1,105,655	93,884	[3]162,000	.....

[1]These townships are liable to the surcharge mentioned in a previous report (Vol. LIX, pt. 3).
[2]M.B. Minimum monthly bill.
[3]Included in this figure is 133,806 M cu. ft. used in tobacco curing and 2,741 M cu. ft. used in drilling.



Data relating to the domestic use of natural gas in Ontario, 1923–51.



Data relating to the industrial use of natural gas in Ontario, 1923–51.

Note 1 Each service location or outlet should be considered as a separate customer and shall be classified in accordance with the functions of the establishment at that location.

Note 2 The size of the customer or the volume of use is not a criterion for determination of class or service.

Note 3 Where two classifications apply, the customer should be placed in that classification which uses the greater portion of the gas.

The average annual consumption per consumer for both urban and rural areas is as follows:

Residential - 35.6 Mcf. Commercial - 105.9 Mcf. Industrial - 687.9 Mcf.

TABLE VII - GAS CONSUMPTION IN COUNTIES - 1954

County	Number of Consumers			Quantity Consumed in Mcf.			Total Consumption
	Res.	Comm.	Ind.	Res.	Comm.	Ind.	
Brant	568	18	2	27,357	1,812	908	30,077
Elgin	677	3	8	43,594	346	16,231	60,171
Essex	2,463	98	14	183,002	10,967	23,406	217,375
Haldimand	2,770	96	7	187,514	8,496	2,120	198,130
Kent	3,193	175	45	295,025	28,304	20,846	344,175
Lambton	1,299	92	8	114,458	10,807	3,620	128,885
Lincoln	227	6	-	11,896	549	-	12,445
Middlesex	251	4	34	20,166	248	28,330	48,744
Norfolk	1,030	24	13	61,237	2,308	106,791	170,336
Oxford	193	8	3	12,397	721	20,964	34,082
Waterloo	5	-	-	218	-	-	218
Welland	2,547	5	3	247,779	482	6,956	255,217
Wentworth	17	-	-	326	-	-	326
Total	15,240	529	137	1,204,969	65,040	230,172	1,500,181

Average Annual Consumption per Consumer

1. Residential - 79.1 Mcf.
2. Commercial - 122.9 Mcf.
3. Industrial - 1,680 Mcf.

Section 8 - Natural Gas Rates -

Table VIII gives the rates charged by the various distributors. The municipalities to which they apply are indicated in Table VI by reference code.

It is to be noted that the rate schedules of the larger distributors were approved by the Natural Gas Referee up to May, 1954, and after that date they were fixed by the Ontario Fuel Board. The schedules of many of the small distributors are not so fixed, but in these cases, no alteration of existing rates may be made without the approval of the Board.

In the case of Metropolitan Toronto, manufactured gas rates remained in force until conversion to natural gas was completed on February 17th, 1955, at which time a rate order was issued by the Board. Throughout the conversion period, November 8th, 1954 to February 17th, 1955, customers were billed on the basis of the manufactured rate, by application of a thermal conversion factor.

TABLE VI - GAS CONSUMPTION IN CITIES AND TOWNS - 1954--Continued

City, Town or Village	Population	No. of Consumers			Consumption - Mcf.			Rate Index Reference Table VIII
		Res.	Comm.	Ind.	Res.	Comm.	Ind.	
Norwich	1,415	158	25	.....	8,892	2,925	.....	J
Oil Springs	494	99	20	.....	9,597	1,522	.....	N
Otterville	656	124	16	.....	7,594	6,255	.....	J
Paris	5,404	1,025	58	7	39,852	4,350	597	G
Petrolia	3,371	958	81	12	91,428	8,570	12,575	N
Port Burwell	695	331	.....	.....	3,815	.....	.....	G
Port Colborne	13,481	3,116	113	1	123,718	10,890	2,944	G
Port Dover	2,491	689	51	.....	42,440	5,406	.....	G
Port Lambton	399	261	43	3	23,224	4,889	748	N
Port Robinson	351	117	.....	.....	5,888	.....	.....	F
Port Rowan	739	429	26	2	26,425	2,756	621	G
Preston	8,819	1,850	79	14	80,652	10,721	6,641	G
Ridgetown	2,420	797	99	10	82,214	11,787	1,980	N
Rodney	984	321	30	.....	18,628	3,461	552	G
St. Catharines	39,881	6,422	325	36	233,960	39,127	49,451	G
St. George	668	143	11	.....	5,657	1,349	.....	G
St. Thomas	19,117	3,935	156	5	228,308	17,996	1,334	G
Sarnia	39,550	7,527	698	47	593,211	112,212	252,460	N
Shedden and Fingal	527	169	10	1	9,805	1,154	266	G
Simcoe	7,403	2,271	189	8	139,884	20,035	2,484	G
Smithville	814	226	45	.....	14,728	3,300	.....	I
Springfield	518	113	.....	.....	8,075	.....	.....	G
Straffordville	450	147	.....	.....	5,248	.....	.....	G
Thamesville	985	337	67	9	33,671	10,153	4,450	N
Thorold	7,400	1,278	51	1	46,555	6,140	1,374	G
Tilbury	3,136	788	129	16	76,254	19,016	25,389	N
Tillsonburg	5,751	1,426	136	2	80,432	11,729	709	G
*Toronto Metro	1,250,773	149,526	5,206	1,897	325,000	74,000	88,500	E
Vienna	342	109	.....	.....	3,637	.....	.....	G
Wallaceburg	7,802	2,383	226	27	218,728	29,873	220,212	N
Wardsville	295	79	20	1	8,275	3,204	188	N
Waterford	1,841	388	20	.....	23,899	2,120	.....	G
Welland	16,287	6,134	157	11	263,767	19,885	36,853	L
West Lorne	1,050	250	27	1	14,505	3,115	266	G
Wheatley	1,089	283	32	.....	19,060	3,557	.....	G
Windsor	126,034	29,231	2,370	392	2,279,552	399,842	703,514	N
Woodstock	16,891	2,362	134	18	106,762	16,682	3,214	G
Wyoming	757	203	29	1	15,943	4,442	14	N
	1,892,349	285,591	15,660	3,030	9,492,616	1,648,620	1,948,441	

* Toronto-Metro Consumption is the amount of Natural Gas used from November 8 to December 31, 1954 during which period conversion was being completed.

Average annual consumption per consumer

1. Residential - 33.2 Mcf.
2. Commercial - 105.3 Mcf.
3. Industrial - 643.0 Mcf.

TABLE VI

GAS CONSUMPTION IN CITIES AND TOWNS - 1954

City, Town or Village	Population	No. of Consumers			Consumption - Mcf.			Rate Index Reference Table VIII
		Res.	Comm.	Ind.	Res.	Comm.	Ind.	
Alvinston	670	240	48	2	21,753	6,611	836	N
Ancaster	682	110	4	.....	4,354	491	.....	G
Appin	250	55	12	1	5,309	694	304	N
Aylmer	3,996	846	.....	.....	37,563	.....	.....	G
Beachville	726	45	7	.....	3,150	487	.....	A
Belle River	1,617	369	56	1	32,229	6,370	380	N
Belmont	469	176	.....	.....	7,764	.....	.....	O
Blenheim	2,675	835	112	6	82,193	16,285	1,435	N
Bothwell	773	209	44	4	20,240	5,881	634	N
Brantford	49,856	6,264	256	42	247,811	31,396	18,597	G
Brownsville	321	107	.....	.....	8,055	.....	.....	M
Brigden	454	177	38	1	16,717	3,782	94	N
Byron	2,432	136	17	1	11,274	2,116	493	N
Caledonia	2,035	581	73	3	30,723	8,550	950	K
Canfield	134	64	.....	.....	3,422	.....	.....	B
Chatham	22,721	6,917	809	80	653,485	143,946	51,865	N
Chippawa & Stamford	1,823	2,261	75	6	117,531	9,570	8,868	L
Comber	575	155	37	7	15,837	6,150	1,549	N
Courtright	548	161	29	.....	16,937	2,843	.....	N
Crystal Beach	4,069	907	43	.....	84,693	10,430	.....	L
Delhi	2,820	644	63	.....	39,668	6,678	2,455	G
Dorchester	737	173	8	.....	8,460	665	3,582	G
Dresden	2,133	691	119	15	65,300	13,839	9,886	N
Dunnville	4,803	1,384	117	1	84,953	11,645	466	G
Dutton & Wallacetown	826	311	36	1	18,044	4,153	266	G
Essex	3,155	835	86	13	75,957	10,168	11,006	N
Fenwick	605	164	7	2	5,975	842	2,746	G
Fisherville	240	56	.....	.....	4,123	.....	.....	H
Florence	165	66	19	1	6,504	1,789	396	N
Fonthill and Ridgeville	1,621	326	4	.....	11,877	482	.....	G
Fort Erie	8,292	2,332	60	7	233,545	14,555	9,415	L
Galt	22,185	2,598	113	33	113,263	15,334	15,653	G
Glencoe	1,000	336	57	4	36,009	6,892	1,145	N
Grimsby	3,280	548	47	3	22,525	3,348	2,816	I
Grimsby Beach	597	196	3	.....	11,283	287	.....	I
Hagersville	1,890	537	53	1	33,077	5,618	311	G
Highgate	382	122	15	.....	7,078	1,731	.....	G
Ingersoll	6,728	1,437	81	8	70,272	6,742	6,761	G
Inwood	202	76	24	.....	7,140	1,863	.....	N
Jarvis	660	192	18	.....	11,826	1,908	.....	G
Kingsville	2,766	803	51	4	54,081	5,669	1,936	G
Lambeth	1,426	216	6	1	12,532	692	266	G
Leamington	7,846	1,999	196	8	124,475	18,080	2,257	G
London	98,666	18,668	1,748	233	1,502,881	337,446	317,908	D
Merlin	532	155	42	2	16,114	4,869	341	N
Merritton	5,192	679	19	2	24,737	2,287	2,748	G
Mount Brydges	728	194	27	1	17,483	4,124	270	N
Newbury	299	75	7	.....	6,197	1,202	.....	N
Niagara Falls	24,667	3,158	295	14	126,914	37,647	52,470	L

TABLE V - SUMMARY OF GAS DISTRIBUTION, 1950 - 1954

Classification	1950 Mcf.	1951 Mcf.	1952 Mcf.	1953 Mcf.	1954 Mcf.
Total Residential Sales	8,547,903	9,175,886	9,619,670	10,303,121	10,697,585
Total Commercial Sales					1,713,660
Total Industrial Sales	1,811,257	1,929,567	1,994,953	2,207,988	2,178,613
Total Sales to customers	10,460,830	11,206,441	11,682,773	12,602,838	14,589,858
Used by Companies for all purposes	457,912	603,300	477,253	225,638	359,907(2)
Used by Private Well-owners	126,500	126,500	126,500	126,500	(3)
Free gas					92,998
Natural gas to storage	1,499,560	1,114,271	1,813,440(1)	2,165,591(1)	940,733
Gas unaccounted for(4)	863,943	809,329	428,228	835,837	730,564
Total volume distributed	13,408,745	13,859,841	14,528,194	15,956,404	16,714,060

(1) Includes 64,816 Mcf. used in gas manufacturing plant (Hamilton) in 1952 and 972 Mcf. in 1953.

(2) Includes 106,000 Mcf. used in reforming (Hamilton) and 35,400 Mcf. used in drilling.

(3) Estimation of private consumption discontinued.

(4) Gas unaccounted for includes leakage.

There has been an increase in the volume of natural gas distributed each year since 1946. The increase of 1954 over 1953 was 757,656 Mcf. or 4.75 percent. A major factor in the ability of utilities to serve new customers has been the development of substantial new reserves in Lambton County.

Table VI shows the number of consumers and the consumption in cities, towns, and villages. Table VII gives the same data for rural areas by counties. Footnotes to these tables give the average consumption per consumer in each of the three classes, residential, commercial and industrial.

These three classes are described and defined as follows:

(a) Residential - Residential services applies to customers supplied for residential purposes under individual contracts in a single family dwelling or building, or in an individual flat or apartment in a multiple family dwelling or building or portion thereof occupied as the home, residence, or sleeping place of one or more persons.

(b) Commercial Service - Commercial service applies to customers engaged in selling, warehousing, or distributing a commodity, in some business activity or in a profession, or in some other form of economic or social activity and to service that does not directly come in one of the other classifications of service.

(c) Industrial Service - Industrial service applies to customers engaged in a process which creates or changes raw or unfinished materials into another form or product, i.e. in extractive, fabricating or processing activities.

Chapter III: Natural Gas Production by Fields

The Harkness Files
Volume XII
Natural Gas Statistics

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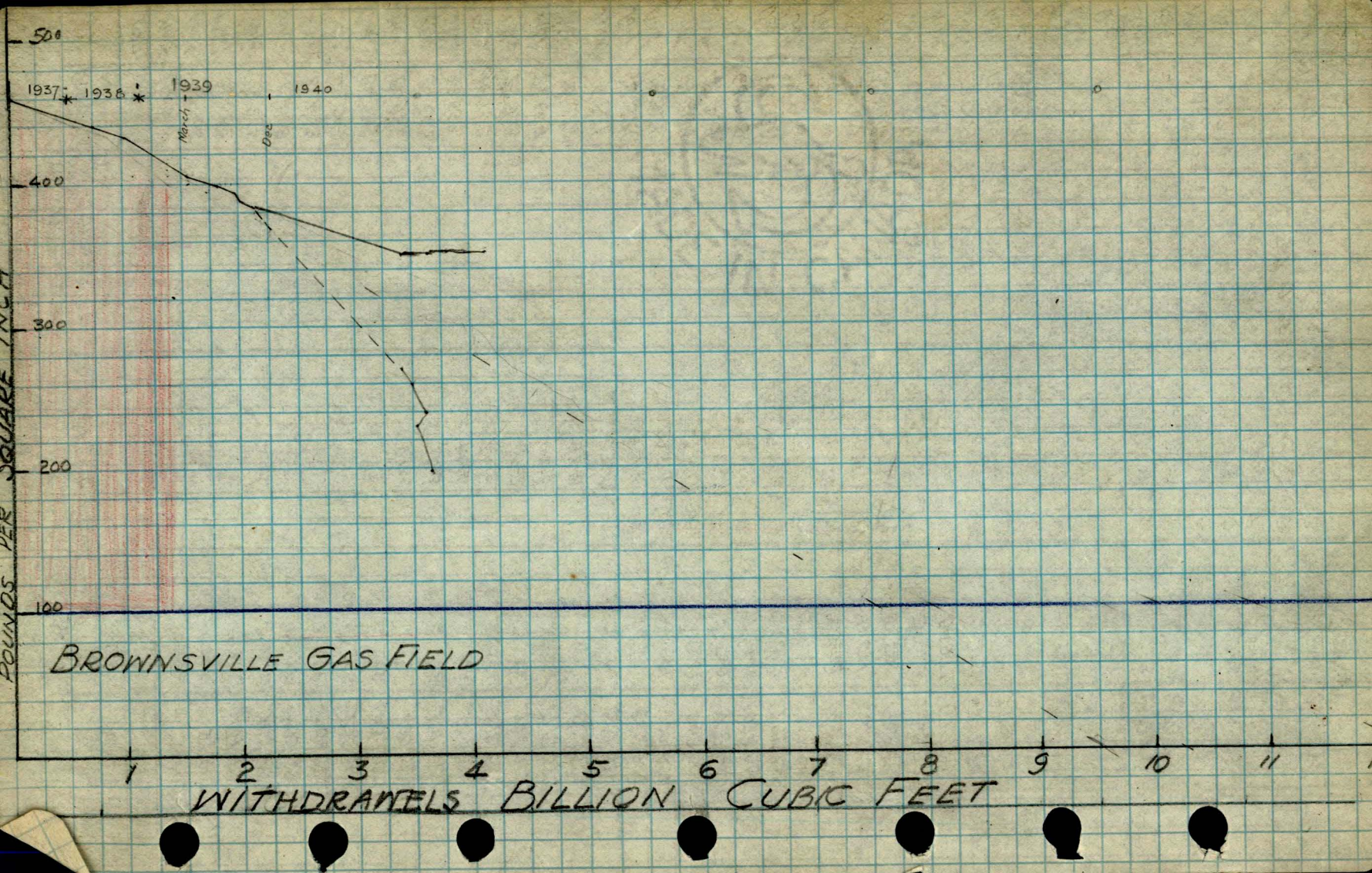

500
400
300
200
100
POUNDS PER SQUARE INCH
1937
1938
1939
1940
March
Dec
BROWNSVILLE GAS FIELD
1
2
3
4
5
6
7
8
9
10
11
WITHDRAWELS BILLION CUBIC FEET

BROWNSVILLE FIELD GAS SALES

	OXFORD PIPE LINE				CENTRAL PIPE LINE						
	DOMINION	BROWNSVILLE AND OTHERS	GYPSUM	TOTAL	DOMINION	AYLMER	BORDEN	FIELD WASTE BTC.	TOTAL	CUMULATIVE TOTAL	ROCK PRESSURE
1937											
March	50 000								50 000	50 000	
April	47 905								47 905	97 905	460
May	39 582								39 582	137 487	
June	29,214							1000	30.214	167 701	
July	15,885							1800	17 685	185 386	
Aug	20 492							1000	21 492	206 878	
Sept	42 066							1300	43 366	250 244	
Oct	84 589							1000	85 589	335 833	
Nov	83 096	Drillers				6133			89 229	425 062	
Dec	81 662	6350				7513		1000	86 525	511 587	
1938 Jany	28868			494 491		8846			37 714	549 301	
Feb	16 168					3416		4000	23 584	572 885	
Mar	29 993					6641		75 000	171 634	744 519	
Apr	21 604					10 250		2000	33854	778 373	
May	16.235					9348		800	26 181	804 554	440
June	16,811					8,764	403		25 978	830 532	
July	15,526	Drillers				9246	599		25 371	855 903	
Aug	18351	3250				22518	532		44651	900 554	
Sept	17 298					23,761	1887		42 946	943 500	
Oct	41,498					12.265	147		53 910	997 410	
Nov	63 079			379 057		14,325	00		77 404	1074 814	431
Dec	93,628	2,169		95 797	18 449	19,240	119		134 345	1209 159	
1939 Jan	77,816	1.816		79 732	51,736	20,665	1.563		153596	1,362, 755	
Feb	54,986	2097		57.083	49695	21 545	2137		128460	1491 215	
Mar	53,019	1.945		54.964	35164	20,910	2773		111 811	1,603 026	404
Apr	33.466	1835		55.301	22597	24,830	2812		85 540	1,688,566	
May	8879	875	5382	15236	2689	13 567	2437	1000	34829	1,723, 395	
June	17,588	385	15,759	33,732	8198	8696	3381		54007	1,767,402	
July	22,009	320	13954	36.284	8041	4438	2605		51367	1.818769	399+
Aug	19,049	291	13,843	33228	3994	12677	2226		52.125	1.870.894	397
Sept	20.214	510	15405	40,129	18 277	19943	1.657		80 006	1950 900	398
Oct	32 580	1006	14342	47928	27 153	12623	1,376		88 890	2039 880	
Nov	61 184	2539	20 866	84,589	34 502	17 536	1277		137 924	2177 804	382
Dec	65198	3,191	18,078	86467	33,212	21, 813	1,723		143,215	2321 019	369
1940					293,258						
Jany	129,291	5,735	16,060	151,086	30,141	28,204	1,702		231,133	2552152	
Feb	136,547	5,956	15,899	158402	31,046	21,921	58		211,427	2763579	
Mar	111,071	4,586	16,658	132,315	4,903	20,043	0		157,261	2920840	
Apr	92,977	4,569	19,614	117,160	1,362	15,773	0		134,295	3055135	
May	33,554	2,800	21,843	58,197	1,258	8,734	0		68,189	3123324	
June	16,797	1,041	21,757	39595	1,193	4,315	0		45,103	3168427	
July	21,689	976	15,800	38,465	1,018	3,427	0		42,910	3211337	
					90,921						

Brownsville Field

	Oxford Pipe Line				Central Pipe Line						
	Dominion	Brownsville + Others	Gypsum	Total	Dominion	Aylmer	Borden	Field Waste	Total	Cumulative Total	Rock Pressure
1940	635 541,926				90,921					3211,337	
Aug	17,366	655	27,130	45,151	0	13,411	0		58,562	3269899	
Sept.	20,804	1,159	29,074	51,037	5,364	27,772	0		84,170	3354069	
Oct.	21,721	1,648	24,915	48,284	4,718	13,202	0		66,204	3420273	270
Nov.	19,127	3,540	26,736	49,403	0	0	0		49,403	3,469,676	
Dec.	15,354	5,448	20,697	41,499	101,003				41,499	3511,175	260?
1941	646,298										
Jan	20,324	5644	13,653	39,621					39,621	3550,796	230
Feb	14,671	5,959	12,008	32,638					32,638	3,583,434	
Mar			3473	21,961					21961	3605395	240
Apr	18 584	4109	37	22730					22730	3628125	
May	17,444	1,131	–	18575					18575	3646700	195
June	16,204	525	–	16,729					16729	3663429	
July	13726	559	1,188	15,473					15473	3678902	
Aug	12445	639	1,455	14,539					14539	3693441	
Sept	12894	836	300	14,030					14030	3707471	
Oct	14593	1559	–	16,152					16152	3723623	
Nov.	7889	3500 est		11 389					11389	3735012	
Dec	4500	5500 est		10 000					10000	3745012	
	153,274			–							
1942											
Jany	2,163	5500		7635					7635	3752647	
Feb	5 344	4000		9344					9344	3761991	
Mar	4 413	3,063		7476					7476	3769467	
Apr	4470	2,883		7353					7353	3776820	
May	5243	1299		6542					6542	3783362	
June	21,633	6461		6461					6461	3789823	
July		6061		6061					6061	3795884	
Aug		6485		6485					6485	3802369	
Sept		5636		5636					5636	3808005	
Oct		5330		5330					5330	3813335	
Nov		5532		5532					5532	3818867	
Dec		4899		4899					4899	3823766	
1943											
Jan		5380		5380	Purification Plant				5380	3829146	
Feb		3995		3995	Back Pressure				3995	3833141	
Mar		3988		3988	1940		270		3988	3837129	
Apr		4901		4901	41		230		4901	3842030	
May		4394		4394	42		220		4394	3846424	
June		3688		3688	43		205		3681	3850105	
July		4423		4423	44		105		4423	3854528	
Aug		4359		4359					4359	3858887	
Sept		3473		3473					3473	3862360	
Oct		4482		4482					4482	3866842	
Nov	nov	4874		4874					4874		
Dec	Au	3833		3833					3833	3875549	

BROWNSVILLE FIELD PRODUCTION

Year	Oxford Pipe Line	Warren CHIRA	CENTRAL PIPE LINE	Total	Cumulative Total
					3 875 629
1944	37,390			37,390	3,912,939
1945	30,037			30,037	3,942,976
1946	17,776	2,641		20,417	3,963,393
1947	—	25,560		25,560	3,988,953
1948		44,321		44,321	4,033,274
1949		65,670		65,670	4,098,944
1950		41,751		43,751	4,140,695
1951				24 651	4 165 346
				21 661	4 187 007
				19 676	4 206 683
				19 666	4,233,299

the requested hourly demand to pass through at a fixed pressure. This device defeats the consumer nearest the source of supply from using more than his demand. When consumers in general find that there is always a fixed amount of gas available at any hour, substitute fuels are not required and more gas is used between "peaks", furthermore the rate is lower and more people can afford to use gas for heating.

The secret of the low average rate is in demanding the lowest possible rate per hour and using more gas between peak loads.

A resident of Windsor, Ontario, passing through Ottawa, Kansas, in 1922 made many enquiries at all classes of homes as to the results of this new method. Without exception he was told that the service was now satisfactory whereas in previous years there was always a shortage of gas. Questioned as to the rates the dissatisfied ones were asked if they would prefer the old system, but none would consider such a thought.

Causes of Increases in Gas Rates

The cost of distributing natural gas must increase as the supply in the gas wells fail; for three main reasons:

1.—The pressure in the wells fails at times of peak demand and in order to get more gas to the consumer larger mains and more mains must be laid.

2.—About the time that the rock pressure fails usually from seven to fifteen years, soil electrolysis and normal corrosion will have caused much deterioration in pipes, regulators, valves and other equipment that leakage of gas will become excessive necessitating very many repairs and replacements.

3.—In order to maintain a supply many more wells must be drilled and if the limits of the gas field have been reached much money must be expended in prospecting for new gas fields.

The sum of expenditures and legitimate profit divided into total sales will give the rate per thousand cubic feet[1]—and if the total sales are declining the rate must necessarily raise every year. An examination of natural gas rates on this continent will show that very rarely does it exceed eighty cents per M. cubic feet. The explanation being that sales decrease so rapidly beyond this rate that it is unprofitable to operate. And the feature now becomes noticeable, viz., many consumers do not produce enough revenue to pay the fixed charges against each consumer. In one Ontario city the gas company discovered that electricity was being used in very many houses for cooking and gas used only for emergency water heating and when the electricity failed. Nevertheless the meter must be read monthly and clerical help paid to keep accounts and collect payments, in short the large consumer paid the loss on the small consumer and the company's profit.

The most undesirable feature is that when the supply fails to meet the demand, the consumer nearest the source of supply can still have enough gas to heat and cook when those farthest away cannot get even enough to cook with, let alone heat their houses. In short, the gas company contracts to supply every one on their system but having no control over the amount any one person may use the result is that a few people get their own share and the major portion of that which belongs to their neighbour.

[1]Ont. Dept. of Mines, Volume XXXI, Part V, p. 34.

Gas Legislation

Following a demand for a revision of the gas legislation a questionnaire was circulated in January, 1922, among all the municipalities in Ontario using natural gas. The great majority of the replies to this questionnaire showed that the people desired a rate-making tribunal and that the control of natural gas should rest with the Government. This was made the basis of new legislation.

TABLE VII.—PRODUCTION OF NATURAL GAS BY FIELDS, 1906-1919.

Year	Norfolk Welland Haldimand mill. cu. ft.	Kent mill. cu. ft.	Elgin mill. cu. ft.	West Lambton mill. cu. ft.	Total mill. cu. ft.	Total Value $
1906	.....	.....	.....	.....	2,534.2	533,446
1907	3740.3	415.6	.....	.....	4,155.9	756,174
1908	3635.0	848.6	.....	.....	4,483.0	988,616
1909	2347.0	3401.0	.....	.....	5,388.0	1,188,179
1910	3422.1	3841.2	.....	.....	7,263.3	1,491,236
1911	4000.0	5649.0	126.0	.....	12,311.9	2,186,762
1912	4246.0	7752.5	456.4	.....	12,454.9	2,268,022
1913	4115.8	7975.8	466.8	.....	12,558.4	2,362,021
1914	3306.0	10121.6	465.6	169.6	14,062.8	2,346,687
1915	3592.9	10819.1	399.1	401.2	15,212.3	2,622,838
1916	3769.5	13752.5	351.9	55.2	17,929.1	2,404,499
1917	3760.2	15450.4	290.8	44.6	20,026.4	3,220,123
1918	3357.0	9316.6	338.8	37.0	13,067.4	2,498,769
1919	3300.0	7891.3	340.0	52.0	11,563.3	2,583,324

TABLE VIII.—NATURAL GAS PRODUCTION, 1920, 1921 AND 1922.

Year	Welland M cu. ft.	Norfolk and Haldimand M cu. ft.	Elgin M cu. ft.	Tilbury M cu. ft.	Dover M cu. ft.
1920	527,151	2,149,158	215,822	6,800,264	1,009,342
1921	494,752	1,991,029	182,359	5,386,159	435,946
1922	463,675	2,067,991	166,714	5,484,618	322,984

TABLE VIII.—*Continued.*

Year	Lambton M cu. ft.	Bruce M cu. ft.	Middlesex M cu. ft.	Total M cu. ft.	Total Value $
1920	25,181	1,411	.....	10,729,303	3,163,500
1921	31,489	1,250	250	8,523,234	4,018,190
1922	56,295	953	5,071	8,568,301	4,024,767

Recoverable Residue Supply

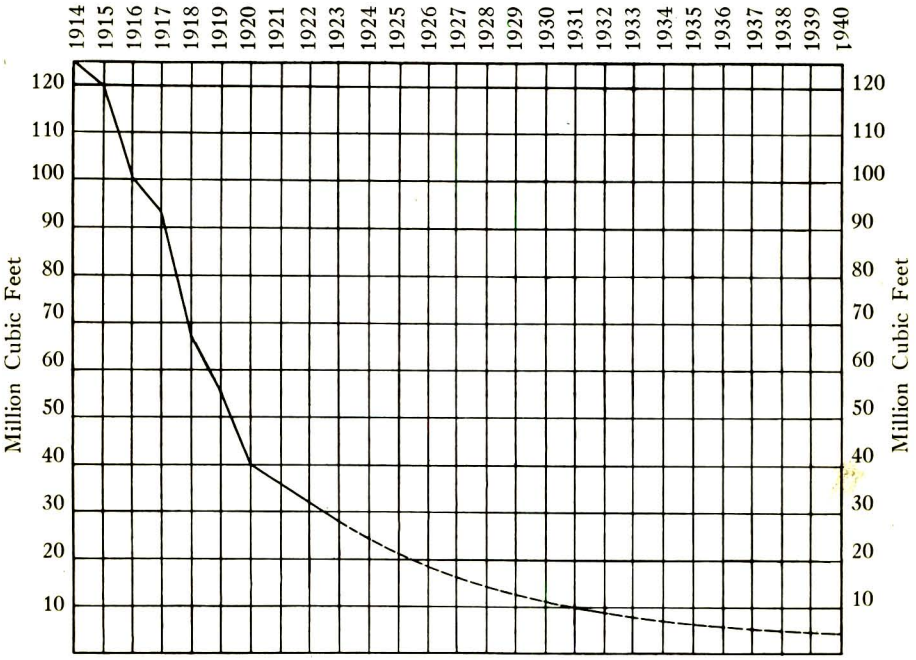
It has been the aim of the writer to keep the gas-using public informed as to the probable life of gas fields and the quantity of gas available. In the many and bitter rate controversies of the past few years an opportunity has not been afforded to see whether or not the statements made by the gas companies or their own advisers are well founded and with this in mind the following figures are presented and explanations offered:

Year	Tilbury field								Dover field		No. of consumers that can be given service in winter months	Year
	New wells			No. of wells abandoned	Total at end of year							
	No. of wells	Average per well			No. of producing wells	Total open flow	Average per well		Production for year	Open flow No. 13 well	Production for year	
		rock pressure	open flow				rock pressure	open flow				
		lbs.	M cu. ft.			M cu. ft.	lbs.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.		
1914	30	(a) 496	(e)1,402	1	133	125,000	491	.....	8,295,781	.....	.....	.....	1914
1915	10	(b) 337	1,249	1	141	120,672	475	856	8,405,488	.....	.....	.....	1915
1916	18	(c) 428	1,512	2	149	101,477	434	681	10,008,568	.....	.....	.....	1916
1917	7	(d) 391	966	1	172	93,531	368	544	10,635,531	.....	165,525	.....	1917
1918	2	.....	320	1	174	66,946	330	385	6,010,739	.....	468,798	.....	1918
1919	4	(b) 310	353	2	173	55,419	320	320	5,036,386	7,760	470,806	.....	1919
1920	.....	.....	.....	1	174	40,042	291	230	4,503,500	.....	835,079	.....	1920
1921	7	327	573	8	170	.....	277	.....	3,485,702	.....	275,351	.....	1921
1922	3	410	311	14	159	.....	280	.....	3,385,141	.....	212,188	.....	1922
1923	3	373	300	10	158	28,646	305	186	3,000,000	2,016	170,000	24,952	1923
1924						24,600	250	165	2,600,000	1,620	137,000	24,952	1924
1925						21,400	236	147	2,300,000	1,340	113,000	24,952	1925
1926						18,750	224	132	2,030,000	1,110	94,000	24,952	1926
1927						16,500	213	119	1,820,000	920	88,000	24,952	1927
1928						14,400	204	108	1,620,000	770	65,000	21,870	1928
1929						12,800	195	97	1,450,000	650	55,000	19,788	1929
1930						11,500	186	89	1,310,000	550	46,000	17,143	1930
1931						10,200	178	81	1,180,000	463	38,000	15,041	1931
1932						9,250	172	74	1,070,000	400	33,000	13,700	1932
1933						8,350	165	68	975,000	345	29,000	12,000	1933
1934						7,500	158	63	890,000	300	25,000	10,042	1934
1935						6,800	152	58	820,000	260	21,500	8,670	1935
1936						6,180	147	54	753,000	224	18,700	7,786	1936
1937						5,630	142	50	693,000	195	16,200	7,000	1937
1938						5,150	137	47	638,000	173	14,300	6,240	1938
1939						4,700	133	44	590,000	153	12,500	5,600	1939
1940						4,300	129	41	545,000	133	11,000	5,030	1940

(a) Average of 20 wells
(b) One well only
(c) Average of 12 wells
(d) Average of 9 wells
(e) Average of 28 wells

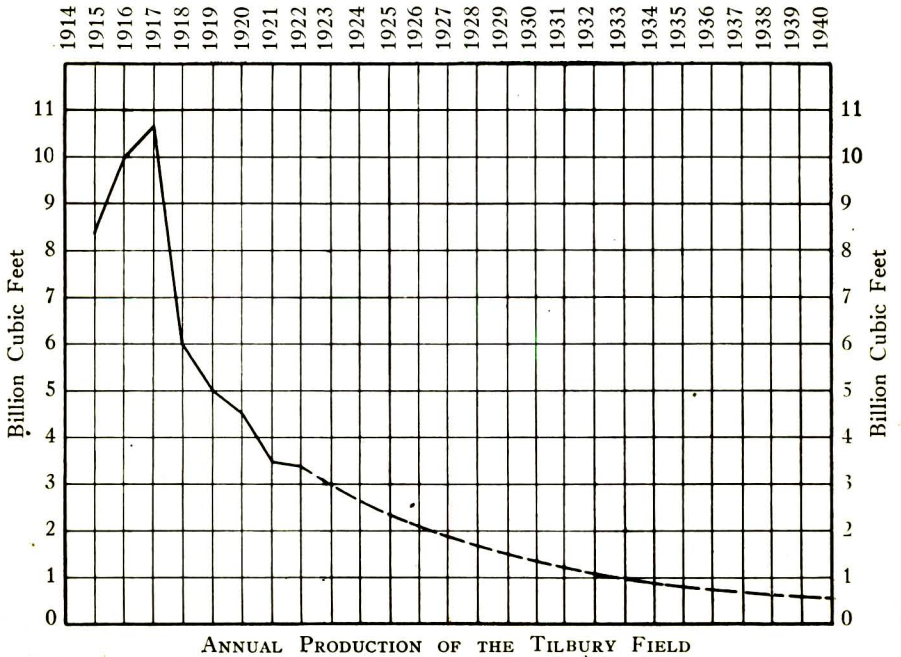
The figures below the heavy line are estimates.

On pages 29 and 30 [pages 26 and 27 of present report], four charts with explanations are submitted. These show for Tilbury field, the total open flow, annual production, annual rock pressure, and decline of volume of gas in field.



TOTAL OPEN FLOW OF THE TILBURY FIELD

In making the above graph, the total open flows for the years 1916, 1918, 1919 and 1923 were used as a basis of the projection. This gives a very fair average, as 1917 and 1920 fall on either side of the curve. Note that in 1940 the total open flow has declined to 4,300 M. cubic feet, while there is still 44 billion cubic feet of gas in the field.



ANNUAL PRODUCTION OF THE TILBURY FIELD

In making this graph, the production for the years 1918, 1919, and 1922 was used for projecting the curve, the point representing the years 1920 and 1921 falling above and below this line, respectively.

TABLE II—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921–1933

Year	No. of pay consumers	Total quantity used	Quantity used per consumer	Capital invested in all natural gas operations[1]	No. of men employed	Wages paid
		M cu. ft.	M cu. ft.			
1921	58,609	5,937,316	101.3	$17,328,757	632	$592,606
1922	63,229	6,028,947	95.3	17,769,664	692	539,072
1923	62,352	6,210,459	99.6	25,570,972	603	633,365
1924	61,100	5,933,595	97.1	24,781,723	727	639,167
1925	62,338	5,300,424	85.6	26,111,387	692	625,826
1926	63,695	5,595,521	87.8	30,500,874	860	842,305
1927	66,818	5,210,315	78	31,987,879	1,123	1,148,339
1928	70,259	5,699,553	71.2	36,601,828	1,209	1,497,999
1929	80,991	6,336,873	78.2	35,162,736	1,323	1,529,367
1930	84,135	6,332,519	75.2	36,162,268	1,328	1,545,648
1931	86,050	5,607,744	65.1	42,921,142	1,241	1,383,286
1932	86,631	5,409,154	62.2	45,982,719	893	1,059,643
1933	84,933	5,102,340	60	51,766,592	958	958,336

[1]This includes capital invested in drilling, producing, and distributing.

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1930–1933

County	Field	1930	1931	1932	1933
		M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Essex	Kingsville	4,999,278	4,376,184	4,506,072	4,201,704
Kent	Tilbury				
	Dover	459,112	338,422	275,958	252,694
Lambton	Dawn	131,647	130,198	170,671	265,061
	Oil Springs				
Middlesex	Crumlin	300	300	.....	.....
Elgin	Bayham	48,018	43,536	45,708	45,968
Norfolk	Norfolk	277,971	312,535	365,638	346,621
Lincoln	Lincoln				
Haldimand	Haldimand	1,479,032	1,590,452	1,453,864	1,524,251
Wentworth	Wentworth				
Brant	Onondaga	58,637	170,521	140,612	121,578
Bruce	Amabel	858	516	500	500
Welland	Welland	408,475	377,566	351,616	333,619
Wells in surface drift	Howard and Sa	20,088	19,304	15,515	14,663
Private wells	.....	60,000	60,000	60,000	60,000
Total produced	.....	7,943,416	7,419,534	7,386,154	7,166,659
Value	.....	$5,061,588	$4,635,497	$4,719,297	$4,523,084
		M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Imported mixed gas	.....	144,577	102,141	111,727	97,075
Manufactured gas	.....	3,248	.....	.....	.....
Total distributed	.....	8,091,241	7,521,675	7,497,881	7,263,734

The number of consumers in the province, for the first time on record, has shown a loss, viz., 1,698 less than in 1932. This loss in consumers is mainly in Hamilton and the Border Cities, which may be attributed to a loss of popula-

tion. In Hamilton, many consumers of previous years only used gas when electricity failed, or to supplement electricity as fuel. The quantity used per consumer shows a loss over the previous year, the figures for which were considered to be a minimum consumption. This may be attributed to the use of cheaper fuels, which entail more time and labour, as well as the keener competition of electricity for heating water.

TABLE II—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921–1933

Year	No. of pay consumers	Total quantity used	Quantity used per consumer	Capital invested in all natural gas operations[1]	No. of men employed	Wages paid
		M cu. ft.	M cu. ft.			
1921	58,609	5,937,316	101.3	$17,328,757	632	$592,606
1922	63,229	6,028,947	95.3	17,769,664	692	539,072
1923	62,352	6,210,459	99.6	25,570,972	603	633,365
1924	61,100	5,933,595	97.1	24,781,723	727	639,167
1925	62,338	5,300,424	85.6	26,111,387	692	625,826
1926	63,695	5,595,521	87.8	30,500,874	860	842,305
1927	66,818	5,210,315	78	31,987,879	1,123	1,148,339
1928	70,259	5,699,553	71.2	36,601,828	1,209	1,497,999
1929	80,991	6,336,873	78.2	35,162,736	1,323	1,529,367
1930	84,135	6,332,519	75.2	36,162,268	1,328	1,545,648
1931	86,050	5,607,744	65.1	42,921,142	1,241	1,383,286
1932	86,631	5,409,154	62.2	45,982,719	893	1,059,643
1933	84,933	5,102,340	60	51,766,592	958	958,336

[1]This includes capital invested in drilling, producing, and distributing.

The price of natural gas will show a slight decrease, owing to rate reductions and discount in certain areas.

Following the investigation into gas reserves in 1921, it was considered advisable to discourage the use of gas in large volumes. The retail rates were, in consequence, made to penalize the large consumer, by an increase with every ten thousand cubic feet used. Twelve additional years' experience and a study of gas reserves has shown that the reserves are much greater than anticipated, and the main distributing companies have prepared to serve their customers indefinitely. It has now been considered advisable to bring gas rates more in line with rates charged for other commodities by charging either a flat rate or, preferably, encouraging its use by giving a lower rate for larger consumption. Rates are gradually being brought in line with this principle.

Gas Wells Drilled in 1933

There was little exploratory drilling in 1933. One well was drilled in Maidstone township, Essex county; one in Orford township, Kent county; one in Chatham Gore, Kent county; one in Ekfrid township, Middlesex county; and one in Puslinch township, Wellington county. One well was begun in Sarnia township, Lambton county, to test deep horizons.

Further drilling was carried out in an endeavour to enlarge the fields in Raleigh township, Kent county; Dawn township, Lambton county; Middleton township, Norfolk county; and in Tuscarora, Indian reserve, Brant county.

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1931–1934

County	Field 1935	1931	1932	1933	1934
		M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Essex	Kingsville	4,376,184	4,506,072	4,201,704	4,093,186
Kent	Tilbury 4,161,021				
	Dover 935,446	338,422	275,958	252,694	363,344
Lambton	Dawn 417,944	130,198	170,671	265,061	517,009
	Oil Springs				
Middlesex	Crumlin	300	.....	.....	.....
Elgin	Bayham 116,118	43,536	45,708	45,968	51,483
Norfolk	Norfolk 472,903	312,535	365,638	346,621	354,274
Lincoln	Lincoln				
Haldimand	Haldimand 1,576,323	1,590,452	1,453,864	1,524,251	1,801,160
Wentworth	Wentworth				
Brant	Onondaga 120,461	170,521	140,612	121,578	109,486
Bruce	Amabel 400	516	500	500	500
Welland	Welland 290,119	377,566	351,616	333,619	318,409
Wells in surface drift	Howard and Sa[illegible]000	19,304	15,515	14,663	14,000
Private wells	60,000	60,000	60,000	60,000	60,000
Total produced	8,195,825	7,419,534	7,386,154	7,166,659	7,682,851
Value	4,938,084	$4,635,497	$4,719,297	$4,523,084	$4,741,368
		M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Imported mixed gas	98,848	102,141	111,727	97,075	102,667
Total distributed	8,257,673	7,521,675	7,497,881	7,263,734	7,785,518

TABLE II—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921–1934

Year	Retail rate, cents per M cu. ft.	No. of pay consumers	Total quantity used	Quantity used per consumer	Capital invested in all natural gas operations[1]	No. of men employed	Wages paid
			M cu. ft.	M cu. ft.			
1921	47	58,609	5,937,316	101.3	$17,328,757	632	$592,606
1922	47	63,229	6,028,947	95.3	17,769,664	692	539,072
1923	50	62,352	6,210,459	99.6	25,570,972	603	633,365
1924	55	61,100	5,933,595	97.1	24,781,723	727	639,167
1925	56	62,338	5,300,424	85.6	26,111,387	692	625,826
1926	57	63,695	5,595,521	87.8	30,500,874	860	842,305
1927	60	66,818	5,210,315	78	31,987,879	1,123	1,148,339
1928	60	70,259	5,699,553	71.2	36,601,828	1,209	1,497,999
1929	58	80,991	6,336,873	78.2	35,162,736	1,323	1,529,367
1930	64	84,135	6,332,519	75.2	36,162,268	1,328	1,545,648
1931	62	86,050	5,607,744	65.1	42,921,142	1,241	1,383,286
1932	63	86,631	5,409,154	62.2	45,982,719	893	1,059,643
1933	63	84,933	5,102,340	60	51,766,592	958	958,336
1934	62	~~89,990~~ ~~86,393~~	5,262,631	~~61~~ 58·5	41,934,395	931	1,010,979
1935	60	117325	5,553,902	48·2 = 52·7	42,681,223	1,089	1,089,909

[1]This includes capital invested in drilling, producing, and distributing.

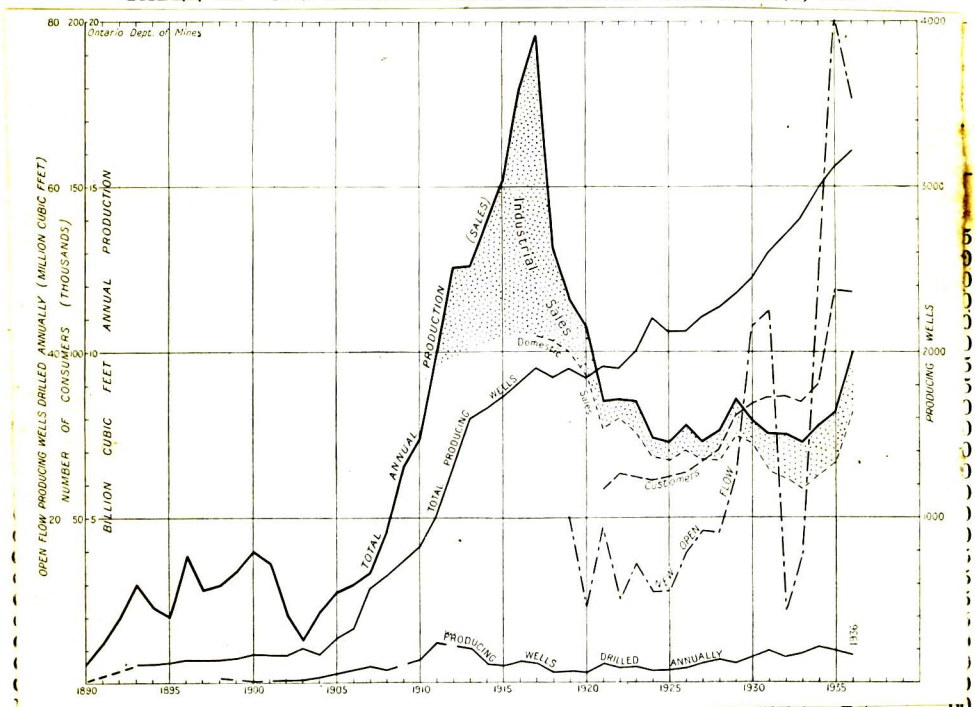
Analysis of Gas Consumption

Tables III and IV give in detail the statistics of gas consumed in homes and industries in all gas-consuming municipalities in Ontario during 1934.

Similar tables have been published annually since 1921, and these give an excellent comparison of the quantity of gas used at varying rates. It should be borne in mind that the price of other fuels in different localities will affect the consumption of gas, as also does the atmosphere, temperature, and wind velocity. In making a comparison of these tables, these factors should be given due consideration. The slight increase in the per capita consumption, may be due to either the late spring or to a more general use of gas.

Space does not permit of publishing the intermediate steps in the rates. The maximum and minimum rates only are given.

TABLE III—GAS CONSUMPTION IN TOWNS AND CITIES, 1934



Dorchester	403	115	....	6,934	.....	.....	95	.60–.85
Dresden and Tupperville	1,469	495	3	43,458	174	835	38	.50–.65
Dundas	5,032	1,124	1	56,133	8	4,151	172	.70
Dunnville	3,632	1,000	2	95,947	433	11,038	7	.45–.60
Dutton	798	240	3	19,966	213	870	52	.55–.80
Echo Place	732	75	....	3,371	.....	.....	5	.80
Eden	76	28	....	1,382	.....	.....	11	.60
Essex	1,786	466	*2	39,277	85	570	33	.55–.70
Fairground	75	13	....	619	.....	.....	1	.60
Fenwick	328	96	....	5,856	.....	.....	18	.60–.75
Fingal	169	33	....	2,312	.....	.....	71	.55–.80
Fisherville	162	45	....	3,652	.....	78	2	.50
Florence	184	64	....	3,691	.....	.....	5	.50–.75
Fonthill	872	224	....	6,601	.....	.....	25	.75–.85
Fort Erie	5,366	1,364	5	56,186	2,332	.....	8	1.00–1.30
Galt	14,057	2,202	1	82,881	210	5,551	147	.55–.80
Grimsby	1,952	247	....	7,684	.....	.....	10	.85
Grimsby Beach		54	....	1,977	.....	.....	11	.85
Hagersville	1,355	410	....	31,158	.....	.....	14	.60
Hamilton	153,504	8,280	3	354,252	763	644,343	47	.75
Hepworth	380	5	2	100	400	.....	1	.75

TABLE II—NATURAL GAS PRODUCTION BY FIELDS, 1941

County	Field	1940	1941 Quantity
			M cu. ft.
Essex	Kingsville	2,902,079	32,418
	Tilbury		2,433,968
Kent	Declute	2,717,192	1,482,186
	Dover	381,837	341,516
	Chatham		165,010
Lambton	Dawn	2,276,346	1,661,500
	Oil Springs		8,249
Oxford	Dereham (Brownsville field[1])		220,077
Elgin	Bayham (Brownsville field[1])	1,036,260	
Elgin	Bayham	81,354	71,692
	Malahide	688,860	2,497,447
Norfolk	Norfolk	432,510	421,717
Lincoln	Lincoln		
Haldimand	Haldimand	2,101,759	1,962,524
Wentworth	Wentworth		
Welland	Welland	267,567	274,039
Brant	Onondaga	151,193	182,360
Wells in surface drift	Harwich and Howard tps	14,000	14,000
Private wells	Haldimand, Norfolk, Welland tps	60,000	60,000
Total produced		13,053,403	11,828,703
Value		$ 7,745,867	$7,115,473.85
			M cu. ft.
Imported mixed gas		129,130	172,482
Manufactured gas (Windsor plant)			7,697
Manufactured gas (Sarnia plant)			18,972
Total distributed		13,183,337	12,027,854

[1]Dereham township, 178,841 M cu. ft.; Bayham township, 41,236 M cu. ft.

Supplementary Gas Plants

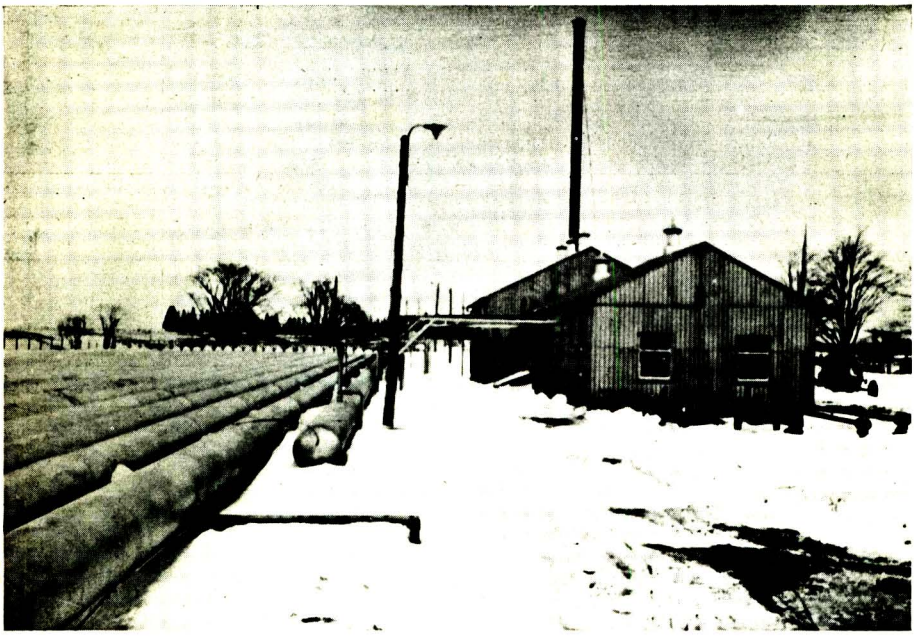
As a result of the depletion of natural supplies and the necessity of conserving natural gas reserves, along with the pressing requirements of war industries, steps were taken early in the year to provide supplementary supplies. After careful investigation and surveys, it was decided to augment the natural gas supplies by the construction of artificial gas plants at strategic points in southwestern Ontario.

DOMINION NATURAL GAS COMPANY

The first propane plant was erected five miles north of Brantford by the Dominion Natural Gas Company at a point on the company's main pipe line system within easy access of a railroad siding. Liquid propane or butane, delivered by specially constructed steel tank cars, is unloaded with a 4-inch pipe line and a 2-inch vapour pipe line. The 2-inch vapour pipe line is utilized to transfer, by means of compressors, vapour from the storage tanks, which are 1½ miles from the siding, to the tank cars to build up pressure to force the liquid propane through the 4-inch line to the 200,000-gallon storage tanks. For the construction of storage facilities, owing to wartime steel shortage, the company used approximately two miles of 24-inch steel pipe or tubing. From the storage tanks, the liquid is drawn off by a liquid pump to heat exchangers and vaporized. The vapour then passes through ratio flow controls and is mixed with fixed amounts of air and natural gas. The gas then flows through a calorimeter to determine the B.t.u. or heating value of the gas before it passes into the pipe lines for distribution.

UNITED GAS AND FUEL COMPANY

A second artificial gas plant, owned by the United Gas and Fuel Company, was nearing completion in Hamilton by the close of the year. The plant, which is similar to the one erected near Brantford, will utilize liquefied petroleum gas, propane or butane, to supplement the supply of natural gas available to the city during the winter season. Liquid propane or butane is vaporized, mixed with air and coke oven and natural gas, and introduced directly into distributing pipe lines. As at the Dominion plant, 24-inch steel pipe was welded together to form storage for 220,000 gallons. The capacity of the plant when completed will range from 3,000 to 5,000 cubic feet of 1,000 B.t.u. gas per cubic foot per 24 hours.



Propane plant of the Dominion Natural Gas Company, near Brantford, showing the 24-inch steel pipe storage. The nearest building houses the mixing and control equipment and the one behind, the boiler and compressor.

UNION GAS COMPANY

Sarnia Plant

Under the direction of the Union Gas Company, the erection of a third artificial gas plant was commenced in September, near Sarnia. The plant, however, did not come into operation until late in 1942, owing to difficulties experienced in obtaining essential material and equipment. Unlike the artificial gas plants at Hamilton and Brantford, refinery or "still" gas will be utilized to augment the supply of natural gas in areas served by the Union Gas Company.

The plant is unique in that for the first time in Ontario refinery gas will be used to supplement the supply of natural gas for domestic, commercial, and industrial consumption. The first step in the process involves the removal of sulphuretted hydrogen by passing the unpurified refinery gas, piped from the Imperial Oil refinery, through a lime slurry (Burrell-Dayton process). The purified refinery gas then passes to the reforming equipment where a portion

NATURAL GAS IN 1928

By R. B. Harkness

General

The production of natural gas in Ontario in the year 1928 is valued at $4,535,312, which places this commodity fifth in importance among the minerals of this province, having exceeded in value the production of silver. The production by fields, as compared with past years, is given below in Table I.

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1925–1928

County	Field /1924	1925	1926	1927	1928
		M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Essex	Kingsville	4,966,207	5,365,423	4,994,071	5,228,451
Kent	Tilbury 4,757,849				
	Dover 199,770	126,687	159,136	189,438	178,273
Lambton	Dawn	50,913	14,937	12,666	16,204
	Oil Springs 73,577				
Middlesex	Crumlin 2,649	2,030	.....	.....	300
Elgin	Bayham	140,231	36,794	40,698	44,154
	Malahide 150,672				
Lincoln	Lincoln				
Haldimand	Haldimand	1,544,348	1,782,950	1,668,148	1,746,894
Wentworth	Wentworth 1,595,625				
Norfolk	Norfolk				
Brant	Onondaga 8,926	979	12,275	13,224	13,804
Welland	Welland 456,961	294,843	276,259	278,967	301,847
Bruce	Amabel 591	650	650	224	240
Peel	Caledon	.....	.....	1,500	100
Wells in surface drift	Howard and Sarnia 64,295	70,386	68,072	52,278	42,473
Private wells	60,000	60,000	60,000	60,000	60,000
Total	7,370,914	7,257,274	7,776,496	7,311,214	7,632,740

TABLE II—SALES OF GAS FROM KENT AND NORFOLK-HALDIMAND FIELDS

Month	Kent field		Norfolk-Haldimand field	
	1924–25	1925–26	1924–25	1925–26
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
December	576,409	526,723	158,755	160,475
January	592,893	587,993	182,637	189,298
February	513,724	562,932	170,622	179,330
March	457,409	592,465	143,548	173,832
April	379,276	553,386	115,498	189,244
May	271,788	322,687	98,104	150,213

The supreme test of good service is the delivery of gas from the field in with the correct proportion of air, gives a perfectly clean flame that can be

brought in contact with a metal surface without injury to the metal and without depositing scale, whereas in using oil, coal, or other fuel, the products of combustion must in most cases be kept from coming in contact with the metal surface. Gas, therefore, is a great time-saver, is very easily controlled, simplifies operations, and gives surer results. Consequently, there is a great demand for natural gas in industries where the above-mentioned operations are carried on.

The increase in the number of consumers is principally in Hamilton and Windsor. These cities have been growing rapidly in the past five years, and the gas companies are extending their pipes into new sections of these and other cities. This increase is most noticeable in 1927 and 1928.

The increased use of natural gas for house-heating is largely due to improvements in the application of the gas flame to the sides of the fire-box of furnaces and to the use of refractory materials in the fire-box. Further economy has been effected by the use of the thermostat, whereby the gas is turned on or off automatically.

Capital invested in all natural gas operations, including drilling, producing, and distribution, is $36,601,828; the number of men employed is 1,209; and the wages paid amount to $1,497,999.

The capital and wages included in drilling represent both oil and gas, so far as exploratory work is concerned. There are 31 drilling rigs operating within the province.

Changes and Improvements in Service

The Dominion Natural Gas Company report the purchase of the Sterling Natural Gas Company's well-pipe lines in Moulton, Sherbrooke, Wainfleet, and Humberstone townships and the distributing plant in the village of Humberstone and the town of Port Colborne.

Following the sale, the Dominion Natural Gas Company tied the Sterling pipe lines into their own system, thereby giving Port Colborne an additional supply of gas from the 800 wells of the Dominion Company in Haldimand and adjacent counties.

The Dominion Natural Gas Company have materially increased their distributing plants in Hamilton East and in St. Catharines, and have secured franchises in the township of Saltfleet and the village of Burlington. They have laid special 10-inch pipe lines across the new Welland canal to provide for future expansion. This company reports having made a systematic leakage survey of their distributing plants in Dundas, Thorold, Hagersville, Strafford-ville, Vienna, Port Burwell, and Wheatley, and have made necessary repairs.

The Southern Ontario Gas Company have built a purification plant at Glenwood to remove the hydrogen sulphide from the gas from their wells in the Tilbury field. This is described in detail on page 3. They have also done exploratory drilling, with some success, along the western margin of the Tilbury field.

The Union Natural Gas Company report having laid 58½ miles of 2- to 16-inch pipe line in the city of Windsor and the Border Cities, and 12½ miles of 1- to 8-inch pipes in Chatham and the surrounding area. They have connected the Dawn gas field directly to the main transmission pipe line from the Tilbury gas field to Sarnia; this will give a much more flexible service from the gas field in Dawn township.

Pipe replacements in the main transmission lines are as follows: Ridgetown line, 5½ miles of 6-inch; Windsor line, 1½ miles of 8-inch; Chatham line, 1 mile

A 6-inch transmission line was being laid from the centre of this field near Brownsville to the town of Ingersoll, a distance of about 10 miles. This pipe line is owned by the Oxford Pipe Line Company.

The extension of the Bayham township field, known as the Eden field, is gratifying, although the limits appear to have been reached on three sides, east, north, and west.

Drilling in the Haldimand field was very much curtailed in 1936, and the proportion of dry holes increased greatly, which may be taken as an indication that drilling in this field is reaching its conclusion. There are now 1,899 producing wells in Haldimand county and the adjacent townships in Welland, Lincoln, and Brant counties.

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1936

County	Field	Quantity
		M cu. ft.
Essex	Kingsville	3,531,870
	Tilbury	
Kent	Declute	1,298,363
	Dover	842,362
Lambton	Dawn	1,436,919
	Oil Springs	
Elgin	Bayham	207,914
Norfolk	Norfolk	462,653
Lincoln	Lincoln	1,735,171
Haldimand	Haldimand	
Wentworth	Wentworth	
Welland	Welland	286,345
Brant	Onondaga	130,747
Bruce	Amabel	400
Wells in surface drift	Harwich and Howard tps.	14,000
Private wells		60,000
Total produced		10,006,743
Value		$6,054,294
		M cu. ft.
Imported mixed gas		113,721
Total distributed		10,120,464

TABLE II—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921–1936

Year	Retail rate, cents per M cu. ft.	No. of pay consumers	Total quantity used	Quantity used per consumer	Capital invested in all natural gas operations	No. of men employed	Wages paid
			M cu. ft.	M cu. ft.			
1921	47	58,609	5,937,316	101.3	$17,328,757	632	$592,606
1922	47	63,29	6,028,947	95.3	17,769,664	692	539,072
1923	50	62,352	6,210,459	99.6	25,570,972	603	633,365
1924	55	61,100	5,933,595	97.1	24,781,723	727	639,167
1925	56	62,338	5,300,424	85.6	26,111,387	692	625,826
1926	57	63,695	5,595,521	87.8	30,500,874	860	842,305
1927	60	66,818	5,210,315	78	31,987,879	1,123	1,148,339
1928	60	70,259	5,699,553	71.2	36,601,828	1,209	1,497,999
1929	58	80,991	6,336,873	78.2	35,162,736	1,323	1,529,367
1930	64	84,135	6,332,519	75.2	36,162,268	1,328	1,545,648
1931	62	86,050	5,607,744	65.1	42,921,142	1,241	1,383,286
1932	63	86,631	5,409,154	62.2	45,982,719	893	1,059,643
1933	63	84,933	5,102,340	60	51,766,592	958	958,336
1934	62	89,990	5,262,631	58.5	41,934,395	931	1,010,979
1935	60	118,719	5,553,902	46.8–52	42,975,846	1,273	1,219,520
1936	60	118,117	6,956,453	59.3	45,197,240	1,336	1,354,611

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1937

County	Field	Quantity
		M cu. ft.
Essex	Kingsville	3,245,333
	Tilbury	
Kent	Declute	1,512,300
	Dover	636,552
Lambton	Dawn	1,890,874
	Oil Springs	
Oxford	Brownsville[1]	486,931
Elgin		
Elgin	Bayham	260,974
Norfolk	Norfolk	441,375
Lincoln	Lincoln	1,784,257
Haldimand	Haldimand	
Wentworth	Wentworth	
Welland	Welland	298,493
Brant	Onondaga	112,482
Bruce	Amabel	2,763
Wells in surface drift	Harwich and Howard tps.	14,000
Private wells		60,000
Total produced		10,746,334
Value		$6,588,798
		M cu. ft.
Imported mixed gas		113,495
Total distributed		10,859,829

[1]Dereham township, 455,611 M cu. ft.; Bayham township, 31,320 M cu. ft.

1. Over 20 M cu. ft. [illegible]

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1938

County	Field	Quantity
		M cu. ft.
Essex	Kingsville	3,265,726
	Tilbury	
Kent	Declute	1,797,789
	Dover	509,677
Lambton	Dawn	1,894,730
	Oil Springs	
Oxford	Brownsville[1]	556,922
Elgin		
Elgin	Bayham	113,651
Norfolk	Norfolk	437,867
Lincoln	Lincoln	1,912,882
Haldimand	Haldimand	
Wentworth	Wentworth	
Welland	Welland	253,085
Brant	Onondaga	135,348
Bruce	Amabel	1,129
Wells in surface drift	Harwich and Howard tps.	14,000
Private wells		60,000
Total produced		10,952,806
Value		$6,460,763
		M cu. ft.
Imported mixed gas		125,807
Total distributed		11,078,613

[1]Dereham township, 506,005 M cu. ft.; Bayham township, 50,917 M cu. ft.

From 10 M to 15 M cu. ft.	80c. per M cu. ft.
From 15 M to 25 M cu. ft.	70c. per M cu. ft.
Over 25 M cu. ft.	60c. per M cu. ft.

NATURAL GAS IN 1930

By R. B. Harkness

General

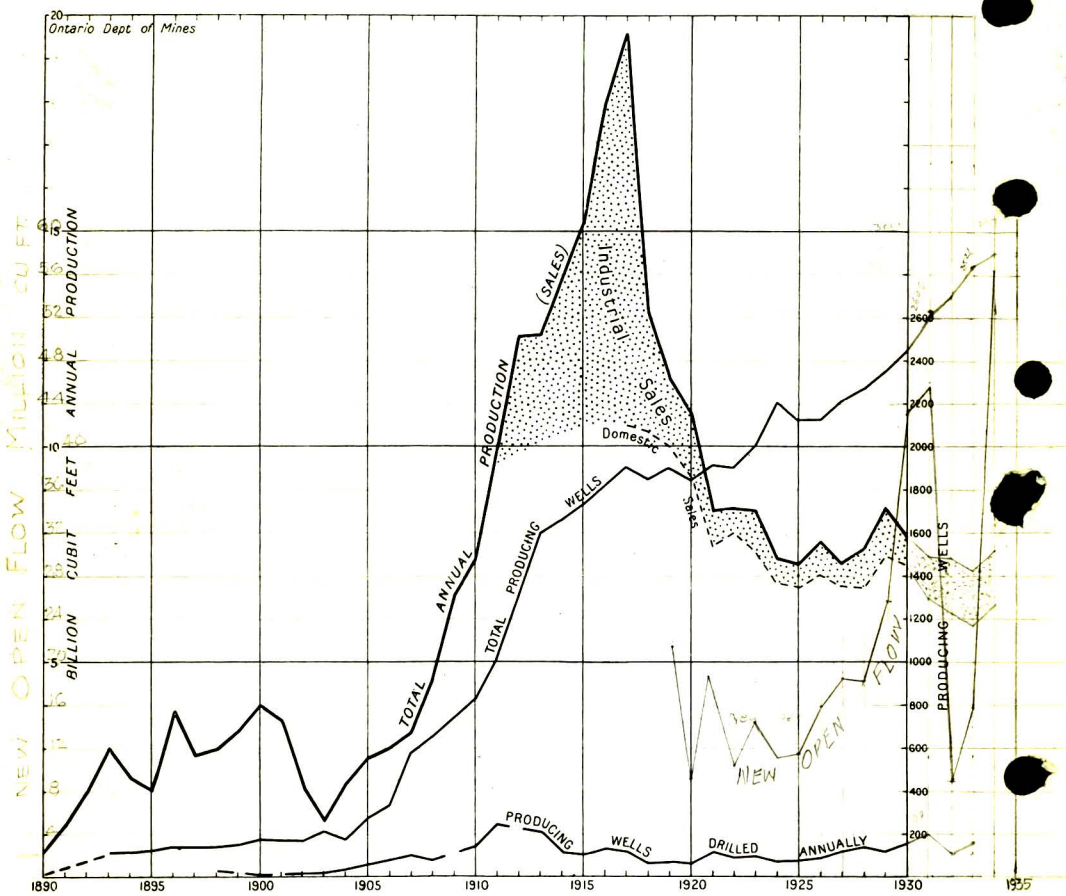
The natural gas production in Ontario in 1930 is below that of 1929, but well above the average for the last six years. The value, however, shows an increase, due to a higher average retail rate. Table I shows the production by fields for the past four years.

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1927–1930

County	Field	1927	1928	1929	1930
		M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Essex	Kingsville	4,994,071	5,228,451	5,780,061	4,999,270
Kent	Tilbury				
	Dover	189,438	178,273	366,224	459,112
Lambton	Dawn				
	Oil Springs	12,666	16,204	94,027	131,647
Middlesex	Crumlin	300	300	300	300
Elgin	Bayham	40,698	44,154	46,272	48,018
Norfolk	Norfolk				277,971
Lincoln	Lincoln				
Haldimand	Haldimand	1,668,148	1,746,894	1,866,136	1,479,032
Wentworth	Wentworth				
Brant	Onondaga	13,224	13,804	31,558	58,637
Welland	Welland	278,967	301,847	298,688	408,475
Bruce	Amabel	224	240	107	858
Peel	Caledon	1,500	100		
Wells in surface drift	Howard and Sarnia	52,278	42,473	39,814	20,088
Private wells		60,000	60,000	60,000	60,000
Total produced		7,311,214	7,632,740	8,583,187	7,943,416
Value		$4,331,780	$4,535,312	$4,968,133	$5,061,588
		M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Imported mixed gas		103,040	116,639	138,352	144,577
Manufactured gas				3,986	3,248
Total distributed		7,414,254	7,749,379	8,725,525	8,091,241

The decrease in the consumption of natural gas from 8,583,187 M cubic feet in 1929 to 7,943,416 M cubic feet in 1930 is due both to the depression felt throughout the world (which has slowed down or shut down many Ontario industries) and to the milder fall and winter of 1930. The extension of gas lines in municipalities now being served with gas and the addition of new municipalities accounted for an increase of 3,144 in the number of consumers served in the province, but the quantity used per consumer is reduced 3,000 cubic feet. The new discoveries of gas, which will be discussed later, have very much improved the service to the municipalities in Lambton county that have been heretofore dependent on the Tilbury field, and has reduced the distance from the gas field by forty miles. The prosperous year of 1929, with the great increase in demand, had the effect of stimulating the search for gas. The number of wells drilled shows an increase of 17 per cent. over the previous year, and the number of

dry holes, a decrease of 8 per cent. The result of this activity was the extension of the De Clute and Dawn fields, the discovery of the Mosa (or Newberry) gas field, and the extension of the gas field in Middleton township. Some of the wells in the Kent fields were of considerable capacity. There does not appear to have been any cessation of activity at the end of the year, and the season of 1931 should also be a banner year. Comparing the apparent reserves of gas at the present time with those of five years ago gives a very favourable outlook for the future, especially in the Tilbury and Haldimand fields. The cleaning-out operations in the Tilbury field and the drilling in the Haldimand



Graph of the natural gas industry in Ontario for the past forty years.

field force a change in the estimate of reserves; and, although a definite statement cannot be made, it would appear that the lifetime of these fields has been extended by ten years or more and that the undrilled acreage holds supplies of gas hitherto unsuspected. The promise of these future supplies resulted in a very active campaign, and improved methods of prospecting are being tried, among these being core-drilling and the use of geophysical instruments. To date, the core-drilling has been more satisfactory than geophysics in the Kent and Lambton field. In the Haldimand-Norfolk field no better method has been found than following the indication given by highest remaining rock pressures and the thickest "sand," or, in undrilled areas, "wildcatting."

TABLE I—SUMMARY OF NATURAL GAS DISTRIBUTION, 1941–1945

	1941	[1]1942	[2]1943	[3]1944	[4]1945
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
l distribution to customers	11,343,255	10,624,148	9,519,186	9,355,852	9,694,776
l by companies for all purposes	85,992	163,239	276,993	282,330	303,321
l by private well-owners	74,000	74,000	74,336	39,253	69,799
tage in transmission lines	226,230	277,680	218,763	272,006	303,728
tage in distribution plants	281,361	209,470	436,729	253,650	244,787
tage in rural lines	17,016	17,798	22,012	21,739	27,229
Total amount distributed	12,027,854	11,366,335	10,548,019	10,224,830	10,643,640

[1]889,565 M cu. ft. of manufactured and other gas is included in these figures.
[2]2,633,611 M cu. ft. of manufactured and other gas is included in these figures.
[3]3,142,321 M cu. ft. of manufactured and other gas is included in these figures.
[4]3,443,670 M cu. ft. of manufactured and other gas is included in these figures.

TABLE II—NATURAL GAS PRODUCTION BY FIELDS, 1945

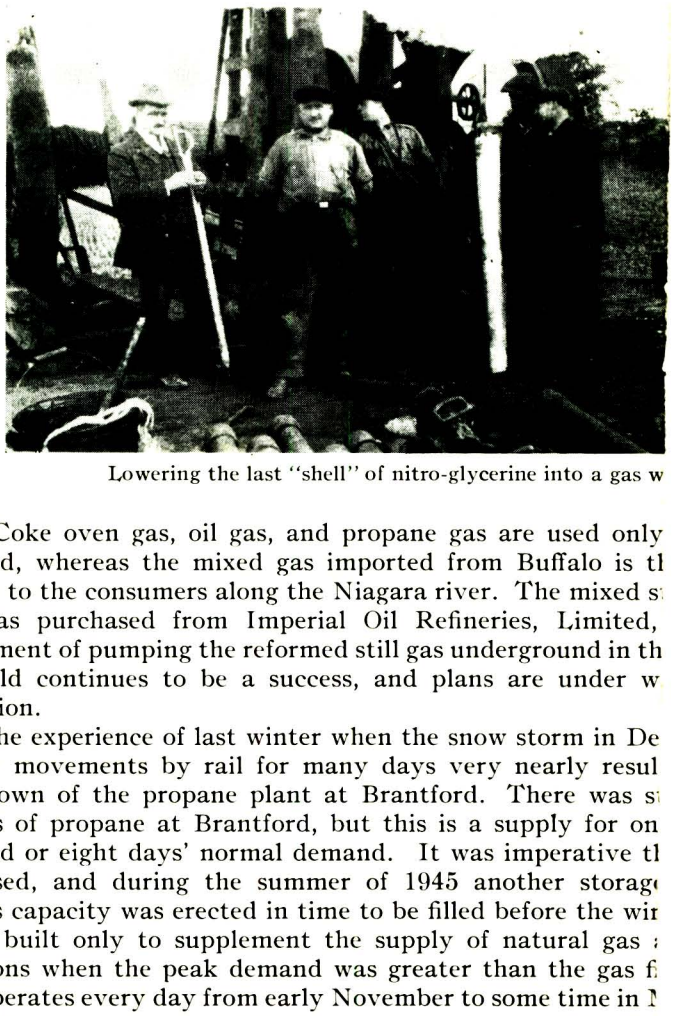
County	Field	Quantity
		M cu. ft.
t	Onondaga	72,666
n	Bayham	23,888
	Malahide	25,445
x	Kingsville	27,416
limand	Haldimand	1,885,760
	Chatham and Camden gore	297,978
t	Dover	162,286
	Tilbury	2,125,982
	Zone	665,568
bton DeClute	Dawn and Oil Springs	421,320
oln	Lincoln	70,614
folk	Norfolk	463,243
rd	Brownsville	30,026
land	Welland	331,955
tworth	Wentworth	60,295
ls in surface drift	Harwich and Howard	14,000
ate wells		60,000
Total produced		7,199,970
Retail value		$4,837,585
		M cu. ft.
distributed other than natural gas:		
Mixed still gas		2,266,954
Coke oven gas		467,209
Imported mixed gas		347,097
Oil gas		192,307
Propane gas		170,103
Total of other gases		3,443,670
Total of all gases distributed		10,643,640

Although drilling in the year 1945 showed in general a slight improvement r 194[illegible] the available reserve of natural gas is decreasing each year. This in lf is serious, but the increase in the quantity that each consumer uses creates alarming situation. The Union Gas Company of Canada, Limited, which plies the London, Sarnia, Chatham, and Windsor areas, has entered into an eement with the Panhandle and Eastern Gas Company to import five and

a half billion cubic feet of gas per year from this company's pip
This agreement now awaits the approval of the Federal Powe
the United States, and if this approval is received that comp
plentiful supply of gas for many years to come. The gas suppl
and eastward through Woodstock, Paris, Brantford, and Ga
maintained from November to May by introducing propane
transmission lines; on mild days this is further mixed with
natural gas diverted from the Haldimand field via Hamilton
twice as much as natural gas, and as a permanent supply it canno

Supplementary Gas Supplies

At the bottom of Table II will be seen the kind and quan
to supplement our failing natural gas supply. A comparison of t
one published last year shows an increase in every item with th



Lowering the last "shell" of nitro-glycerine into a gas w

gas. Coke oven gas, oil gas, and propane gas are used only
demand, whereas the mixed gas imported from Buffalo is th
supply to the consumers along the Niagara river. The mixed s
still gas purchased from Imperial Oil Refineries, Limited,
experiment of pumping the reformed still gas underground in th
gas field continues to be a success, and plans are under w
operation.

The experience of last winter when the snow storm in De
up car movements by rail for many days very nearly resul
shut-down of the propane plant at Brantford. There was s
gallons of propane at Brantford, but this is a supply for on
demand or eight days' normal demand. It was imperative th
increased, and during the summer of 1945 another storag
gallons capacity was erected in time to be filled before the wi
plant, built only to supplement the supply of natural gas
occasions when the peak demand was greater than the gas f
now operates every day from early November to some time in
of the Brantford plant is 4,000 M cubic feet daily, but it is con

[1]For a description of the process, see Ont. Dept. Mines, Vol. LI, 1942

TABLE I—SUMMARY OF NATURAL GAS DISTRIBUTION, 1939–1943

	1939	1940	1941	[1]1942	[2]1943
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Total distribution to customers	11,337,644	12,629,776	11,343,255	10,624,148	9,519,186
Used by companies for all purposes	51,605	74,791	85,992	163,239	276,993
Used by private well-owners	74,000	74,000	74,000	74,000	74,336
Leakage in transmission lines	139,445	116,218	226,230	277,680	218,763
Leakage in distribution lines	255,483	234,029	281,361	209,470	436,729
Leakage in rural lines	16,191	17,129	17,016	17,798	22,012
Unmeasured leakage in field	200,159	37,394	.....	.....	.....
Total amount distributed	12,074,527	13,183,337	12,027,854	11,366,335	10,548,019

[1]889,565 M cu. ft. of manufactured and other gas is included in these figures.
[2]2,633,611 M cu. ft. of manufactured and other gas is included in these figures.

TABLE II—NATURAL GAS PRODUCTION BY FIELDS, 1943

County	Field	Quantity
		M cu. ft.
Essex	Kingsville	28,732
	Tilbury East	
	Romney	2,445,565
	Raleigh	
Kent	Raleigh (Declute)	475,567
	Dover	220,133
	Chatham	311,029
	Zone	2,202
Lambton	Dawn	1,092,293
	Oil Springs	9,779
Oxford	Dereham (Brownsville)	36,710
	South Norwich	3,730
	Bayham (Brownsville)	15,008
Elgin	Bayham	7,082
	Malahide	87,091
Norfolk	Norfolk	240,399
Lincoln	Lincoln	
Haldimand	Haldimand	2,470,967
Wentworth	Wentworth	
Welland	Welland	296,016
	~~Brantford~~	
Brant	Onondaga	98,105
	~~Tuscarora~~	
Wells in surface drift	Harwich	14,000
	Howard	
	Haldimand county	
Private wells	Norfolk county	60,000
	Welland county	
Total produced		7,914,408
Retail value		$6,354,045
Gas distributed other than natural gas:		M cu. ft.
Re-formed still gas		1,938,589
Imported mixed gas		237,116
Coke oven gas		217,383
Oil gas		167,823
Propane gas		72,700
Total of other gases		2,633,611
Total of all gases distributed		10,548,019

produce as serious results as might be imagined; only parts of the war plants were closed, and in some cases oil could be substituted in part. It is, however, a fact that this did cause some slowing down in war industries that depended on natural gas for heat-treating and similar operations.

Leakage shows an alarming increase in 1943. This situation demands immediate attention on the part of gas companies.

The graph on page 2 shows clearly the present deficiency of natural gas and how it is supplemented with other gases, viz., oil gas, still gas, coke oven gas, and liquid propane.

With the removal of furnace burners in 1942 by order of the Power Controller of Canada, there was a decrease of 7,000 domestic consumers, but in 1943 the number of domestic consumers had risen to 141,253—only 267 less than the total for 1941. This was no doubt due to war-time housing demands and the division of houses into duplexes and apartments.

Natural Gas Consumption and Rates

Table III gives, at a glance, the history of the gas industry in Ontario from the year 1921.

TABLE III—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921-1943

Year	Retail rate, cents per M cu. ft.	No. of pay consumers	Total quantity used	Quantity used per consumer	Capital invested in all natural gas operations	No. of men employed	Wages paid
			M cu. ft.	M cu. ft.			
1921.....	47	58,609	5,937,316	101.3	$17,328,757	632	$592,606
1922.....	47	63,229	6,028,947	95	17,769,664	692	539,072
1923.....	50	62,352	6,210,459	99.6	25,570,972	603	633,365
1924.....	55	61,100	5,933,595	97.1	24,781,723	727	639,167
1925.....	56	62,338	5,300,424	85.6	26,111,387	692	625,826
1926.....	57	63,695	5,595,521	87.8	30,500,874	860	842,305
1927.....	60	66,818	5,210,315	78	31,987,879	1,123	1,148,339
1928.....	60	70,259	5,699,553	71.2	36,601,828	1,209	1,497,999
1929.....	58	80,991	6,336,873	78.2	35,162,736	1,323	1,529,367
1930.....	64	84,135	6,332,519	75.2	36,162,268	1,328	1,545,648
1931.....	62	86,050	5,607,744	65.1	42,921,142	1,241	1,383,286
1932.....	63	86,631	5,409,154	62.2	45,982,719	893	1,059,643
1933.....	63	84,933	5,102,340	60	51,766,592	958	958,336
1934.....	62	89,990	5,262,631	58.5	41,934,395	931	1,010,979
1935.....	60	118,719	5,553,902	46.8-52	42,975,846	1,273	1,219,520
1936.....	60	118,117	6,956,453	59.3	45,197,240	1,336	1,354,611
1937.....	60	123,527	7,767,359	62.8	49,059,740	1,501	1,668,188
1938.....	60	127,861	7,912,220	61.8	51,189,094	1,439	1,631,677
1939.....	60	131,598	8,673,200	65.9	53,300,113	1,633	1,883,252
1940.....	60	136,698	9,671,008	70.7	56,938,282	1,736	2,071,031
1941.....	60	141,520	8,885,751	62.7	56,389,701	1,738	2,205,723
1942.....	65	134,562	8,256,439	61.3	56,929,352	1,485	2,056,051
1943.....	65	141,253	7,351,438	52	56,565,582	1,010	1,965,366

Tables IV and V show the consumption of gas in all municipalities in Ontario supplied with natural or mixed gas and the rates that were paid in 1943. These tables have been published in each report since 1921 and are available for reference. The column entitled "Distance from gas field" has been discontinued because only a few places receive gas from one particular field. In addition to the rates shown in the right-hand column, the Dominion Natural Gas Company, Limited, has been authorized to charge an additional 10 cents per thousand for all gas used over 100 M cubic feet per month by industries. The Union Gas Company of Canada, Limited, has also been authorized to charge 50 cents per thousand for all gas used in excess of 100 M cubic feet per month by industries.

horizon. Owners of gas wells are required to save a sample of the first water encountered below the seat of this casing. By this means the property owner is afforded full protection against loss of fresh water from his well or any other damage to his fresh-water well from gas wells drilled in the neighbourhood.

Natural Gas Consumption and Rates

In Table III the growth of the natural gas consumption in Ontario, beginning with the year 1921, will be seen.

TABLE III—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921–1947

Year	Retail rate, cents per M cu. ft.	No. of pay consumers	Total quantity used	Quantity used per consumer	Gas used by industries	Capital invested in all natural gas operations	No. of men employed	Wages paid
			M cu. ft.	M cu. ft.	M cu. ft.			
1921.	47	58,609	5,937,316	101.3	857,714	$17,328,757	632	$592,606
1922.	47	63,229	6,028,947	95	538,796	17,769,664	692	539,072
1923.	50	62,352	6,210,459	99.6	662,080	25,570,972	603	633,365
1924.	55	61,100	5,933,595	97.1	549,063	24,781,723	727	639,167
1925.	56	62,338	5,300,424	85.6	535,088	26,111,387	692	625,826
1926.	57	63,695	5,595,521	87.8	780,438	30,500,874	860	842,305
1927.	60	66,818	5,210,315	78	542,276	31,987,879	1,123	1,148,339
1928.	60	70,259	5,699,553	71.2	900,946	36,601,828	1,209	1,497,999
1929.	58	80,991	6,336,873	78.2	1,039,778	35,162,736	1,323	1,529,367
1930.	64	84,135	6,332,519	75.2	683,946	36,162,268	1,328	1,545,648
1931.	62	86,050	5,607,744	65.1	1,092,777	42,921,142	1,241	1,383,286
1932.	63	86,631	5,409,154	62.2	1,296,067	45,982,719	893	1,059,643
1933.	63	84,933	5,102,340	60	1,373,481	51,766,592	958	958,336
1934.	62	89,990	5,262,631	58.5	1,503,896	41,934,395	931	1,010,979
1935.	60	118,719	5,553,902	46.8–52	1,608,382	42,975,846	1,273	1,219,520
1936.	60	118,117	6,956,453	59.3	1,812,500	45,197,240	1,336	1,354,611
1937.	60	123,527	7,767,359	62.8	2,174,522	49,059,740	1,501	1,668,188
1938.	60	127,861	7,912,220	61.8	2,131,656	51,189,094	1,439	1,631,677
1939.	60	131,598	8,673,200	65.9	2,503,954	53,300,113	1,633	1,883,252
1940.	60	136,698	9,671,008	70.7	2,792,556	56,938,282	1,736	2,071,031
1941.	60	141,520	8,885,751	62.7	2,320,849	56,389,701	1,738	2,205,723
1942.	65	134,562	8,256,439	61.3	2,235,350	56,929,352	1,485	2,056,051
1943.	65	141,253	7,351,438	52	2,065,556	56,565,582	1,010	1,965,366
1944.	65	142,015	7,384,715	52	1,877,126	.....	1,115	1,835,301
1945.	65	146,186	8,005,381	54.7	1,589,247	.....	1,060	1,297,843
1946.	65	150,947	8,116,731	53.7	1,512,991	.....	1,359	1,797,316
1947.	67	150,133	8,536,609	56.8	1,616,483	.....	1,227	1,630,507

It is most interesting to examine the quantity of gas used per consumer in Ontario in the past few years. The Commission and the gas companies have appealed to the consumers to conserve gas at all times and especially in cold weather, when the demand is greater than the supply. In the year 1942, at the height of the demand for gas in war industries, some 14,000 convertible furnaces were denied gas, and as a consequence the rate of consumption was greatly lowered in many towns and cities. The present appeal becomes necessary because of the great number of new consumers. Although no new customers were to be accepted, nevertheless many new consumers have appeared through the increase in shared accommodation and added new appliances and by scores of means have avoided the regulations. Most of these new consumers attempt to heat rooms and small apartments with a cookstove or have found a heater for sale and installed it unknown to the gas company. An examination and comparison over a few years will show that in many municipalities the rate of consumption has increased rather than decreased. The public should be aware of this before blaming the gas company for inadequate service.

The following table shows the rates charged for natural gas in 1947:—

NATURAL GAS RATES, 1947

Classification letter	Season, company, or locality	Classification according to amounts of gas used	Net rate and seasonal discount
A		Up to 10 M cu. ft.	85c. per M cu. ft.
		Over 10 M cu. ft.	60c. per M cu. ft.
		Minimum bill	$1.02
		Meter rental	15c.
B	October to April	Up to 10 M cu. ft.	55c. per M cu. ft.
		From 10 M to 20 M cu. ft.	60c. per M cu. ft.
		Over 20 M cu. ft.	70c. per M cu. ft.
	May to September		80c. per M cu. ft.
C	October to April	Up to 10 M cu. ft.	50c. per M cu. ft.
		From 10 M to 20 M cu. ft.	55c. per M cu. ft.
		Over 20 M cu. ft.	65c. per M cu. ft.
	May to September		75c. per M cu. ft.
D	October to April	Up to 10 M cu. ft.	40c. per M cu. ft.
		From 10 M to 20 M cu. ft.	45c. per M cu. ft.
		Over 20 M cu. ft.	55c. per M cu. ft.
	May to September		70c. per M cu. ft.
E	October to April	Up to 10 M cu. ft.	82½c. per M cu. ft.
		From 10 M to 20 M cu. ft.	87½c. per M cu. ft.
		Over 20 M cu. ft.	97½c. per M cu. ft.
	May to September		$1.07½c. per M cu. ft.
F	Where imported mixed gas is used.	Less than 1 M cu. ft.	$1.25 per M cu. ft., less discount of 25c.
		1 M cu. ft. and over	$1.05 per M cu. ft., less discount of 25c.
			Same as above plus pro rata share of duty.
	Summer consumers	Less than 1 M cu. ft.	$1.75 per M cu. ft., less discount of 25c.
		1 M cu. ft. and over	$1.35 per M cu. ft., less discount of 5c.
G		Minimum bill	$1.02½
		Up to 10 M cu. ft.	$1.02½ per M cu. ft.
		From 10 M to 25 M cu. ft.	87½c. per M cu. ft.
		Over 25 M cu. ft.	77½c. per M cu. ft.
J		Up to 200 cu. ft.	40c. per hundred cu. ft
		From 200 cu. ft. to 5 M cu. ft.	70c. per M cu. ft.
		From 5 M to 10 M cu. ft.	60c. per M cu. ft.
		Over 10 M cu. ft.	45c. per M cu. ft.
	October to April, discount	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to September, discount	On bills under $5.00	10 per cent.
K		Up to 200 cu. ft.	40c. per hundred cu. ft.
		From 200 cu. ft. to 5 M cu. ft.	75c. per M cu. ft.
		From 5 M to 10 M cu. ft.	65c. per M cu. ft.
		Over 10 M cu. ft.	50c. per M cu. ft.
	October to April, discount	On bills under $5.00	15 per cent.
		On bills between $5.00 and $10.00	10 per cent.
	May to Sept., discount	On bills under $5.00	10 per cent.
L	Fonthill-Ridgeville Gas Co.	Minimum bill	$1.00
		First 2,000 cu. ft.	$1.12½ per M cu. ft.
		From 2 M cu. ft. to 5 M cu. ft.	$1.02½ per M cu. ft.
		Over 5 M cu. ft.	$1.37½ per M cu. ft.
	Dominion Natural Gas Co.		97½c. per M cu. ft.

TABLE II—NATURAL GAS PRODUCTION BY FIELDS, 1946

County	Field	Quantity
		M cu. ft.
ant	Onondaga	65,188
Elgin	Bayham	13,661
	Malahide	45,437
Essex	Kingsville	22,276
Haldimand	Haldimand	1,897,202
Kent	Chatham and Camden gore	296,757
	Dover	134,814
	Tilbury	2,540,638
	Zone	692,149
Lambton	Dawn and Oil Springs	337,298
Lincoln	Lincoln	74,126
Norfolk	Norfolk	450,316
Oxford	Brownsville	22,999
Welland	Welland	340,639
Wentworth	Wentworth	51,309
Wells in surface drift	Harwich and Howard	6,500
Private wells		60,000
Total produced		7,051,309
Retail value		$4,656,528
		M cu. ft.
Gas distributed other than natural gas:		
Mixed still gas		2,251,254
Coke oven gas		459,490
Imported mixed gas		363,673
Oil gas		173,792
Propane gas		288,522
Total of other gases		3,536,731
Total of all gases distributed		10,588,040

Supplementary Gases

At the foot of Table II will be seen the quantities and various kinds of gases that are used to supplement our supply of natural gas in Ontario.

The mixed still gas is purchased from Imperial Oil Refineries in Sarnia and is "reformed," i. e. diluted from approximately 1,600 B.t.u. per cubic foot to 1,000 B.t.u. per cubic foot. It then is introduced into the pipe lines of the Union Gas Company and is distributed throughout their system. The oil gas enriched with propane gas is manufactured at Windsor and carries the peak loads there. The imported mixed gas is purchased from the Iroquois Gas Company in Buffalo and augments the supply to Fort Erie and Niagara Falls. The coke oven gas is made by the Hamilton By-product Coke Oven Company and mixed with propane and is supplied in lieu of natural gas to the natural gas consumers in Hamilton. The remainder and in fact the greatest percentage of the propane is used at Brantford, where it is reduced to about 1,100 B.t.u. by mixing it with air. All customers of the Dominion Natural Gas Company from Brantford westward to St. Thomas are supplied with propane during the winter months.

Natural Gas Consumption and Rates

In Table III the growth of the natural gas industry in Ontario will be seen, beginning with year 1921. When it is considered that in 1920 a committee of Members of Parliament was appointed to inquire into the state of the natural gas fields of Ontario, which at that time had failed to supply all the demands

that were made upon them, it can be seen by the increase in the number of domestic consumers what an outstanding service has been rendered to the people of Southwestern Ontario by the natural gas companies who supplied them.

TABLE III—DOMESTIC CONSUMPTION OF NATURAL GAS, CAPITAL INVESTED, AND WAGES PAID, 1921-1946

Year	Retail rate, cents per M cu. ft.	No. of pay consumers	Total quantity used	Quantity used per consumer	Gas used by industries	Capital invested in all natural gas operations	No. of men employed	Wages paid
			M cu. ft.	M cu. ft.	M cu. ft.			
1921.	47	58,609	5,937,316	101.3	857,714	$17,328,757	632	$592,606
1922.	47	63,229	6,028,947	95	538,796	17,769,664	692	539,072
1923.	50	62,352	6,210,459	99.6	662,080	25,570,972	603	633,365
1924.	55	61,100	5,933,595	97.1	549,063	24,781,723	727	639,167
1925.	56	62,338	5,300,424	85.6	535,088	26,111,387	692	625,826
1926.	57	63,695	5,595,521	87.8	780,438	30,500,874	860	842,305
1927.	60	66,818	5,210,315	78	542,276	31,987,879	1,123	1,148,339
1928.	60	70,259	5,699,553	71.2	900,946	36,601,828	1,209	1,497,999
1929.	58	80,991	6,336,873	78.2	1,039,778	35,162,736	1,323	1,529,367
1930.	64	84,135	6,332,519	75.2	683,946	36,162,268	1,328	1,545,648
1931.	62	86,050	5,607,744	65.1	1,092,777	42,921,142	1,241	1,383,286
1932.	63	86,631	5,409,154	62.2	1,296,067	45,982,719	893	1,059,643
1933.	63	84,933	5,102,340	60	1,373,481	51,766,592	958	958,336
1934.	62	89,990	5,262,631	58.5	1,503,896	41,934,395	931	1,010,979
1935.	60	118,719	5,553,902	46.8-52	1,608,382	42,975,846	1,273	1,219,520
1936.	60	118,117	6,956,453	59.3	1,812,500	45,197,240	1,336	1,354,611
1937.	60	123,527	7,767,359	62.8	2,174,522	49,059,740	1,501	1,668,188
1938.	60	127,861	7,912,220	61.8	2,131,656	51,189,094	1,439	1,631,677
1939.	60	131,598	8,673,200	65.9	2,503,954	53,300,113	1,633	1,883,252
1940.	60	136,698	9,671,008	70.7	2,792,556	56,938,282	1,736	2,071,031
1941.	60	141,520	8,885,751	62.7	2,320,849	56,389,701	1,738	2,205,723
1942.	65	134,562	8,256,439	61.3	2,235,350	56,929,352	1,485	2,056,051
1943.	65	141,253	7,351,438	52	2,065,556	56,565,582	1,010	1,965,366
1944.	65	142,015	7,384,715	52	1,877,126	.....	1,115	1,835,301
1945.	65	146,186	8,005,381	54.7	1,589,247	.....	1,060	1,297,843
1946.	65	150,947	8,116,731	53.7	1,512,991	.....	1,359	1,797,316
1947	67	150,133	8536,609	56.8	1616,483	——	1,227	1,630,507

Those who promoted the natural gas industry in Ontario had no knowledge of the lifetime of the gas fields and, in order to be assured of the return of their money, sold gas in large volume to industries. They served those customers that were convenient to the main lines and wholesaled gas to neighbouring towns and cities where the people had been served with manufactured gas. This had been quite satisfactory from 1905 on; but in 1917 the volume of sales to industry was in the neighbourhood of ten billion cubic feet and when the gas fields failed to supply the demand of both domestic and industrial consumers, the domestic consumer suffered. The domestic consumer was paying 20 to 25 cents per M cubic feet, and the large industries, who used gas in hundreds of million cubic feet, paid from 12½ to 15 cents per M cubic feet. The domestic consumer demanded that the industries should be cut off but refused to compensate the gas company for loss of revenue by agreeing to an increase in rates. The quarrel continued until 1921, when the present legislation was enacted and the gas industry served the domestic consumer first and the industries were allowed to use any surplus.

On pages 7 and 8 are given the rates charged for natural gas in Ontario.

Tables IV and V record the consumption of gases of all kinds in all municipalities in Ontario, the number of consumers, and the amount of gas used in the industries of the municipality. The rates in each municipality are detailed in the last column or indicated by a letter that refers back to the table of rates.

Table I gives a breakdown of the distribution of all natural gas and supplementary gases used in Ontario. This shows that the pay consumers use 90 per cent. of the gas produced. Five and three-quarters per cent. leaks from the pipe lines between the gas field or point of manufacture and the consumers' meters.

TABLE II—NATURAL GAS PRODUCTION BY FIELDS, 1947

County	Field	Quantity
		M cu. ft.
Brant	Onondaga	73,821
Elgin	Bayham	24,640
	Malahide	43,459
Essex	Kingsville	19,108
Haldimand, Lincoln, and Wentworth	Haldimand	1,970,961
Kent	Chatham and Camden gore	466,162
	Dover	129,184
	Raleigh (Declute)	1,040,760
	Tilbury	1,244,489
	Zone	1,251,338
Lambton	Dawn and Oil Springs	652,303
Norfolk	Norfolk	414,397
Oxford	Brownsville	15,825
Welland	Welland	372,974
Wells in surface drift	Harwich and Howard	6,000
Private wells		60,500
Total produced		7,785,921
Retail value		$5,334,991
		M cu. ft.
Gas distributed other than natural gas:		
Mixed still gas		2,170,785
Coke oven gas		457,660
Imported mixed gas		393,601
Oil gas		208,586
Propane gas		316,863
Imported natural gas (Panhandle)		35,056
Total of other gases		3,582,551
Total of all gases distributed		11,368,472

Table II shows the distribution of the production among the gas fields in Ontario. This table has been published annually since 1921, and an examination of past reports gives the history of the gas fields of Ontario. Annual figures must not be interpreted as the maximum production that each field is capable of in each year. Development of gas fields is affected by many things, such as pipe-line pressures, markets, supply of material, and wholesale price. For instance the Welland field, which has been in production for nearly sixty years and has been declining since 1908, has for the past seven years been increasing in production. The production of this field is sold in Welland county, where the retail price is more than one dollar per thousand cubic feet. The distributors pay 45 cents per M cubic feet to producers, and their market being wholly domestic, i.e. cooking and hot-water heating, they can purchase all the gas that can be produced nearly every month in the year. The market is also in and adjacent to the gas field, and the transmission lines can be operated at a very low pressure. The Haldimand-Norfolk field on the other hand supplies markets in St. Catharines and Hamilton and sends some gas to Brantford. The retail price is from 65 cents to 85 cents per M cubic feet, and so much gas is used for heating purposes that

sales in the summer months are as much as 60 per cent. less than those in the winter months. The most prolific part of this field is the western part, and in order that this gas may be marketed in St. Catharines and Hamilton, Norfolk gas must pass through the Haldimand field. The Norfolk wells have a much higher pressure than the older Haldimand wells, and the transmission lines through the Haldimand field, therefore, carry a relatively high pressure. Against such high pressures, the low pressure wells in the Haldimand field can only be kept producing gas by the aid of compressors. The wholesale price of natural gas in the Haldimand-Norfolk field has steadily increased from 25 cents per M cubic feet before the late war to 35 cents per M cubic feet this year (February, 1948). The effect of higher field prices will no doubt show the same results as in the Welland field. The production in the Haldimand field has been decreasing during the past ten years. Renewed drilling activity could produce an increase, but undrilled areas are limited.

During the past three years the production has increased in Norfolk county, mainly in Townsend township, where a new field was discovered three years ago and is now apparently fully developed. Norfolk county has a great area undrilled and shows much promise of future production, especially in Woodhouse, Charlotteville, and North and South Walsingham townships. Houghton township has seen little drilling but has three small areas in production. The gas pressure in the western part of Norfolk county is very high, and the wells continue in production for many years. Norfolk county may very easily be one of Ontario's principal reserves of gas.

The failure of the Brownsville field to produce gas up to expectation has dealt exploratory work in Oxford county a severe blow. The quantity of gas in the Brownsville field was estimated in its early days at a maximum of 25,000,000 M cubic feet and a minimum of 7,500,000 M cubic feet. The actual production was just under 3,000,000 M cubic feet. A well that is almost depleted of gas will still show a rock pressure of 300 pounds per square inch. This is the pressure of bottom water that has displaced the gas in the lower horizons. The gas produced at present is confined to thin upper porous horizons, and only by most carefully plugging off this lower water can any gas be produced from the upper porous horizons. The highly skilled operators in this field continue to produce enough gas to supply the villages of Brownsville, Norwich, and Otterville. The future of the supply to these villages is totally in their hands, for the adjacent Norfolk field is now taxed beyond its capacity to produce. Much exploratory drilling has been done in the southern part of Oxford county, but the results have been disappointing. One producing well was found at Rock Mills, but after the drilling of a number of dry wells, none have been drilled in the area for the past three years.

Elgin county has also had a disappointing gas field. The story of the Malahide field is similar to that of the Brownsville field. All wells but a few in the extreme west end have now been abandoned. These have water problems that place a limit on their life. The west end of Elgin county is an area of promise, but as there is only one pipe line with a few tributaries in the county, no exploratory work has been done for many years except in Aldborough township near the Thames river, where exploratory work with a diamond-drill has found indications of a gas field.

Kent county has been a most prolific producer of gas for many years and still holds the main reserves of gas in the Province. The Tilbury field and the adjacent waters of Lake Erie still hold billions of cubic feet of natural gas. West Petroleum, Limited, pioneers of drilling the deeper waters of Lake Erie, is ex-

TABLE I—SUMMARY OF NATURAL GAS DISTRIBUTION, 1944–1948

	1944	1945	1946	1947	1948
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Total distribution to customers	[1]9,355,852	[2]9,694,776	[3]9,723,042	[4]10,252,370	[5]9,422,845
Used by companies for all purposes	282,330	303,321	289,653	334,142	306,085
Used by private well-owners	29,253	69,709	66,500	66,500	66,500
Leakage in transmission lines	272,006	303,728	240,378	251,985	162,541
Leakage in distribution plants	253,650	244,787	246,482	373,457	359,661
Leakage in rural lines	21,739	27,229	21,995	24,384	35,162
Used by manufacturing gas plant (Hamilton)	.....	.....	.....	65,625	.....
Natural and still gas to storage	.....	.....	.....	.....	1,162,932
Total amount distributed	10,224,830	10,643,640	10,588,040	11,368,472	11,515,726

[1]3,142,321 M cu. ft. of manufactured and other gas is included in these figures.
[2]3,443,670 M cu. ft. of manufactured and other gas is included in these figures.
[3]3,536,731 M cu. ft. of manufactured and other gas is included in these figures.
[4]2,582,551 M cu. ft. of manufactured and other gas is included in these figures.
[5]925,297 M cu. ft. of gases other than natural gas included in these figures.

Table II shows the distribution of natural gas produced in the different gas fields in the province and the supplementary gases used to augment the supply of natural gas. These supplementary gases are used mostly between the months of December and May. The remainder of the year there is sufficient natural gas to supply the demand.

TABLE II—NATURAL GAS PRODUCTION BY FIELDS, 1948

County	Field	Quantity
		M cu. ft.
[redacted]	Onondaga	51,691
[redacted]n	Bayham	48,526
	Malahide	10,866
[redacted]sex	Kingsville	18,357
[redacted]ldimand, Lincoln, and Wentworth	Haldimand	1,772,101
	Chatham and Camden gore	636,226
	Dover	134,780
Kent	Raleigh (Declute)	528,384
	Tilbury	1,682,281
	Zone	1,488,010
	Dawn and Oil Springs	350,998
[redacted]ton	Moore (Kimball)	339,838
	Sombra (Becher)	550,597
Norfolk	Norfolk	413,970
Oxford	Brownsville	25,816
Welland	Welland	471,488
Wells in surface drift	Harwich and Howard	6,500
Private wells	.....	60,000
[redacted]tal produced		8,590,429
Retail value		$6,958,247
		M cu. ft.
Gas distributed other than natural gas:		
Mixed still gas		2,123,857
Imported mixed gas from Buffalo		353,108
Oil gas		141,556
Propane gas		277,766
[redacted]Imported natural gas (Panhandle) from Detroit		29,010
Total of other gases		2,925,297
Total of all gases distributed		11,515,726

The Wartime Prices and Trade Board would not allow any price increase until a business or operation showed a loss, and then advances in prices or rates were allowed that were only sufficient to maintain the business on this narrow line. Retail rates for natural gas changed little during the war; any advance was laid on the doorstep of war-time industry. The Dominion Natural Gas Company received permission to charge an additional 5 cents per M cubic feet to pay for a propane plant that they had to build at Brantford. This small surcharge was not sufficient, and by the end of the year 1947 this company was $500,000 in debt. The Union Gas Company was allowed to put a surcharge on all industrial gas in order to avoid a loss. When war-time industries were closed down this company faced a deficit. After much negotiation new rates were put into effect. The average rate of 67 cents in 1947 has risen to an average of 81 cents in 1948. In 1949, this average may again show an increase.

The natural gas industry is an industry of wasting assets; in order to avoid the risk of premature failure to supply the public, a reserve equal to twenty years' supply should be held in drilled and undrilled acreage. There is a great element of uncertainty about the productivity of undrilled reserves or acreage, and where this acreage proves to be barren or limited in its production the company must engage immediately in exploratory drilling. The major gas companies, even if funds for exploratory drilling do not exist or do not meet requirements, can always raise the necessary funds, but the small producing companies or syndicates are not in such a happy position. Within a year or two after the close of the war nearly all gas companies found that both reserves of gas and funds had diminished and that the cost of all materials required in the industry had risen beyond all expectations. The major companies found the money to continue exploratory work, but the small syndicates had little assets on which to borrow. Some of them have gone out of business either by selling to other companies or by liquidation. In many cases where the finances of the company or syndicate were involved with claims or lawsuits, their wells have not been operated and are full of water. These wells have become a problem to the inspector, who has no cause to plug a well unless a complaint is laid that damage is being done to adjacent producing wells. The casing in these idle wells could be put to good use in exploratory drilling if the ownership could be determined.

New syndicates entering the natural gas industry have about equalled the number who have failed, leaving the number of operating syndicates much the same for the past ten years. Many syndicates, however, have moved their operations to fields where higher prices are being paid for gas produced. In 1938 there were 117 syndicates producing gas in the Haldimand field and 27 in the Welland field. In 1948 there were 97 in the Haldimand field and 53 in the Welland field. Prior to 1948 the field price to producing syndicates was from 25 to 30 cents in Haldimand county and 45 cents in Welland county. The field price in Haldimand is now about 10 cents higher, whereas the field price in Welland remains stationary.

It is probable that for the first time in the life of Ontario natural gas fields the Kent, Lambton, and Welland fields were kept at or near full production throughout the twelve months of the year. The Union Gas Company, which obtains a great percentage of the gas supply from the Imperial Oil Company's refinery at Sarnia, stores the re-formed still gas from the refinery underground in the Dawn gas field (now depleted). In the fall of 1947, this refinery had not produced much still gas and consequently the Union Gas Company had little gas in storage and what they had in storage had been withdrawn by the middle of January, 1948. Then followed some months of outcry against the shortage of gas and appeals to every source for propane, butane, fuel oil, anything in fact that

[illegible]d to make up the demand. The excess of demand over supply comes [illegible]ng the heating season, November until May. The natural gas fields give [illegible]sufficient supply during the remainder of the year, and in fact over the past [illegible] years natural gas was withdrawn from "flush" fields in the summer months [illegible]stored underground to be withdrawn in the winter to meet the heating demand.

TABLE II—NATURAL GAS PRODUCTION BY FIELDS, 1949

County	Field	Quantity
		M cu. ft.
[illegible]sex	Kingsville	1,913,376
	Tilbury	
	Dover	100,431
Kent	Declute	355,370
	Chatham and Camden gore	435,474
	Zone	681,940
	Dawn	112,863
[illegible]mbton	Kimball	1,402,106
	Becher	283,955
[illegible]n	Bayham and Malahide	23,892
[illegible]mand		
[illegible]n	Haldimand	1,684,216
Wentworth		
Brant	Brant	49,615
Norfolk	Norfolk	372,165
Oxford	Brownsville	66,849
Welland	Welland	455,461
Wells in surface drift	Harwich and Howard	6,500
[illegible]ivate wells		80,000
Total produced		8,024,213
[illegible]Retail value		$8,826,634
		M cu. ft.
Gas distributed other than natural gas produced in Ontario:		
Mixed still gas		2,126,575
Imported mixed gas from Buffalo		283,740
Imported natural gas from Detroit		998,300
Oil gas		390,671
Propane gas		92,874
Total of other gases		3,892,160
Total of all gases distributed		11,916,373

This decline in production is not associated with any failure in the production of the wells over normal decline; and the normal decline is more than compensated for by new discoveries in Lambton county, where the Imperial Oil Company in search for oil has discovered two major gas fields. One well brought in during [illegible]ember, 1949, had an open flow of 45,000 M cubic feet and a rock pressure of [illegible]pounds per square inch. It was not found necessary to draw on this well in 1949 because other sources of supply were found to be sufficient. These new wells in Lambton county have brought the new open flow to 71,094 M cubic feet, which is greater than any year since 1940. The search for suitable depleted gas fields in which to store gas continues, and the use of present known fields is increasing. The gas stored during summer months in 1949 was 1,748,065 [illegible]cubic feet, an increase of 585,133 M cubic feet over 1948.

It will be noted that the number of pay consumers has increased by 2,864, making the total of pay consumers 140,174. The demand for gas is so great and its saving of the household budget so apparent that in spite of the desire

of the companies to keep the number of consumers in line with the diminishing supply of natural gas, new consumers demand that they be supplied with natural gas and by various and devious means manage to have these demands met. These consumers have been served with gas by adding more and more supplemental oil gas and liquid petroleum gases, which are much more expensive than natural gas. As a consequence the retail price of gas has advanced from an average of 81 cents to $1.10 per M cubic feet.

The total number of wells drilled in 1949 was 292, which is a decrease of 20 from that of 1948. The total number of producing wells drilled was 172, which is a decrease of 9 over 1948, but these producing wells gave a total flow of 71,094 M cubic feet, an increase over 1948 of 48,956 M cubic feet. At the end of 1949 the total number of active gas wells in Ontario was 3,812.

The number of men employed in the natural gas industry in 1949 was 1,370 and the wages paid them amounted to $2,243,778. These figures include men employed by drilling contractors with wages amounting to $97,131.

The graph on page 2 shows the growth of the industry from the years 1899 to 1949.

The gas fields in Welland and Haldimand counties have now been drawn on for sixty years and in a large area the rock pressure has dropped to, and in some parts below, pipe line pressure. In the Tilbury field, the area adjoining Lake Erie in Kent county, the rock pressure of the gas has fallen to pipe line pressure.

In the Welland field the Provincial Gas Company, Limited, has met this problem by increasing the diameter or number of pipe lines. Their markets are near by, and they have found this to be most economical and practical. In the Haldimand field, where markets supplied by the Dominion Natural Gas Company are at a much greater distance from the fields, it has been found necessary to install compressors on the pipe lines which radiate from the gas fields toward the markets. As these pipe lines are all interconnected, this arrangement makes for very flexible service. In the years prior to 1949, the compressor at Caledonia delivered gas through Hamilton to Brantford and westward where the supply of natural gas from the Tilbury field was insufficient. In the winter of 1949-50, however, when the oil gas plant at Port Stanley[1] and the propane plant at Brantford were in full supply and operation, peak demands in parts of Haldimand county were met by reversing the flow through these compressors and building up pressure by adding the mixture of natural gas, oil, and propane gas from the Brantford–St. Thomas pipe line. Fortunately this procedure was only necessary on one or two occasions but it is evident that the plans that have been carried out by the Dominion Natural Gas Company have made the fuel supply to the customers secure against shortage.

In the district west from London, which is principally supplied by the Union Gas Company, the large compressor plants at Port Alma, at the Dawn gas field, and at Sarnia make for a most flexible gas service. The Sarnia compressor delivers re-formed still gas into the Sarnia-Dawn-Chatham line, and the Dawn compressor takes all surplus gas from this line and pumps it underground into the old depleted Dawn gas field. The Dawn compressor station can draw gas or deliver gas to any pipe line or to underground storage. The compressor station at Port Alma delivers gas from the Tilbury field to Windsor, but when Texas gas is available for import during the summer months at Windsor, the Port Alma station delivers this gas, plus gas from the Tilbury field, to the Sarnia line, where it is picked up by the Dawn compressors and stored underground.

[1]Ont. Dept. Mines, Vol. LVIII, 1949, pt. 3, pp. 17-20.

is the gravimeter. It cannot be determined with certainty which gas field is in a reef and which is in a porous dolomite or limestone, but it is believed that six or seven pools in Lambton and possibly one or more in Elgin county are in reefs. Certainly the 45-million-cubic-foot well, drilled in September, 1949, by the Imperial Oil, Limited, in Moore township, was in one of these reefs. Needless to say most reefs are very porous, and have always been found in association with faults.

The availability of a small supply of natural gas from the United States has been of great help to the old gas fields in Welland and Kent counties, particularly the Tilbury field. These fields are drawn on at a minimum rate, especially in summer months, and are given a "rest" so that the underground gas pressure has time to equalize. This helps keep the underground water in control and, for a time at least, increase the delivery rate of gas from the wells.

Production and Distribution

Table I shows the production of purely natural gas from the different fields in Ontario. At the bottom is shown the quantities of various gases that are added to natural gas to make up the quantity demanded by consumers. Most fields show a decline in production from that of 1949. With an increase of about 2 billion cubic feet in the imports of natural gas from the United States and the new Kimball discoveries in Moore township, Lambton county, where 810,799 M

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1950

County	Field	Quantity
		M cu. ft.
Essex	Kingsville	1,761,648
	Tilbury	
	Dover	139,121
Kent	Declute	231,950
	Chatham and Camden gore	262,913
	Zone	439,299
	Dawn	4,959
Lambton	Kimball	2,212,905
	Becher	157,756
Elgin	Bayham and Malahide	64,184
Haldimand		
Lincoln	Haldimand	1,584,476
Wentworth		
Brant	Brant	46,849
Norfolk	Norfolk	384,580
Oxford	Brownsville	43,542
Welland	Welland	548,806
Wells in surface drift	Harwich and Howard	6,500
Private wells		120,000
Total produced		8,009,488
Retail value		$8,890,532
		M cu. ft.
Gas distributed, other than natural gas produced in Ontario:		
Mixed still gas		1,736,378
Imported mixed gas from U.S.A.		3,236,669
Oil gas		333,547
Propane gas		92,663
Total of other gases		5,399,257
Total of all gases distributed		13,408,745

NATURAL GAS IN 1950

By R. B. Harkness

General

The total quantity of natural gas produced in Ontario in 1950 was approximately the same as in 1949. The actual quantities were: 1949, 8,024,213 M cubic feet; 1950, 8,009,488 M cubic feet, a decline of 14,725 M cubic feet. The total consumption of natural gas and supplementary gases from all sources showed a substantial increase in 1950 of 1,492,372 M cubic feet. Consumption in 1949 was 11,916,373 M cubic feet and in 1950, 13,408,745 M. This increase is reflected in the average consumption per consumer, which has increased from 52.6 M cubic feet in 1949 to 59.6 M cubic feet in 1950 and this, when compared with earlier years, shows an increase in the gas used for domestic heating purposes. The number of consumers increased 3,264 over 1949. There were 143,338 pay-consumers at the end of 1950.

The amount of supplementary gas—natural gas, oil gas, and propane—used in 1949 was 3,892,160 M cubic feet and in 1950, 5,399,257 M cubic feet, an increase of 1,507,097 M cubic feet. This increase was principally in natural gas from Texas, which was imported during the summer months through Detroit, and stored in the Dawn gas field, now depleted of its original natural gas. Another source of mixed natural gas, with a small quantity of coke oven gas, is Buffalo. With natural gas from the United States available in increasing quantities, it has been possible to decrease the withdrawals from the many small gas pools scattered throughout western Ontario. Confirmation of these figures may be found in Tables I and II. The graph on the opposite page also shows the annual statistics for a period of 60 years.

Exploratory and development drilling was less successful in 1950 than in 1949. A total of 279 wells were drilled, as against 292 the previous year. In 1950, 176 producers had an open flow of 33,724 M cubic feet, as compared with 71,094 M cubic feet in 1949. This great difference in open flow, however, was because of one exceptionally large well, which measured 45,000 M cubic feet. It was given special mention in last year's report. When this well is excluded the drilling results of the two years do not differ materially.

The geologist or "wildcatter" has little to guide him in searching for new gas fields in Welland, Haldimand, Norfolk, and the east half of Elgin county. The gas horizons, in the Red and White Medina, are in sandstone and whereas gas in the Clinton is found in dolomite in Welland and Haldimand, there is a sandy phase at the base of the Clinton to the west of these counties. These three horizons are "blanket" formations, that is, they lie evenly one over the other. In Kent, Essex, Lambton, Middlesex, and western Elgin county, the producing horizons are found in the Salina and Guelph, and there are many disconformities, particularly in the Salina formation; salt beds further complicate the problem facing the geologist. In the last few years the gas pools found in Lambton county were in "coral" reefs with their bases in the Guelph and their summit projecting as much as 200 feet up into the overlying Salina. An intensive search is being made for these reefs by geophysicists. The instrument most used

but just as many are in porous areas adjacent to faults. These are from 1,600 feet to 1,800 feet deep, and the original rock pressure was about 800 pounds. The Zone township field, which first produced in 1943, reached its peak in 1948 when it produced 1,488,010 M cubic feet. Its production in 1951 of 226,453 M cubic feet could be increased if necessary. The fields in Moore township are mainly in reefs and are very large producers. There are 22 producing wells and in 1951 their production was 2,396 M cubic feet, over 100 M cubic feet per well. When compared with greater Haldimand field, where 1,940 wells produced 867 M cubic feet per well, the production of these newer fields appears in a very creditable light.

TABLE I—NATURAL GAS PRODUCTION BY FIELDS, 1951

County	Field	Quantity
		M. cu. ft.
Essex	Kingsville	1,986,211
	Tilbury	
Kent	Dover	180,231
	Electric	44,806
	Declute	268,281
	Chatham and Camden gore	226,453
	Zone	261,070
	Dawn	942
Lambton	Moore (Kimball-Payne)	2,396,834
	Becher	36,859
Middlesex and Elgin	Mosald	184,810
Elgin	Bayham and Malahide	25,583
Haldimand		
Lincoln	Haldimand	1,682,314
Wentworth		
Brant	Brant	22,047
Norfolk	Norfolk	400,383
Oxford	Brownsville	50,119
Welland	Welland	549,399
Wells in surface drift	Harwich and Howard	6,500
Private wells		120,000
Total produced		8,442,842
Retail value		$9,962,553
		M. cu. ft.
Gas distributed other than natural gas produced in Ontario:		
Mixed still gas		$1,616,421
Imported mixed gas		.....
Imported mixed gas and natural gas from U.S.A.		3,682,039
Oil gas		94,773
Propane gas		23,766
Total of other gases		5,416,999
Total of all gases distributed		13,859,841

Table II gives information of each gas field in Ontario by townships. The table can be found in each report since the year 1921. Referring to the year 1921, the total number of producing wells at the end of that year was 1,915, whereas in 1951 the total was 3,951, an increase of 2,036 wells. In 1921, dry wells drilled numbered 21 and producing wells 115, with an open flow of 18,716 M cubic feet. In 1951 dry holes drilled numbered 113 and producing wells 146, with an open flow of 41,937 M cubic feet. If five wells in Moore township with a phenomenal open flow of 25,985 M cubic feet were excluded, the average open flow in 1921 would be 162.7 M cubic feet and in 1951, 113.1 M cubic feet. The percentage of dry holes to total wells in 1921 was 15.4 percent and in 1951, 43.7 percent.

TABLE II—GAS WELLS AND THEIR PRODUCTION, 1951

County and township	Producing	Abandoned	Wells drilled: Producing	Wells drilled: Dry	Wells drilled: Open flow	Production	Rock pressure
					M cu. ft.	M cu. ft.	lb. per sq. in.
ESSEX:							
Gosfield South	22	5					150
Malden	5			2		11,866	395
Mersea	3						300
Tilbury West	3						445
KENT:							
Camden gore	17			1		69,430	530
Chatham	24					157,023	415
Chatham gore	2		1	4	750		745
Dover	12	2				225,037	150
Orford				1			
Raleigh (Declute)	32	6				268,281	250
Raleigh	19						218
Romney	125	3				1,974,345	147
Tilbury East	106						140
Zone	49					261,070	400
LAMBTON:							
Dawn	24	3	1	7	590	942	340
Enniskillen	3	1					225
Moore	22		5	16	25,985	2,396,834	937
Plympton				1			
Sombra	13		4	17	7,485	36,859	795
MIDDLESEX:							
Mosa	9						690
ELGIN:						184,810	
Aldborough	15						650
Dunwich	6						715
Bayham	32						210
Malahide	16					25,583	320
Yarmouth	5						320
Bayham (Brownsville)	5						335
OXFORD:						50,119	
Dereham (Brownsville)	6	4		1			340
South Norwich	6		4		184		520
NORFOLK:							
Charlotteville	19			3			247
Houghton	7						240
Middleton	37		2	1	125		204
North Walsingham	37		5	5	655	400,383	315
South Walsingham	24		2	2	159		308
Townsend	61	1		1			220
Windham	32		6	3	610		233
Woodhouse	144	3	9	14	934		195
BRANT:							
Brantford		2					...
Onondaga	7	4				22,047	55
Tuscarora	25	2		2			80

of just over 10 percent; another large well has increased the potential of this field, and it is now the largest single gas field in Ontario, covering 1,900 acres. Slight variations in the production of any one field, with the exception of the Haldimand field, are now of little significance. With present reserves in Kent and Lambton counties, any of the older fields could be closed in the summer months without affecting the service to consumers or, by operating the present compressor capacity, the production of a field might be abnormally increased. In order to gauge the condition of any field in Ontario, it is better to examine the number of wells and the rock pressures given in Table II.

Table II gives details of gas wells and their production in Ontario. This table has been published since 1921, and an examination of former annual reports will give the story of their growth or decline.

Lambton county again has the wells with the greatest open flow. A study of the table shows that the average new well in Kent county had an open flow of 560 M cubic feet; Lambton county, 8,984 M cubic feet; Elgin county, 341 M cubic feet; Oxford county, 32 M cubic feet; Norfolk county, 103 M cubic feet; Haldimand county, 32 M cubic feet; and Welland county, 49 M cubic feet. The total open flow of new wells was 92,727 M cubic feet. This is 50,785 M cubic feet more than in 1951.

A total of 287 wells was drilled in 1952, or 24 more than in 1951. Of these, 122 were dry, and 165 were producing wells. In 1951, 146 dry holes and 117 producing wells were drilled. The total footage drilled in 1952 was 341,099; for dry holes, 177,684, and for producing wells, 163,415.

A new column, "Idle," appears in this table. Idle wells have been a matter of concern for many years, and the question has been discussed in the report for 1950.[1] Since then an effort has been made to report idle wells, and Table II shows the number idle at the end of the year. This figure differs for every month of the year as there are wells idle, from time to time, in every field.

TABLE III—SUMMARY OF GAS DISTRIBUTION, 1948–52

	1948	1949	1950	1951	1952
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.
Total distribution to customers	9,422,845	9,025,107	10,460,830	11,206,441	11,682,773
Used by companies for all purposes	306,085	403,055	457,912	603,300	477,253
Used by private well owners	66,560	86,500	126,500	126,500	126,500
Leakage in transmission lines	162,541	456,048	515,353	527,877	207,733
Leakage in distribution plants	359,661	364,219	314,242	245,503	183,970
Leakage in rural lines	35,162	33,379	34,348	35,949	36,525
Used in gas-manufacturing plant (Hamilton)	.....	.....	.....	.....	64,816
Natural and still gas to storage	1,162,932	1,748,065	1,499,560	1,114,271	1,748,624
Total amount distributed	11,515,726	11,916,373	13,408,745	13,859,841	14,528,194
Amount other than natural gas produced in Ontario included in totals (see Table I)	2,925,297	3,892,160	5,399,257	5,416,499	6,226,004

Distribution and Rates

Distribution continues to increase annually. The total for 1952, 14,528,194 M cubic feet, shown in Table III, includes 6,226,004 M cubic feet of supplementary gases. Details of these gases are given in Table I.

[1] R. B. Harkness, *Natural Gas in 1950*, Ont. Dept. Mines, Vol. LX, 1951, pt. 3, p. 16.

Table IV gives the rates charged for gas delivered in Ontario. A revision made in November, 1951, has simplified the hitherto complicated system of rates charged by the Dominion Natural Gas Company, Limited.

TABLE IV—NATURAL GAS RATES, 1952

Classification	Company	Amount of gas used	Net rate
A[1]	Dominion Natural Gas	First 1,000 cu. ft. or less Over 1,000 cu. ft.	$1.60 $1.09
B	Central Pipe Line	Minimum bill and meter rental First 1,000 cu. ft. Second 1,000 cu. ft. Next 2,000 cu. ft. Next 3,000 cu. ft. Over 7,000 cu. ft.	$2.00 $2.00 per M cu. ft. $1.10 per M cu. ft. $1.25 per M cu. ft. $1.75 per M cu. ft. $2.00 per M cu. ft.
C	Norotto Gas	First 200 cu. ft. Over 200 cu. ft. Minimum bill	40c. per C cu. ft. $1.00 per M cu. ft. $1.50
D	Provincial Gas (where imported mixed gas is used) (summer consumers)	Minimum bill 1,000 cu. ft. and over Minimum bill 1,000 cu. ft. and over	$1.00 $1.00 per M cu. ft. Same as above plus pro rata share of duty $1.30 $1.30 per M cu. ft.
E	Pure Gas and Oil	First 1,000 cu. ft. Over 1,000 cu. ft.	$1.50 $1.06
F	Union Gas	First 200 cu. ft. Next 1,800 cu. ft. Next 8,000 cu. ft. Over 10,000 cu. ft.	50c. per C cu. ft. 95c. per M cu. ft. $1.05 per M cu. ft. $1.00 per M cu. ft.
G	United Development	First 1,000 cu. ft. 1,000–6,000 cu. ft. Over 6,000 cu. ft. effective Dec. 1, 1952	$2.35 $1.50 $1.35

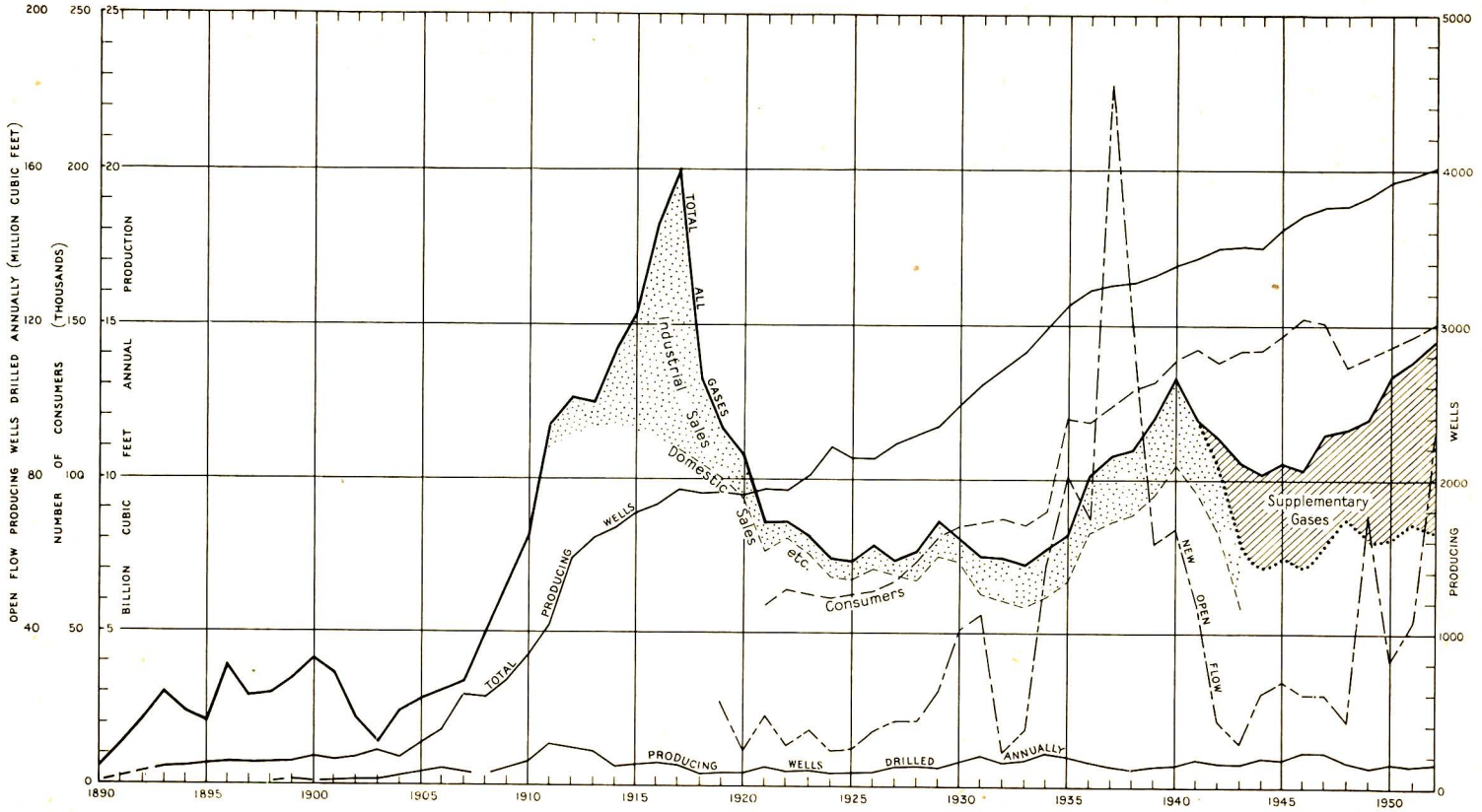
[1]This classification is liable to a surcharge as directed by The Natural Gas Referee in an order dated November 29, 1951, as follows:

(a) for all gas sold and supplied by the Applicant [the Dominion Natural Gas Co.] in the Counties aforesaid . . . after the 1st day of December 1951 a supplemental rate shall be fixed in addition to the uniform standard rates . . . and that such supplemental rate shall be based on the actual expenses incurred exclusively in manufacturing oil-gas and other liquefied petroleum gases and/or in purchasing other gas to supplement the Applicant's supply of natural gas at a price in excess of the highest price paid to any producer of natural gas in Ontario who sells substantially his whole output thereof to the Applicant on an annual basis, which supplemental rate shall be determined and adjusted from year to year in accordance with the following requirements and shall apply per 1000 cubic feet of gas sold by the Applicant:

(i) prior to the 1st day of October in each year the Applicant shall estimate the total expenses to be incurred in manufacturing oil-gas and/or acquiring supplemental gases for the next ensuing twelve (12) months; from such estimate, the Applicant shall deduct the sum of $33,000, established as the stand-by expense of the plants of the Applicant available for the production of manufactured gas (oil-gas, propane and other liquefied petroleum gases); the supplemental rate shall be determined by dividing the balance of such estimate by the estimated total sales of gas (in thousands of cubic feet) to be made by the Applicant during the next ensuing twelve (12) months;

(ii) the estimated supplemental rate fixed from time to time in accordance with the next foregoing clause (a) shall be operative for the appropriate period of twelve (12) months after the 1st day of October, 1948;

(iii) prior to the 1st day of October in each year after the 1st of October 1949 . . . the Applicant shall determine from its books and records the actual expenses incurred exclusively in manufacturing and acquiring supplemental gas for the period of twelve (12) months next preceding



The Development of the Natural Gas Industry in Ontario, 1890–1952.

drilled two wells to the salt beds at approximately 2,000 feet. The Sun Oil Company, Limited, also used the same drilling rig to drill two wells to the salt beds. These wells will be used by the Sun Oil company to introduce liquid petroleum gases into underground storage. After the wells were drilled, fresh water was poured underground. This dissolved the salt, which was pumped out as brine, and left a cavity that will be filled with liquid petroleum gases, propane or butane, under pressure.

Gravimetric exploration was continued in 1952 by Imperial Oil, Limited, and the Union Gas company. New fields were found in Dawn, Enniskillen, and Moore townships, Lambton county, and a well in Harwich township, Kent

TABLE II—GAS WELLS AND THEIR PRODUCTION, 1952

County and township	Wells as at December 31, 1952			New wells drilled 1952			Production	Rock pressure
	Producing	Idle	Abandoned	Dry	Producers	Open flow		
						M cu. ft.	M cu ft.	lb. per sq. in.
ESSEX:								
Gosfield South	16	3	3	1			15,183	165
Malden		5		1				395
Mersea	3						2,000	285
Tilbury West		3						445
KENT:								
Camden gore	15	2					2,377	586
Chatham	21		2				85,200	422
Chatham gore		2		1				745
Dover	12						122,269	137
Harwich		1		4	1	450		768
Raleigh (Declute)	28	3	7				289,395	235
Raleigh	17	1	1					253
Romney	119	5	3		2	1,230	1,623,281	127
Tilbury East	105	1						141
Zone	49						115,100	414
LAMBTON:								
Bosanquet				1				
Brooke				1				
Dawn	12	12	1	2	1	6,014	744	399
Enniskillen	1		3	10	1	353		500
Euphemia				1				
Moore	18	8		5	4	51,475	2,651,432	774
Plympton				3				
Sarnia				3				
Sombra	2	14		14	3	22,010	44,707	775
Warwick				2				
MIDDLESEX:								
Mosa	10	2			3	830		738
ELGIN:							298,246	
Aldborough	20	5		2	10	2,902		695
Dunwich	1	5						704
Bayham	26	6						165
Malahide	3	12	2		1	17	20,429	320
Yarmouth		5						320
Bayham (Brownsville)	5							335
OXFORD:							21,661	
Dereham (Brownsville)	6							340
South Norwich	7		1	1	2	75	34,554	400
West Oxford				3				

TABLE II—GAS WELLS AND THEIR PRODUCTION, 1952—*Continued*

County and township	Wells as at December 31, 1952			New wells drilled 1952			Production	Rock pressure
	Producing	Idle	Abandoned	Dry	Producers	Open flow		
						M cu. ft.	M cu ft.	lb. per sq. in.
NORFOLK:								
Charlotteville	25	.....	.....	3	6	335		217
Houghton	7	.....	.....	.....	.....	.....		350
Middleton	41	.....	.....	2	4	279		200
North Walsingham	45	.....	.....	5	8	919	546,282	306
South Walsingham	24	.....	.....	.....	.....	.....		289
Townsend	57	2	2	.....	.....	.....		202
Windham	39	1	.....	3	8	1,133		263
Woodhouse	135	5	6	5	2	317		194
BRANT:								
Onondaga	3	4	.....	.....	.....	.....	21,519	55
Tuscarora	22	.....	3	.....	.....	.....		106
WENTWORTH:								
Binbrook	28	1	4	.....	4	57		52
Glanford	8	.....	.....	.....	.....	.....		36
HALDIMAND:								
Canborough	139	.....	12	1	3	38		86
Dunn	180	1	1	5	16	844		170
Moulton	125	1	9	5	13	352		143
North Cayuga	204	3	13	.....	4	99		129
Oneida	121	.....	7	4	8	335		90
Rainham	232	13	7	.....	3	58	1,594,783	127
Seneca	102	4	5	.....	.....	.....		61
Sherbrooke	24	.....	.....	1	2	105		163
South Cayuga	120	1	2	2	.....	.....		155
Walpole	495	8	7	4	6	177		160
LINCOLN:								
Caistor	102	.....	2	1	5	105		77
Gainsborough	6	1	1	.....	.....	.....		62
Louth	.....	.....	.....	1	.....	.....		.....
WELLAND:								
Bertie	238	6	14	6	8	142		100
Crowland	50	.....	2	3	4	35		25
Humberstone	119	24	1	4	21	1,874		60
Pelham	2	.....	.....	4	2	46	686,528	153
Stamford	5	.....	.....	.....	.....	.....		45
Thorold	29	.....	2	2	1	3		110
Wainfleet	35	4	1	4	3	44		58
Willoughby	86	.....	2	2	6	69		70
SURFACE WELLS: Harwich and Howard	55	.....	.....	.....	.....	.....	6,500	.....
PRIVATE WELLS	447	.....	.....	.....	.....	.....	120,000	.....
Total	3,846	174	126	122	165	92,722	8,302,190	.....

The columns "Acres under lease" and "Rentals paid," formerly included in this table have been omitted. These figures are not available by townships, and it is impossible to obtain an accurate break-down. The totals for the province are:

Acres under lease	931,765
Rentals paid	$577,097

county, may indicate a gas pool. One well in lot 18, concession VII, of Moore township is as large as the well brought in, in lot 21, concession VII, Moore township, in 1949. Development work continued in Lambton and adjacent counties. The Sun Oil company has entered the Province, and an extensive leasing campaign is in progress. With these large companies in the field, the oil and gas resources of Ontario should be throughly tested.

Changes and Improvements

Inspector Brittain reports that the Union Gas Company of Canada, Limited, has made many changes and extensions to its system to insure efficient service to customers.

As well as the changes already mentioned, this company has laid field lines in the Wardsville pool and connected it to the London line. Fifty-three miles of double and triple sections of the Port Alma–Windsor line, now very old, were replaced by 40 miles of single line of 8-inch and 10-inch diameter. In addition to this, the Union Gas company laid 1⅕ miles of 4-inch, 2 miles of 3-inch, and ½ mile of 2-inch pipe in the gas fields, and 2 miles of 4-inch, 2¼ miles of 3-inch, and 6¼ miles of 2-inch pipe in low-pressure distribution plants. Major extensions were made in low-pressure distributing plants. In Windsor, 9 miles, and in Chatham, 1¾ miles, of all sizes of pipe were laid.

Considerable extensions were made in low-pressure distributing plants by the Union Gas company; 9 miles of pipe were laid in Windsor, 7 miles in Sarnia, and 1¾ miles in Chatham of all sizes of pipe. Other replacements were, 1⅕ miles of 4-inch, 2 miles of 3-inch, and ½ mile of 2-inch pipe in the gas fields. In distributing plants, 2 miles of 4-inch, 2¼ miles of 3-inch, and 6¼ miles of 2-inch pipe were laid.

The Western Ashley Minerals, Limited, have several producing wells in the Wardsville field. The production from these wells has been contracted for by the Dominion Natural Gas Company, Limited, and the Western Ashley company has laid 6½ miles of 6-inch pipe to connect these wells to the Dominion company's transmission line at Rodney.

Inspector G. H. Smith reports also that The Provincial Gas Company, Limited, has replaced 8,200 feet of 8-inch pipe with the same length of 10-inch pipe to the west of the Peace Bridge to facilitate the transmission of natural gas from Buffalo to the storage pool in Humberstone township and, in the winter months, in the opposite direction to Fort Erie and Niagara Falls. A 150-horsepower compressor was installed at the storage pool and greatly increased the storage pressure; two 75-horsepower compressors were placed at the western outskirts of Fort Erie to assist deliveries.

Production

Table I gives the production of natural gas by fields and the amounts of supplementary and imported gases used to make up the deficiency of natural gas in Ontario. The increased supply of imported natural gas has given operators an opportunity to shut in wells that have been in continuous operation for many years and to make repairs hitherto difficult or impossible when the wells were being operated.

Of the old gas fields, only Norfolk and Welland counties show an increase in production. This is because of increased drilling. The Welland field has not been enlarged, but new wells of small capacity are being drilled in areas that are known to have a thinner "pay." The Norfolk field is gradually expanding to the southwest into Walsingham township. The Moore field shows an increase in production

necessary to secure cores. It seems unlikely that rotary drilling will ever replace cable-tool drilling for exploratory work or in drilling in non-reef-structure gas fields where the flow of gas does not lift the cable tools. In Moore township six wells were drilled in "reef fields" with a rotary rig, and two wells were deepened. In Warwick, one well was completed and a second deepened through a "reef field" with a rotary drill.

The gravity meter continues to be used by the major companies for locating reefs. A number of reefs were located, but only two contained oil or gas. One in Harwich was a gas reef and one in Warwick was classified as "oil" although it had a very large flow of gas. The remainder were either totally dry or else filled with water. Mr. Brittain remarks on this.

The larger operators have confidence in gravimetric surveys; their operations range from Essex country through Kent, Lambton, and Middlesex, to Huron county. In 1953, three parties were employed at one time, and an estimated 2,300,000 acres were covered in the year.

TABLE II—NATURAL GAS PRODUCTION BY FIELDS, 1953

County	Field	Quantity
		M cu. ft.
Essex	Kingsville and Leamington	18,874
Kent	Tilbury	1,726,881
	Dover	79,643
	Declute	232,262
	Chatham	86,495
	Camden gore	11,295
	Zone	99,165
Lambton	Dawn	712
	Moore (Kimball-Payne)	4,247,472
	Sombra (Becher)	102,948
Middlesex and Elgin	Mosald	585,371
Elgin	Bayham and Malahide	16,929
Haldimand, Lincoln, Wentworth	Haldimand	1,313,761
Brant	Brant	18,810
Norfolk	Norfolk	517,872
Oxford	Brownsville	19,676
	Norwich	34,032
Welland	Welland	596,771
Private wells		125,500
Total produced		9,835,469
Retail value		$11,694,595
		M cu. ft.
Gas other than natural gas produced in Ontario:		
Imported mixed gas		613,415
Natural gas imported from U.S.A. (Texas panhandle)		5,497,101
Oil gas		1,260
Propane gas		9,159
Total of other gases		6,120,935
Total of all gases distributed		15,956,404

Wells drilled in 1953 totalled 297 as compared with 288 wells drilled in 1952. There were 66 exploratory wells drilled in 1953: 63, dry; and 3, producers. The producers were in Warwick, Mosa, and Aldborough townships. Of the 231 development wells drilled, 83 were dry and 148, producers. There was a total of 377,671 feet drilled during the year, the dry holes accounting for 58 percent of this footage, and the producers for 42 percent. The open flow of the producing wells was 122,546 M cubic feet, which exceeded last year's new open flow by 29,824 M cubic feet. As compared with the past few years, operations in 1953 may be said to have been very satisfactory.

TABLE III—GAS WELLS AND THEIR PRODUCTION, 1953

County	Township	Wells as at Dec. 31, 1953			Wells drilled							Production	Rock pressure
					Dry			Producing					
		Producing	Idle	Abandoned	Exploratory	Development	Footage	Exploratory	Development	Footage	Open flow		
											M cu. ft.	M cu. ft.	lb. per sq. in.
ESSEX	Gosfield South	15	4									15,244	160
	Malden		5										395
	Mersea	2		1								3,650	289
	Tilbury West		3										445
KENT	Camden gore	15	2									11,295	588
	Chatham	21										86,495	419
	Chatham gore		3						1	1,928	450		758
	Dover	5	6	1								79,643	130
	Harwich		2		2	4	11,440	1		1,855	150		820
	Raleigh (Declute)	28	3									232,262	233
	Raleigh	17		1									248
	Romney	116	5	5		1	1,352		2	2,455	2,950	1,726,881	125
	Tilbury East	103		4					1	1,360	310		136
	Zone	49										99,165	
LAMBTON	Bosanquet				1		2,222						
	Brooke				6		12,400						
	Dawn	22	2		8	2	19,429					712	418
	Enniskillen		2		1	1	4,372		1	1,632	6,014		500
	Moore	12	20		3	4	16,767		6	14,795	82,000	4,247,472	760
	Plympton				1		2,575						
	Sarnia				4		11,006						
	Sombra	1	17		5	3	17,535		2	4,538	710	102,948	800
	Warwick		2		4		8,825				20,000		

HURON	Colborne				2		4,080						
	Goderich				2		4,174						
	Hullett				5		9,157						
	Morris				2		3,321						
	West Wawanosh				1		1,937						
MIDDLESEX	Adelaide				1		2,015						
	Caradoc				1		1,859						
	Ekfrid				1		1,825		1	1,602	165		
	Metcalfe				2		3,692						
	Mosa	12	1		1	1	3,403	1	1	3,439	950	585,371	526
ELGIN	Aldborough	22	5			1	1,645	1	1	2,930	1,200		496
	Dunwich	1	5		1	1	2,992						670
	Bayham	27	5									[1]16,929	165
	Malahide	3	12										320
	Yarmouth		5										320
	Bayham (Brownsville)	5										19,676	335
OXFORD	Dereham (Brownsville)	6			1		1,002						340
	South Norwich	8			1		1,156		1	1,136	52	34,032	360
	West Oxford				3		3,445						
NORFOLK	Charlotteville	35		1		6	7,505		11	13,896	675		278
	Houghton	7											320
	Middleton	46			2	5	8,610		5	6,203	822		231
	North Walsingham	61				4	5,575		16	21,336	1,989	[1] 517,872	332
	South Walsingham	24											282
	Townsend	57	2										204
	Windham	45	1	1		11	12,671		7	8,251	869		284
	Woodhouse	131	5	5					1	1,000	27		181
BRANT	Onondaga	3	1	3									53
	Tuscarora	19		3								18,810	103
	South Dumfries				1		2,647						

TABLE III—GAS WELLS AND THEIR PRODUCTION, 1953—*Continued*

County	Township	Wells as at Dec. 31, 1953			Wells drilled							Production	Rock pressure
					Dry			Producing					
		Producing	Idle	Abandoned	Exploratory	Development	Footage	Exploratory	Development	Footage	Open flow		
											M cu. ft.	M cu. ft.	lb. per sq. in.
WENTWORTH	Binbrook	21	1	7									45
	Glanford	7		1									35
HALDIMAND	Canborough	137		3					1	695	36		86
	Dunn	191	1	3		8	8,354		14	12,220	412		152
	Moulton	137		7		4	3,119		18	14,512	724		168
	North Cayuga	181	1	25									166
	Oneida	120		2		2	1,330		1	640	28		102
	Rainham	230	3	17					5	4,368	235	1,313,761	154
	Seneca	101	1	5					1	560	5		59
	Sherbrooke	23	1	1		1	846		1	885	12		133
	South Cayuga	123							2	1,493	45		150
	Walpole	475	5	28		4	3,691		5	4,448	206		159
LINCOLN	Caistor	108		3		2	922		9	4,347	170		66
	Gainsborough	5	1	1									60
WELLAND	Wainfleet	34	3	5		7	4,857		3	2,329	48		56
	Bertie	243	7	3		1	783		8	6,297	157		100
	Crowland	53				1	577		3	2,000	82		25
	Humberstone	140	20	9		4	3,085		16	12,560	956		60
	Pelham	2			1		615					596,771	103
	Stamford	5											45
	Thorold	30				3	1,591		1	501	40		108
	Willoughby	89		1		2	1,112		3	1,945	67		67
SURFACE WELLS	(Howard and Harwich)	55										6,500	
PRIVATE WELLS		419										120,000	
Total		3,848	161	146	63	83	219,515	3	148	158,156	122,546	9,835,469	

Acres under lease (estimated) 1,887,041
Rentals paid $658,219

[1]The small production of the seven wells in Houghton township is not measured separately, it is recorded with Bayham and Malahide townships and therefore included with [redacted]

Ontario production supplied 10,015,818 Mcf. or 59.9 percent of the total of 16,714,060 Mcf. available for distribution. The remaining 41.1 percent, 6,698,242 Mcf. was mainly imported natural gas but included small volumes of mixed gas, oil gas and propane.

Eighty-seven percent or 14,589,858 Mcf. of the total quantity available for distribution i.e. of 16,714,060 Mcf. was sold to customers and of this amount 64 percent or 10,697,585 Mcf. was sold to residential customers, 10.3 percent or 1,713,660 Mcf. to commercial customers and 13.0 percent or 2,178,613 Mcf. to industrial customers. Analyzing total sales by locale 78.3 percent was sold in urban areas and 8.9 percent in rural districts.

TABLE II - NATURAL GAS PRODUCTION BY FIELDS - 1954

County	Field	Producing Formation	Quantity in Mcf.
Brant	Brant	Clinton and Medina	9,460
Elgin	Bayham	Clinton and Medina	10,000
	Malahide	Clinton and Medina	929
Essex	Kingsville and Leamington	Guelph	13,729
Haldimand, Lincoln, Wentworth	Haldimand	Clinton and Medina	1,131,389
Kent	Camden Gore	Salina	56,582
	Chatham	Salina-Guelph	57,605
	Declute	Guelph	226,884
	Dover	Trenton	95,668
	Harwich	Clinton and Medina	2,515
	Tilbury	Guelph	1,865,522
	Zone	Salina-Guelph	140,268
Lambton	Becher	Salina-Guelph	88,289
	Bickford	Guelph	240
	Colinville	Guelph	278,428
	Dawn	Salina-Guelph	1,227
	Duthill	Guelph	2,857
	Enniskillen	Guelph	323
	Kimball	Salina	2,976,367
	Payne	Guelph	861,108
	Seckerton	Guelph	267,959
	Sombra	Guelph	201,288
	Waubuno	Guelph	696
Middlesex and Elgin	Mosald	Salina	547,673
Norfolk	Norfolk	Clinton and Medina	616,747
Oxford	Brownsville	Clinton and Medina	17,616
	South Norwich	Clinton and Medina	35,065
Welland	Welland	Clinton and Medina	509,384
TOTAL GAS PRODUCED			10,015,818
Average Retail Value			$ 11,758,549

Breaking down the balance of the gas which amounted to 2,124,202 Mcf. or 12.8 percent of the total available, then, during the year 5.6 percent or 940,733 Mcf. was placed in storage for future sales and 7.2 percent or 1,183,469 Mcf. was included in drilling, company use, free and unaccounted-for gas.

Section 2 - Production

Table II shows the natural gas production of Ontario's fields during 1954 and the formations from which it was produced. The location of these fields is shown on the map in Figure No. 1. The total production showed a gain of 1.8 percent or 180,349 Mcf. over 1953.

In comparison with previous years, the more significant developments are as follows:

Tilbury field - In spite of its age, this field is still a major source. The field has been extended by the drilling in Lake Erie. Three wells completed during the year were 1 1/2 miles off shore.

Moore township - Two new pools were put in production in August; Colinville and Seckerton, but the total production from the township remained about the same as in 1953. Due to the quantity of gas in storage, only a small percentage of the out-put potential of the township was used.

Sombra township - A new pool near the village of Sombra was put in production in January, 1954. The Bickford pool, in the north-west section of the township, remains shut in, pending a decision on an application to transmit this gas to the Dominion Glass Company in Wallaceburg.

Mosald area - There was a decline of about 35 percent in production from the Wardsville pool, which was partially offset by an increase in production from the town-line pool resulting in an overall decrease of only 6.6 percent.

Haldimand Field - This field comprising the counties of Haldimand, Lincoln and Wentworth, the third largest producing area, shows a decrease of 182,372 Mcf. from 1953. The remaining smaller fields in the counties of Brant, Elgin, Essex, Middlesex, Oxford and Welland all show decreases. Norfolk showed an increase.

A graph showing the developments in Ontario natural gas production is shown in Figure 2.

Private wells: No attempt is made to include an estimate of the production of private wells. Such production is impossible to estimate with any accuracy, and is less than 1 percent of the total.

Gathering Systems

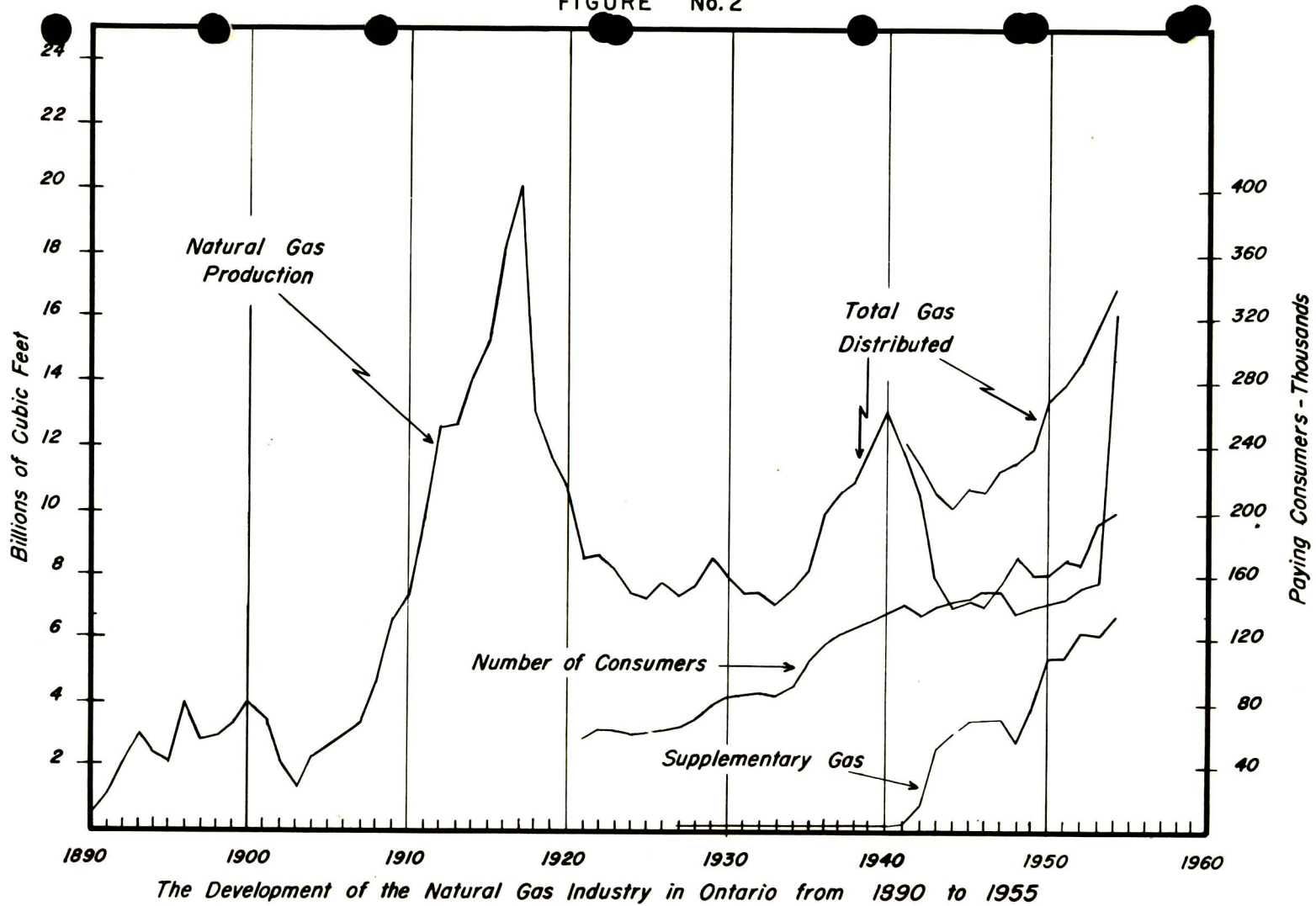
The drilling of new wells and the abandonment of old ones necessitated changes in field gathering lines. Approximate figures for these changes are as follows; 170,000 feet of new pipe was laid in all fields and similarly the pipe removed or abandoned amounted to 14,000 feet.

Section 3 - Wells

Table III is an amplification of Table II, and shows the number of wells in the various townships, with their production and pressure.

Note that only "commercial" wells, as distinguished from "private" wells, are shown in Table III. This results in a considerably reduced total number of wells from that shown in previous years.

FIGURE No. 2



The Development of the Natural Gas Industry in Ontario from 1890 to 1955

TABLE III - GAS WELLS AND THEIR PRODUCTION - 1954

County	Township	Total Wells as of December, 1954		Production in Mcf.	Average Shut-in well head pressure lbs. per sq. in.
		Producing	Idle		
Essex	Gosfield South	16	4	10,559	175
	Malden		5		395
	Mersea	3		3,170	273
	Tilbury West		3		465
Kent	Camden Gore	15	2	56,582	585
	Chatham	21		57,605	443
	Chatham Gore		3		742
	Dover	10	2	95,668	144
	Harwich	2		2,515	801
	Howard		1		1,222
	Raleigh (Declute)	27	3	226,884	227
	Raleigh	15	0	1,131,389	253
	Romney	109	7		142
	Tilbury East	97	2		130
	Zone	49		140,268	398
Lambton	Dawn	22	7	1,227	464
	Enniskillen		6	323	857
	Moore	18	20	4,384,558	740
	Sombra	9	17	292,674	806
	Warwick		2		784
Middlesex	Ekfrid		1	547,673	568
	Mosa	15	3		495
Elgin	Aldborough	22	5		450
	Dunwich	1	5		683
	Bayham	27	5	10,000	150
	Malahide	2	13	929	320
	Yarmouth		5		320
	Bayham (Brownsville)	5		17,616	325
Oxford	Dereham (Brownsville)	6			340
	South Norwich	9		35,065	415
Brant	Onondaga	3		9,460	53
	Tuscarora	17			66
Norfolk	Charlotteville	41		616,747	327
	Houghton	7			275
	Middleton	52			227
	North Walsingham	73			344
	South Walsingham	23			323
	Townsend	57	2		194
	Windham	49			304
	Woodhouse	131	1		180

TABLE III - GAS WELLS AND THEIR PRODUCTION - 1954--Continued

County	Township	Total Wells as of December, 1954		Production in Mcf.	Average Shut-in well head pressure lbs. per sq. in.
		Producing	Idle		
Wentworth	Binbrook	13	1		50
	Glanford	4	.....		39
Lincoln	Caistor	103	.....		68
	Gainsborough	4	1		58
Haldimand	Canborough	111	3		88
	Dunn	180	4		140
	Moulton	149	1	1,131,389	125
	North Cayuga	157	2		183
	Oneida	76	6		86
	Seneca	67	3		65
	Sherbrooke	25	.....		145
	Rainham	202	17		147
	South Cayuga	113	4		129
	Walpole	448	9		153
Welland	Wainfleet	35	2		70
	Bertie	241	13		80
	Crowland	60	2		40
	Humberstone	152	5		75
	Stamford	5	-	509,384	30
	Thorold	23	6		76
	Willoughby	88	6		70
	Pelham	2	-		90
Halton	Esquesing	.....	1	.....	400
Huron	Hay	.....	2	.....	410
Total		3,211	212	10,015,818	

It has been found impossible to keep a record of such leaseholds with any great accuracy, and the column formerly shown in Table III has been discontinued. However, in 1954 oil and gas leases were acquired in south-western Ontario covering about 525,000 acres, of which, 225,000 acres were under the waters of the Great Lakes. As of year's end, it is estimated that oil and gas leases in south-western Ontario covered about 3 1/2 million acres. In addition, in the early part of 1954, exploratory permits for oil and gas were issued or re-issued covering 1 1/2 million acres in the Hudson Bay Lowlands.

With regard to Table III, note that the number of active "commercial" wells shows a decline, despite the completion of 160 new wells. Details of the drilling activities are given in Part III of this Report. More than 90 percent of the new wells were drilled in the four counties of Haldimand, Lambton, Norfolk and Welland.

Section 4 - Supplemental Gas -

In addition to the natural gas produced in Ontario, gas from other sources supplied 40.1 percent of the total quantity distributed by natural gas utilities. These sources are itemized in Table IV.

The increasing use of supplemental gas is shown on the graph in (Figure 2).

Imports of natural gas from the United States will greatly increase in 1955, to supply the Metropolitan Toronto area.

In addition to the plan to bring Alberta gas to Ontario, there is also an application by the Union Gas Company to import additional quantities of Panhandle gas for development of the Ontario market.

TABLE IV - DISTRIBUTION OF SUPPLEMENTAL GAS - 1954

Type of Gas	Quantity in Mcf.
1. Imported mixed gas	717,737
2. Natural gas imported from U.S.A. - at Windsor	5,444,523
- at Niagara	532,540
3. Oil gas	3,409
4. Propane gas	33
Total of supplemental gas	6,698,242

Section 5 - Transmission Lines -

The only major transmission line constructed in Ontario during 1954 was that from Lewiston to Toronto.

It was built as a result of a purchase contract between Consumers' Gas Company of Toronto and producers in Texas and Louisiana and a transmission contract between Consumers' and the Tennessee Gas Transmission Company to deliver the gas to the Canadian Border.

The line is of 20 inch diameter. and runs a distance of 80 miles from a point on the Niagara River, 3 miles north of the Lewiston Bridge, around Lake Ontario and Hamilton to Sheridan, on the Halton-Peel county line.

The route is shown on the map in (Figure 3.)

The part of the line between Lewiston and the Peel-Halton boundary is owned by Trans-Canada Pipe Lines Limited. The engineering was done by Canadian Bechtel Ltd. and the actual installation of the line was carried out by F. E. Shaw Ltd. of Sarnia, Ontario, at a total cost of approximately $5,300,000. Niagara Gas Transmission Limited, a wholly-owned subsidiary of Consumers' Gas Company of Toronto, operate the line under lease from Trans-Canada.

The line is of welded steel, coated, wrapped, and cathodically protected. Connections were made to the Provincial Gas Company for supplying Niagara Falls and Welland, and to the Grimsby Natural Gas Company Limited.

Construction was started on June 15, 1954 and completed on schedule on November 1st, 1954.

The installation of the remainder of the system, which involved laying 21 miles of 20 inch line from Sheridan on the Queen Elizabeth Highway to Booth and Eastern Avenues, Toronto, was done by the Consumers' Gas Company of Toronto at a total cost of approximately $2,200,000.

Natural gas started to flow into its Toronto distribution system on November 8th, 1954.

Other transmission pipe line activity in the Province consisted of the laying of 116,700 feet of new line pipe.

TABLE VIII - NATURAL GAS RATES - 1954

Classification	Company	Amount of Gas Used	Net Rate
A	Beachville Natural Gas Syndicate	Minimum bill	$1.50
		First 200 cu. ft.	0.49 per C. cu. ft.
		Next 9,800 cu. ft.	1.295 per M. cu. ft.
		Next 10,000 cu. ft.	1.195 per M. cu. ft.
		Over 20,000 cu. ft.	1.095 per M. cu. ft.
B	Canfield Natural Gas Co., Ltd.	Minimum bill	$1.00
		Each 1000 cu. ft.	1.00 per M. cu. ft.
C	Central Pipe Line Co., Ltd.	Minimum bill	$2.00
		First 1,000 cu. ft.	2.00 per M. cu. ft.
		Second 1,000 cu. ft.	1.10 per M. cu. ft.
		Next 2,000 cu. ft.	1.25 per M. cu. ft.
		Next 3,000 cu. ft.	1.75 per M. cu. ft.
		Over 7,000 cu. ft.	2.00 per M. cu. ft.
D	City Gas Co. of London	First 200 cu. ft.	$0.50 per C. cu. ft.
		Next 1,800 cu. ft.	0.95 per M. cu. ft.
		Next 8,000 cu. ft.	1.035 per M. cu. ft.
		Over 10,000 cu. ft.	0.985 per M. cu. ft.
		Industrial Rate as above except over 2,000 M. cu. ft.	1.065 per M. cu. ft.
E	Consumers' Gas Co. of Toronto	Minimum bill	$1.15
		First 100 cu. ft.	1.15
		Next 900 cu. ft.	0.33 per C. cu. ft.
		Next 1,500 cu. ft.	0.24 per C. cu. ft.
		Next 2,500 cu. ft.	0.18 per C. cu. ft.
		Over 5,000 cu. ft.	0.12 per C. cu. ft.

Note: These rates did not come into effect until February, 1955

F	Crowland Gas Limited	Port Robinson and Area	
		Minimum bill	$1.50
		Each 1,000 cu. ft.	1.25 per M. cu. ft.
		North and South Crowland Fields	
		Minimum bill	$1.40
		Each 1,000 cu. ft.	0.75 per M. cu. ft.
	Dominion Natural Gas Co., Ltd.	First 1,000 cu. ft. or less	$1.60
		Over 1,000 cu. ft.	1.09
		Supplemental rates	
		Oct. 1, 1952 - Sept. 30, 1953	.21 per M. cu. ft.
		Oct. 1, 1953 - Sept. 30, 1954	.23 per M. cu. ft.
H	Fisherville Gas Syndicate	Minimum bill	$1.30
		Each 1,000 cu. ft.	1.30 per M. cu. ft.
I	Grimsby Natural Gas Co., Ltd.	First 1,000 cu. ft.	$1.20
		Over 1,000 cu. ft.	1.05 per M. cu. ft.
	Grimsby North Grimsby tp. South Grimsby tp. Caistor tp.	Minimum bill	1.25

TABLE VIII - NATURAL GAS RATES - 1954--Continued

Classification	Company	Amount of Gas Used	Net Rate
I	Gainsborough tp.	Minimum bill	1.50
		First 1,000 cu. ft.....	1.50
		Over 1,000 cu. ft.....	1.05 per M. cu. ft.
J	Norotto Gas Co., Ltd.	Minimum bill	$1.75
		First 1,000 cu. ft.....	1.75
		Over 1,000 cu. ft.....	1.10 per M. cu. ft.
K	Port Colborne - Welland Natural Gas and Oil Co., Ltd.	Minimum bill	$1.05
		First 400 cu. ft.	1.05
		Over 400 cu. ft.	1.05 per M. cu. ft.
L	Provincial Gas Co. Ltd.	First 200 cu. ft.....	$0.50 per C. cu. ft.
		Next 1,800 cu. ft.	1.10 per M. cu. ft.
		Over 2,000 cu. ft.....	1.00 per M. cu. ft.
		Over 500,000 cu. ft.....	0.90 per M. cu. ft. Plus pro-rata share of import duty on mixed gas
		Summer consumers between May 1 and Oct. 31 in any year	
		First 7,000 cu. ft.	$11.90 (minimum bill)
		Next 2,000 cu. ft.....	1.70 per M. cu. ft.
		Over 9,000 cu. ft.....	1.32 per M. cu. ft.
M	Pure Gas and Oil Co., Ltd.	First 1,000 cu. ft.....	$1.50
		Over 1,000 cu. ft.....	1.06 per M. cu. ft.
N	Union Gas Co. of Canada, Ltd.	First 200 cu. ft.....	$0.50 per C. cu. ft.
		Next 1,800 cu. ft.....	0.95 per M. cu. ft.
		Next 8,000 cu. ft.....	1.035 per M. cu. ft.
		Over 10,000 cu. ft.....	0.985 per M. cu. ft.
		Industrial rate as above except over 2,000 cu. ft.	1.065 per M. cu. ft.
O	United Development Co., Ltd.	Minimum bill	$2.00
		First 1,000 cu. ft.	2.35
		Next 5,000 cu. ft.....	1.50 per M. cu. ft.
		Over 6,000 cu. ft.	1.35 per M. cu. ft.

Section 9 - Gas Lost or Unaccounted for - including leakage

The leakage tables previously published for main and secondary transmission lines and also for cities and towns, have been discontinued, since, in general, with modern protective techniques and more thorough line patrols, unnecessary leakage has been almost eliminated. While leakage, now, is not a matter of primary concern due to the adequacy of gas reserves, nevertheless it is a matter of dollars and cents which must be paid by the ultimate consumer and therefore the Board will continue to investigate those cases where wastage appears excessive.

The term "unaccounted-for" used in this report is applied to those volumes of gas which are the arithmetic difference between production plus purchases, and use. In addition to actual leakage, this figure for unaccounted-for gas includes differences caused by meter-reading dates, billing periods, meter error and other arithmetic adjustments.