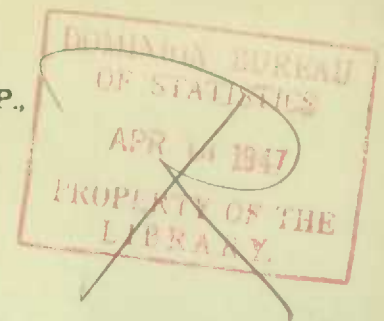


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Minister of Trade and Commerce



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

CONTRACT DRILLING
IN THE
CANADIAN MINING INDUSTRY
IN
1945



OTTAWA
1947

Price 25 cents

100-100000

AMERICAN ...

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Dominion Statistician:
 Director - Division of Census of Industry and Merchandising:
 Chief - Mining, Metallurgical and Chemical Statistics:

A23-1-4-47
 Herbert Marshall
 W. H. Losee
 H. McLeod

CONTRACT DRILLING IN THE CANADIAN MINING INDUSTRY, 1945

Section 1

Diamond Drilling of Deposits Other Than Fuels

There were 74 firms engaged in contract diamond drilling of Canadian mineral deposits, other than fuels, during 1945 compared with 34 in 1944. The income received from drilling operations completed by these firms in 1945 totalled \$8,650,864 against \$4,970,247 in the preceding year. The average number of employees in 1945 was estimated at 2,263 compared with 1,468 in 1944, and the amount of salaries and wages distributed during the year under review totalled \$3,906,545 as against \$2,461,813 in 1944.

The footage drilled in the Dominion by contractors during 1945 aggregated 5,262,438 feet, of which 32 per cent was completed in Ontario, 41 per cent in Quebec, 17 per cent in British Columbia and 6 per cent in the Northwest Territories. Contract drilling was also conducted in Nova Scotia, Manitoba, Saskatchewan, Alberta and Yukon. The footage drilled in 1945 was the greatest to be recorded since 1938 when complete statistics on diamond drilling were first compiled. The value of borts, ballas, carbons, castset bits, etc., purchased in 1945 by diamond drilling contractors totalled \$2,018,768 compared with \$810,085 in 1944.

Not included in this report are general statistics relating to diamond drilling conducted by Canadian mining companies with their own personnel and equipment; employment data relating to such operations are combined with those pertaining to the Canadian mining industry proper.

Table 1 - CONTRACT DIAMOND DRILLING OPERATIONS IN CANADA, 1938-1945 (Drilling operations conducted by contractors who employed diamond drills only and which were confined chiefly to the testing of metalliferous deposits)

Year	Footage drilled	Income from drilling \$	Average number of employees	Total salaries and wages paid \$
1938	2,296,773	3,956,564	1,627	1,801,988
1939	2,063,292	3,013,249	2,920	1,615,615
1940	2,422,948	3,021,629	1,350	1,575,786
1941	2,793,420	3,122,487	1,455	1,535,609
1942	2,960,364	3,147,532	1,019	1,597,040
1943	2,649,708	3,072,481	896	1,493,944

Note: This report was prepared by Mr. A. R. Deir, Mining Statistician.

Table 1 - CONTRACT DIAMOND DRILLING OPERATIONS IN CANADA, 1938-1945 (Concluded)

Year	Footage drilled	Income from drilling \$	Average number of employees	Total salaries and wages paid \$
<u>1944</u>				
Nova Scotia	2,802	4,660	4	2,539
New Brunswick .....	...	...	...	...
Quebec	1,310,156	1,985,927	634	969,082
Ontario	1,348,813	2,031,096	680	1,042,491
Manitoba	69,006	115,319	38	42,989
Saskatchewan	47,926	55,962	24	26,361
Alberta	32,922	128,329	25	54,498
British Columbia	544,077	392,961	102	220,746
Yukon .....	...	...	...	...
Northwest Territories	113,095	255,993	61	103,107
CANADA	3,468,797	4,970,247	1,468	2,461,813
<u>1945</u>				
Nova Scotia	6,432	9,695	1	2,192
New Brunswick .....	...	...	...	...
Quebec	2,166,682	4,040,776	1,075	1,800,259
Ontario	1,676,076	2,817,502	788	1,331,532
Manitoba	120,799	196,312	48	81,542
Saskatchewan	53,142	80,727	22	38,099
Alberta	29,406	138,894	27	63,678
British Columbia	900,605	622,788	200	325,675
Yukon	3,046	6,521	7	6,139
Northwest Territories	306,250	737,649	95	257,429
CANADA	5,262,438	8,650,864	2,263	3,906,545

Table 2 - VALUE OF STONES, READYSET AND CASTSET BITS PURCHASED BY CONTRACTORS, 1938-1945

Year	Value \$	Year	Value \$
1938	649,374	1942	634,233
1939	607,806	1943	637,070
1940	881,085	1944	810,085
1941	861,253	1945	2,018,768

Equipment owned by diamond drilling contractors in 1945 included 299 air or steam-operated drills, 430 gas-driven drills and 3 electric drills.

Table 3 - DRILLING COMPLETED ON AURIFEROUS QUARTZ DEPOSITS (GOLD MINES) IN CANADA, 1944 and 1945

	Footage Drilled	
	1944	1945
<u>Diamond drilling for exploration and testing -</u>		
By mining companies with their own personnel and equipment	510,262	591,243
By diamond drilling contractors (*)	1,606,205	4,011,223
<u>Other diamond drilling -</u>		
Blast hole diamond drilling:		
By mining companies with their own personnel and equipment	83,672	134,555
By diamond drilling contractors (*)	444,859	420,519
Drilling by percussion or other machines (x)	17,830,270	14,649,301

(*) Included in Table 1.

(x) Not complete as records are unavailable at certain mines.

Value of diamonds purchased by gold mining companies in 1945 totalled \$157,144 in 1945 compared with \$128,115 in 1944.

Table 4 - DRILLING COMPLETED ON COPPER-GOLD-SILVER AND NICKEL-COPPER DEPOSITS IN CANADA, 1944 and 1945

	Footage Drilled	
	1944	1945
<u>Diamond drilling for exploration and testing -</u>		
By mining companies with their own personnel and equipment	99,691	76,089
By diamond drilling contractors (*)	285,386	475,066
<u>Other diamond drilling -</u>		
Blast hole diamond drilling:		
By mining companies with their own personnel and equipment	1,088,602	907,598
By diamond drilling contractors (*)	139,552	310,446
Drilling by percussion or other machines (x).	12,731,871	11,869,213

(*) Included in Table 1.

(x) Not complete as records are unavailable at certain mines.

Value of diamonds purchased by copper-gold-silver and nickel-copper mining companies in 1945 totalled \$176,034 compared with \$180,388 in 1944.

Contract

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Table 5 - DRILLING COMPLETED ON SILVER-LEAD-ZINC AND SILVER-COBALT DEPOSITS IN CANADA, 1944 and 1945

	Footage Drilled	
	1944	1945
<u>Diamond drilling for exploration and testing -</u>		
By mining companies with their own personnel and equipment	7,353	11,786
By diamond drilling contractors (*)	86,466	55,429
<u>Other diamond drilling -</u>		
Blast hole diamond drilling:		
By mining companies with their own personnel and equipment .....	...	...
By diamond drilling contractors (*)	280,447	272,508
Drilling by percussion or other machines (x)	2,660,574	1,538,711

(*) Included in Table 1.

(x) Not complete as records are unavailable at certain mines.

Table 6 - DRILLING COMPLETED ON OTHER METAL-BEARING DEPOSITS, 1944 and 1945

	Footage Drilled (b)	
	1944	1945
<u>Diamond drilling for exploration and testing -</u>		
By mining companies with their own personnel and equipment	30,864	...
By diamond drilling contractors (*)	41,976	3,725
<u>Other diamond drilling -</u>		
Blast hole diamond drilling:		
By mining companies with their own personnel and equipment	(a)	(a)
By diamond drilling contractors (*)	(a)	(a)
Drilling by percussion or other machines ...	356,697(a)	800

(*) Included in Table 1. (a) Not reported, or not complete as records are unavailable at certain mines. (b) Includes drilling on iron, chromite, molybdenite and mercury deposits; exclusive of drilling on pitchblende deposits.

Table 7 - DRILLING COMPLETED ON ASBESTOS DEPOSITS, 1944 and 1945

	Footage Drilled	
	1944	1945
<u>Diamond drilling for exploration and testing -</u>		
By mining companies with their own personnel and equipment	37,111	9,275
By diamond drilling contractors (*)	22,019	28,703
<u>Other diamond drilling -</u>		
Blast hole diamond drilling:		
By mining companies with their own personnel and equipment .....	...	9,227
By diamond drilling contractors .....	...	...
Drilling by percussion or other machines ...	3,414,969(x)	3,197,308

(*) Included in Table 1. (x) Not complete as data are not reported by some firms.

Diamonds purchased by asbestos mining companies in 1945 cost \$8,424 compared with \$5,756 in 1944.

NOTE: The total footage of contract drilling recorded in Tables 3 to 7 does not necessarily agree with the corresponding totals shown in Table 1 as drilling data are incomplete or unobtainable from some mining firms.

BLAST HOLE DRILLING

Mr. R. L. Loofbourow, in "Mining and Metallurgy", summarizes the progress and the recent advances in the utilization of diamond drills for drilling blast-holes as follows: "(1) Working conditions, safety and ventilation are notably improved. (2) In comparison with some other bulk methods, less stope preparation is required. (3) Cleaner mining, in comparison with some other bulk methods, results. The location of stope walls may be predetermined definitely and they may be cut clean and smooth. (4) Diamond drilling may readily be used in some pillar removal which would be difficult or impossible by other means. (5) An excellent distribution of explosives is accomplished; the cost of explosives has almost always been reduced sharply. (6) Extremely hard materials can be drilled with greater speed and economy. (7) The whole program of development and mining is usually accelerated. (8) Production may be held steady in spite of a fluctuating labour supply. (9) No large amount of broken ore is tied up as it is with some other methods. This may be of great importance in preventing oxidation of sulphides which would cause heating as well as difficulties in flotation."

DIRECTORY, 1945

The data for 1945, as shown in Table 1, were compiled from returns made by the following firms:

<u>Name of Firm</u>	<u>Head Office Address</u>
Allard Bros.	Val D'Or, Que.
Anderson, Anton	20 Patricia Blvd., Timmins, Ont.
Andercheck, John M.	61 Third Ave., Timmins, Ont.
Arno Diamond Drilling Co. Ltd.	249 Algonquin Blvd. E., Timmins, Ont.
Baderski, Frank & Son	464 Algonquin Blvd. E., Timmins, Ont.
Baker, L. J.	Box 520, Val D'Or, Que.
Bellis, W. E.	Yellowknife, N.W.T.
Berube Diamond Drilling	Val D'Or, Que.
Blackburn & Rabb	Box 570, Rouyn, Que.
Bayles Bros. Drilling Co. Ltd.	1291 Parker St., Vancouver, B.C.
Brochu, W. C.	room 2, Richardson Bldg., Timmins, Ont.
Brade & Smith Drilling Co. Ltd.	Box 213, Red Lake, Ont.
Burphy, Herbert	New Liskeard, Ont.
Burton, Archie S.	352 Howey Crescent, Sudbury, Ont.
Chenette Drilling Reg'd.	Box 462, Noranda, Que.
Connors, T. Diamond Drilling Co. Ltd.	744 West Hastings St., Vancouver, B.C.
Continental Diamond Drilling Co. Ltd.	82 Perreault St.W., Rouyn, Que.
Demorest Drilling Ltd.	Noranda, Que.
Dempsey & Watt	Box 72, Noranda, Que.
Dependence Diamond Drilling Co.	Kirkland Lake, Ont.
Developers of Canada Reg'd.	Box 78, Val D'Or, Que.
Eco Exploration Co. Ltd.	711 McArthur Bldg., Winnipeg, Man.
Geraldton Diamond Drilling Co.	Geraldton, Ont.
Globe Drilling & Exploration Co.	Kenora, Ont.
Grondin, M.	Box 2013, Val D'Or, Que.
Heath & Sherwood	6 Duncan Ave., Kirkland Lake, Ont.

Directory, 1945 (Concluded)

Name of Firm	Head Office Address
Inspiration Mining & Development Co. Ltd.	184 Bay St., Toronto, Ont.
Jones & Bradley Ltd.	Drawer 1050, Noranda, Que.
Kelly, J. C.	Yellowknife, N.W.T.
Kuntz, H. J.	Box 300, Malartic, Que.
Labine Bros.	McKenzie Island, Ont.
Lamothe, Charles & Sons	South Porcupine, Ont.
Lantz Diamond Drilling Co.	204 .. 4th St. N., Kenora, Ont.
LaRocque, T. E.	10 Frontenac St., Val D'Or, Que.
Matheson Drilling & Exploration	Matheson, Ont.
Mikelait, J. A.	Box 127, Rouyn, Que.
Morissette Diamond Drilling Ltd.	Box 440, Haileybury, Ont.
McCall Diamond Drilling Co.	Box B, Geraldton, Ont.
McIsaac, Roderick M.	Box 356, Flin Flon, Man.
McGinn, J. R.	5 Elgin St., Sudbury, Ont.
Napcar Diamond Drilling	20 Cherry St., Timmins, Ont.
National Diamond Drilling Co. Ltd.	Box 508, Rossland, B.C.
Northern Diamond Drilling Co.	711 McArthur Bldg., Winnipeg, Man.
Niemetz Bros.	Red Lake, Ont.
Ontario Diamond Drilling Co. Ltd.	203 Mackey Bldg., Sudbury, Ont.
Pacific Drilling & Exploration Co. Ltd.	356 Alexander St., Vancouver, B.C.
Portelance, A.	626 Leslie Ave., Port Arthur, Ont.
Prochick, M. J.	McKenzie Island, Ont.
Robinson Contracting Co. Ltd.	804-850 Hastings St.W., Vancouver, B.C.
Rowan, Angus	74½ Fifth Ave., Timmins, Ont.
Roy & LaRochelle (x)	Duparquet, Que.
Roy & Clermont (x)	Rouyn, Que.
Roy Bros. Reg'd. (x)	Malartic, Que.
Roy, J. M.	B.P. 392, Malartic, Que.
Smith & Travers Co. Ltd.	208 Walnut St., Sudbury, Ont.
Sudbury Diamond Drilling Co. Ltd.	184 Bay St., Toronto, Ont.
Territories Exploration & Drilling	Box 149, Yellowknife, N.W.T.
Thompson Drilling & Mining Development Co. Ltd.	4 North Ave., Flin Flon, Man.
Timmins Diamond Drilling Dev. Co. Ltd.	174 Maple St. N., Timmins, Ont.
Traynor Diamond Drilling Co. Ltd.	15 Toronto St., Toronto, Ont.
Tremblay, Paul E.	Rouyn, Que.
Turcotte, R. Diamond Drill Reg'd.	Box 478, Malartic, Que.
Wilson, A.	Box 270, Noranda, Que.

(x) Firm dissolved.

Section II

Contract Drilling for Fuels

In 1945, 65 contractors reported drilling for petroleum, natural gas or for other purposes. The footage drilled totalled 733,721 and the income from operations amounted to \$4,095,211 compared, respectively, with 583,155 feet and \$5,353,845 in 1944; of the footage drilled in 1945, there were 224,503 feet completed by cable drills and 509,218 feet by rotary drills. Employees engaged on this work in 1945 totalled 689, and salaries and wages paid amounted to \$1,224,813. Drilling completed by oil companies with their own equipment are not included in this report.

Table 8 (b) - DRILLING CONDUCTED DURING 1944 and 1945 BY CONTRACTORS FOR PETROLEUM, NATURAL GAS, AND FOR OTHER PURPOSES NOT INCLUDED IN SECTION I OF THIS REPORT

Province	Footage Drilled For Petroleum			Footage Drilled For Gas			Footage Drilled For Other Purposes			Gross income from drilling \$	Average number of em- ployees No.	Total salaries and wages paid \$
	Type of Drill			Type of Drill			Type of Drill					
	Cable	Diamond	Rotary	Cable	Diamond	Rotary	Cable	Diamond	Rotary			
	(feet)			(feet)			(feet)					
1944												
Prince Edward Island	Drilling in this province was conducted by an oil company using its own equipment.											
Nova Scotia	3,595	...	...	1,228	...	...	9,156	...	...	86,922	22	28,275
New Brunswick ..	...	...	...	...	...	...	...	...	...	...	...	...
Quebec (a) .....	...	...	...	...	...	...	...	...	...	...	...	...
Ontario	4,289	...	...	182,896	...	...	21,849	...	...	397,395	93	123,906
Manitoba (a) ...	...	...	...	...	...	...	...	...	...	...	...	...
Saskatchewan ...	205	...	10,100	...	...	12,306	3,000	...	...	125,381	22	22,298
Alberta	4,523	2,000	305,901	...	1,000	21,529	...	...	...	4,744,147	396	912,401
British Columbia	...	...	...	...	...	...	...	...	...	...	...	...
Northwest Terri- tories .....	...	...	...	...	...	...	...	...	...	...	...	...
CANADA	12,410	2,000	316,001	184,124	1,000	33,635	33,985	...	...	5,353,845	533	1,066,878
1945												
Prince Edward Island .....	...	...	...	...	...	...	...	...	...	...	...	...
Nova Scotia .....	...	...	...	...	...	...	7,607	...	...	35,420	10	15,507
New Brunswick ..	...	...	...	...	...	...	...	...	...	...	...	...
Quebec	2,119	...	...	...	...	...	...	...	...	69,588	20	13,681
Ontario	7,597	...	...	166,851	...	...	22,194	...	...	432,392	102	119,335
Manitoba .....	...	...	...	1,886	...	...	...	...	...	16,907	3	4,043
Saskatchewan ...	219	...	73,189	...	...	7,512	7,584	...	...	651,683	96	220,828
Alberta	4,550	...	397,723	2,782	...	30,266	1,114	...	528	2,889,221	458	851,419
British Columbia	...	...	...	...	...	...	...	...	...	...	...	...
Northwest Terri- tories .....	...	...	...	...	...	...	...	...	...	...	...	...
Yukon .....	...	...	...	...	...	...	...	...	...	...	...	...
CANADA	14,485	...	470,912	171,519	...	37,778	38,499	...	528	4,095,211	689	1,224,813

(a) Included with Nova Scotia.

(b) Subject to revision.

Contract

DIRECTORY, 1945

The data shown in Table 8 were compiled from returns made by the following firms:

Name of Firm	Head Office Address
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Nova Scotia -

Kennedy, O. V.

Bridgetown

Quebec -

Boileau, E.

1080 Osborne St., Montreal

Ontario -

Ashton, J. L.

550 King St.W., Chatham

Culver, Marvin & Son

R.R. 2, Selkirk

Culver & Havill

Stevensville

Davidson, Fred L.

Wingham

Dennis, G.

R.R. 2, Selkirk

Dolphin Bros.

Saulsbury St., Strathroy

Elk Development Syndicate

R.R. 2, South Cayuga

Emerson, H. L.

R.R. 1, Dunnville

Emerson & Rose

Wainfleet

Garringer, W.

Dunnville

Harris, W.

R.R. 3, Jarvis

Heal, A. A.

Box 264, Watford

Hodgson Bros.

Cayuga

Irving, D.

509 Queen St., Dunnville

Jackson, P. L. & Co.

211 George St., Dunnville

Kiser Bros.

Hicks Bldg., Chatham

Lymburner Bros. & Webber

Dunnville

Mandley, R.

Dunnville

McCutcheon, T. O.

225 Broad St., Dunnville

McKillop, Wm.

Box 102, Hamilton

McLister, J. J.

Dunnville

McMaster, Robt. & Sons

Box 455, Caledonia

Matt, G. L. & Associates

Lynden

Nauman Bros.

Fisherville

Patterson & Culver

Box 93, Dunnville

Patterson Gas Co. Ltd.

Jamestown, N.Y., U.S.A.

Perkins, J. E.

Dunnville

Renwick, S.

Bright

Shank Bros.

R.R. 2, Selkirk

Shaw, S. D.

120 Wellington St., Chatham

Stewart, E.

R.R. 3, Jarvis

Stubble, H. H.

225 Grand Ave.E., Chatham

Swayze & Nauman

R.R. 5, Simcoe

Swent, W. N.

Selkirk

Warren, G.

R.R. 1, Canboro

Werner, D. E.

Fisherville

Wilson-Sullivan Development Co.

112 S. Christina St., Sarnia

Windover, Wm.

R.R. 2, Sarnia

Manitoba -

Coyle, D. J.

796 McDermot Ave., Winnipeg

DIRECTORY, 1945 (Concluded)

<u>Name of Firm</u>	<u>Head Office Address</u>
<u>Saskatchewan -</u>	
Clark Drilling Co.	Wolsely
Creelman, R. E. & Son	1113 Ave. B. North, Saskatoon
Northern Development Co. Ltd. (N.P.L.)	Lloydminster
<u>Alberta -</u>	
Alberta Drilling & Development Co. Ltd.	1 Central Bldg., Calgary
Can-Tex Drilling Co. Ltd.	617 Lancaster Bldg., Calgary
Commonwealth Drilling Co. Ltd.	4 Clarence Block, Calgary
Culbert, E. L.	Black Diamond
Drilling Contractors Ltd.	902 Lancaster Bldg., Calgary
G & C Drilling Co.	Millarville
General Petroleums Ltd.	509 .. 8 Ave. West, Calgary
Kartmeyer, F.	Black Diamond
Machinery Depot Ltd.	1029 .. 10th Ave. West, Calgary
Medhurst, R. P. & Sons	Foremost
McAllister, R. W.	527 .. 1st Ave. West, Calgary
National Petroleum Corp. Ltd.	401 Leeson-Lineham Bldg., Calgary
Newell & Chandler Ltd.	203 Wilson Electric Bldg., Calgary
Regent Drilling Co. Ltd.	Vermillion
Roxana Oils Co. Ltd.	408 Lancaster Bldg., Calgary
Union Drilling & Development Co. Ltd.	403 Lancaster Bldg., Calgary

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