

GENERAL REPORT

OF THE

MINISTER OF MINES

OF THE

PROVINCE OF QUEBEC

FOR THE YEAR ENDING MARCH 31st

1947



Quebec, September, 1947.

To the Honourable

Major-General Sir Eugène Fiset, Kt., C.M.G., D.S.O., M.D.,

Lieutenant-Governor of the Province of Quebec.

Sir,

I have the honour to transmit to you the report on the activities of the Department of Mines for the financial year April 1st, 1946, to March 31st, 1947.

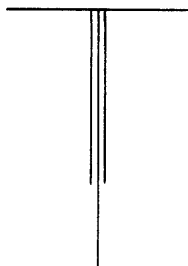
I have the honour to be, Sir,

Your obedient Servant,

JONATHAN ROBINSON,
Minister of Mines.

TABLE OF CONTENTS

	<u>Page</u>
The mining industry of Quebec in 1946-47	5
Mineral rights and titles branch	8
Table I-Various titles issued in the year 1946-47	8
Table II-Titles issued since 1930-31	9
Table III-Exploration work from calendar year 1931 to year 1946	9
Incorporation of mining companies	10
By Quebec charters in 1946	10
By Ontario charters in 1946	13
By Dominion charters in 1946	15
Collection of dues on mines	15
Revenue collected by the Department	16
Geological Surveys branch	17
Mineral Deposits branch	19
Division of Technical Information	21
Inspection of Mines branch	22
Draughting and Cartography branch	24
Division of Mineral Statistics	25
Laboratories branch:	
Chemistry and Physics laboratories	27
Sampling and Ore Dressing plant	30
Lectures to prospectors	31
Museum and exhibitions	32
Division of editing and printing of publications	32
Civil Engineering Works branch	34
The Library	39
Equipment section	39
Scholarships of the Department of Mines	40



REPORT OF THE DEPARTMENT OF MINES
OF THE PROVINCE OF QUEBEC
FOR THE FISCAL YEAR ENDING MARCH 31st, 1947

To the Honourable Jonathan Robinson, K.C.,
Minister of Mines,
Quebec, Que.

Sir,

The Mining Act of the Province of Quebec stipulates that "the Minister of Mines shall submit, with his annual return to the Legislature, a statement respecting mines in the Province" (Section 229). In conformity with this provision, I have the honour to submit the following statement on the mineral industry and a brief summary of the work carried out by the Department of Mines during the fiscal year April 1st, 1946, to March 31st, 1947.

THE MINING INDUSTRY OF THE PROVINCE

In the six years of the duration of World War II (September 10th, 1939, to January 1st, 1946), the demand for war supplies put an abnormal strain on the mines and quarries, particularly on the producing mines of base metals. Most of the efforts were directed to increase the output of the mines to keep up with the ever increasing needs of war matériel and munitions. These activities were to the detriment of the search for new mineral deposits and of the development in the producing mines which were unable to keep up normal ore reserves; in many cases the ore reserves were drawn upon to an alarming extent. owing to the temporary abandonment of development programmes.

Another adverse feature which had to be contended with during the war was the scarcity of labour due to the needs of men in the armed forces. This feature, from which the gold mines have been the chief sufferers, has persisted since the cessation of hostilities, and, to a great extent, it has been a major factor in the decreases in the production of metals during 1946 and in the first half of 1947. The situation has further been aggravated by strikes of the miners, the most notable in Quebec having been that at the Noranda Mines plant; this strike lasted from the middle of November 1946 until late in February 1947. The first copper poured at the Noranda smelter after the settlement of the strike was on the last day of February.

At the end of the calendar year, 1946, and during the first quarter of 1947, the mines of Western Quebec could have absorbed some 1,500 trained miners more than they could get.

On July 6th, 1946, the Minister of Finance of Canada announced to the House of Commons that the Federal Government had decreed the parity between the Canadian dollar and the United States dollar. The loss of the ten per cent premium on the United States currency, as regards the Canadian dollar, was felt keenly by a number of our gold mines as it brought down the price of gold to 35 Canadian dollars, instead of the \$38.50 at which it had stood for some time owing to the "pegged" exchange. Canada does not permit the sale of Canadian gold beyond the United States price of \$35, so that in the case of mines working on a small margin, the loss of the 10 per cent exchange turned profits into losses.

It may be mentioned that in 1946 there was an increase of interest devoted to the potentialities of the iron ore resources of New Quebec, particularly in the region of Attikamagen-Wakuach lakes in the central part of the Ungava peninsula, lying to the north of the height of land which separates the basins of the Kaniapiskau and the Hamilton rivers. This interest was due to the favourable results obtained by the exploration work carried out systematically since 1942 by Hollinger North Shore Exploration Company, a subsidiary of Hollinger Consolidated Gold Mines, Limited. In that year the Company obtained a prospecting license over a block of land of 3,900 square miles in the above region. These activities were briefly touched upon in the reports of the Department of Mines: "The Mining Industry of the Province of Quebec in 1944" and also in 1945 and 1946. Moreover, in the "Report of the Minister of Mines for the fiscal year ending March 31st, 1946", a statement was given of the conditions set in the license granted to the Company on that block of land.

In 1946, mineral exploration licenses, in conformity with Section 228 (amended) of the Quebec Mining Act, were issued for tracts of land, situated to the north of the Hollinger block, to the following organizations: Norancon Exploration (Quebec), Limited (1,500 square miles), a subsidiary of Noranda Mines, Limited; Fort Chimo Mines, Limited (1,000 square miles), a subsidiary of Frobisher, Limited; and Quebec Labrador Development Company, Limited (1,000 square miles).

All these blocks of land, including the Hollinger North Shore Exploration's, are situated in a N.N.W. row in the "Labrador Trough", a geological and geographical area underlain by formations of late Precambrian rocks.

During the past calendar year, Hollinger North Shore Exploration continued the programme of exploration and development initiated in 1942. In 1946, the field season began in mid-June and closed on September 20th. The work carried out in the field during these three months included: trenching, test-pitting and surface development of several extensive bodies of high grade iron ore; diamond-drilling to ascertain their continuity in depth; geological mapping; prospecting in new areas; railroad reconnaissance surveys from Sept-Iles on the Saint-Lawrence, to the permanent camp of the Company, a distance of 350 miles. Moreover, technicians from the Federal Department of Transport selected a site for the construc-

tion of an airport in the vicinity of latitude 54°50' and longitude 66°40'.

The results of the year's work were very satisfactory, both as to size of the iron ore deposits and the grade of the ore.

Kennco Explorations, Limited, a subsidiary of Kennecott Copper, holds a large number of contiguous claims, covering some 6,000 acres, under development licenses in the basin of the lower Romaine river, where important deposits of ilmenite are being investigated. These deposits are mostly in the area immediately east of Allard lake, twenty miles north of Havre Saint-Pierre, some 400 miles below Quebec City.

Ilmenite is the main source of titanium oxide from which is manufactured the pigment "titanium white".

In the summer of 1945, the region of Bachelor lake attracted the attention of prospectors. This lake is situated some 12 miles to the northeast of the eastern end of Puskitamika lake (approximately latitude 49°30', longitude 76°W.) in the projected township No.416, now designated as Lesueur township. During that summer (1945) a few mining claims were staked out and recorded. The interest subsisted through the fall of 1945 and the summer of 1946. In the fall of 1946, the discovery of a promising gold occurrence, now known as the "O'Brien showing" activated the staking of claims, and by March, 1947, some 750 claims had been staked out.

The discovery which caused this mild "rush" was made on Claim C-25719, staked by Basil L. Jackson, and transferred to O'Brien Gold Mines, Limited. The showing was visited by a geologist of the Department of Mines during the summer of 1947, who reported that the vein had been stripped for 260 feet, and drilled by an X-Ray machine.

The Quebec mineral production in the calendar year 1946 was \$92,215,656. It is a slight increase, of less than one per cent, over the figure of \$91,570,982 in 1945. That the increase is not greater was entirely due to a falling off of 7½ millions in the value of the metals in 1946 - when gold alone decreased 3½ million dollars - whereas the industrial minerals showed an increase of 2½ million and the building materials over 5 million dollars.

A detailed account of mining operations and statistical data for the calendar year 1946 will be found in the report of the Department of Mines entitled "The Mining Industry of the Province of Quebec during the Calendar Year 1946".

Throughout the first three months of 1947, which constitute the last quarter of the fiscal year 1946-47, there was little change in the situation. There was an appreciable increase in the production of industrial minerals and of the building materials and a still further falling off of metals, when compared with the corresponding period of 1946. The decreases for the individual

metals were:- gold, 20 per cent; copper, 60 per cent, due to the strike of the Noranda miners referred to above; silver fell off 40 per cent and zinc 30 per cent. On the other hand during the same period the tonnage of asbestos increased 40 per cent; building brick 36 per cent and cement 36 per cent. The rise in the production of building materials is a gauge of the endeavour of the building trades to remedy the keenly felt shortage of dwellings, which has been general since the end of the war.

MINERAL RIGHTS AND TITLES BRANCH

The prospecting activities, which obtained during the fiscal year 1945-46 and which resulted in a record in the staking of mining claims, quieted down in the first half of 1946, to the extent that the number of miner's certificates issued during the fiscal year ending March 31, 1947, fell off to 5,408; it had reached 9,225 the preceding twelve months. The number of claims recorded fell to 16,332 in 1946-47, from 26,501 in 1945-46. It is still satisfactory as it is appreciably higher than the average of the ten preceding years which was 13,000. So it may be stated that prospecting, in search of new mines, is returning to normal.

Tables I, II, and III, which follow, present the figures of these activities since the year 1930-31. Figures for earlier years are given in the report for 1941-42.

J.X. Mercier is the Chief of this Branch of the Department of Mines.

TABLE I

Various Titles Issued by the Department of Mines

Fiscal Years 1945-46 and 1946-47

Designation of Title	1945-46	1946-47
Claims recorded, Amos	17,488	10,238
" " Noranda	4,361	2,699
" " Quebec	4,652	3,395
Total	26,501	16,332
Miner's certificates issued	9,225	5,408
Development licenses issued	4,298	3,263
Development licenses renewed	4,378	6,622
Mining concessions	7	12
Transfer of titles	3,721	2,166
Reports of work: days reported	336,465	2,770,973
Reports of work: diamond drilling, feet	265,369	2,509,863

TABLE II
Titles Issued Since 1930-31
(Fiscal Years)

Fiscal Year	Number of Miner's Certif.	Number of Claims Recorded	Number of Development Licenses(1)	Mining Concessions		Transfer of Mining Rights
				Number	Acres	
1930-31	1,981	6,034	1,341	3	967	855
1931-32	2,324	8,108	906	4	1,940	425
1932-33	3,178	11,211	1,065	4	2,578	908
1933-34	3,002	10,915	1,557	4	2,627	940
1934-35	3,395	11,397	1,680	9	3,541	987
1935-36	4,043	12,962	1,770	5	2,233	1,078
1936-37	7,099	23,823	2,398	2	990	2,400
1937-38	2,718	12,918	2,932	17	4,089	1,217
1938-39	3,221	10,337	2,777	7	2,123	830
1939-40	2,181	7,325	2,320	4	1,574	555
1940-41(2)	965	3,015	1,538	2	1,029	334
1941-42	1,589	4,991	1,936	10	3,765	447
1942-43	1,710	4,420	2,107	4	569	463
1943-44	3,113	8,941	2,788	3	341	978
1944-45	7,303	19,547	4,219	3	726	2,358
1945-46	9,225	26,501	8,676	7	2,566	3,721
1946-47	5,408	16,332	9,885	12	4,475	2,166

- (1) Prior to June, 1937, these licenses were designated "Mining Licenses"
 (2) Interim fiscal period of nine months, from July 1st to March 31st, owing to change in date of the commencement of the fiscal year.

TABLE III

Comparative Statement of Exploration Work Performed on
Mining Claims and Licenses During the
Calendar Years 1931-46

Calendar Year	Number of Days' Work	Footage of Diamond-Drill Holes
1931	124,050	23,486 feet
1932	184,815	44,873 "
1933	263,900	49,889 "
1934	500,502	123,257 "
1935	543,094	146,425 "
1936	730,295	202,623 "
1937	910,088	434,903 "
1938	774,709	517,587 "
1939	549,580	299,619 "
1940	335,499	240,370 "
1941	255,352	169,110 "
1942	175,338	115,056 "
1943	40,160	25,913 "
1944	59,066	37,209 "
1945	250,846	205,991 "
1946	1,463,934	1,296,074 "

INCORPORATION OF MINING COMPANIES

There were fewer incorporations of new mining companies during the calendar year 1946 than in 1945. The parity of the Canadian dollar with the United States' dollar which was decreed early in July, 1946, was a major contributing factor to this falling off. This measure considerably reduced the returns of operating gold mines, as it entailed a fall of \$3.50 an ounce in the selling price of our gold.

As a consequence of this policy, the financing to explore and develop new mineral discoveries was greatly hindered, and reduced the number of new mining companies.

In 1946, eighty-one (81) mining companies were incorporated with Quebec charters; sixty-eight (68) with Ontario charters acquired mining rights in Quebec, as also did five (5) with Federal charters. This brings to one hundred and fifty-four (154) the total number of new mining companies organized in 1946 to operate in the Province of Quebec, against two hundred and seventy-one (271), in 1945.

Mining Companies. Incorporated by
Charters of the Province of Quebec

in 1946

(Calendar Year)

Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Abron Mines, Ltd....	Montreal ..	April 24	3,000,000	\$ 1
Accomac Gold Development Syndicate	Montreal ..	July 26	50,000	\$ 1
Adu Granite Inc. ..	Montreal ..	May 10	200	\$100
Amalgamated Chibougamau Gold Mines, Ltd.	Montreal ..	June 13	3,500,000	\$ 1
Barmont Mines, Ltd..	Montreal...	Sept. 10	3,000,000	\$ 1
Barny Gold Mines ...	Montreal ..	Nov. 22	3,000,000	\$ 1
Beco Inc.	Rimouski ..	May 7	100,000	\$ 1
Belcourt Gold Mines, Ltd.	Montreal ..	Nov. 8	3,500,000	\$ 1
Briqueterie St.Tite Ltée, (La)	St-Tite ...	July 29	480	\$100
Cache Bay (Chibougamau) Mines, Ltd. ..	Montreal ..	Feb. 4	3,000,000	\$ 1
Canada Black Granite Company, Ltd.....	Rouyn	Sept. 10	2,000	\$ 10
(Compagnie de Granit Noir du Canada Ltée)				
Carlyle Mines, Ltd..	Montreal ..	Dec. 20	3,500,000	\$ 1
Carpentier Goldfields Ltd.	Montreal ..	June 18	3,000,000	\$ 1

Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Carrière Saguenay Inc.	Jonquièrè .	Jan. 18	20,000 (a) 299	\$ 1 \$100
Chaux Bonsecours Limitée (Bonsecours Lime, Ltd)	Montreal ..	Oct. 23	200,000	\$ 1
Chavigny Gold Mines, Ltd.	Montreal ..	April 5	3,000,000	\$ 1
Coleraine Asbestos Co., Ltd.	Montreal ..	Dec. 27	3,000,000	\$ 1
Compagnie de Tourbe de Québec Ltée (La).	Québec	Aug. 21	200	\$100
Courtown Gold Mines, Ltd.	Montreal ..	July 3	3,000,000	\$ 1
Cuvier Mines, Ltd. ..	Montreal ..	April 15	3,000,000	\$ 1
deClercq Mining, Ltd..	Montreal ..	Jan. 11	3,000,000	\$ 1
Deep Rock Yellowknife Prospecting Syndicate, Ltd.	Montreal ..	May 8	35,000	None
DeLaRiRo Limitée	Québec	Jan. 23	49,000	\$ 1
Dikor Mines, Ltd. ...	Malartic ..	May 2	3,000,000	\$ 1
Eagleland Goldfields, Ltd.	Montreal ..	July 8	5,000,000	\$ 1
Eastmac Mines, Ltd... East Trecesson Gold Mines, Ltd.	Montreal .. Montreal ..	Jan. 15 Jan. 23	3,000,000 3,500,000	\$ 1 \$ 1
Feldspar Products, Ltd	Montreal ..	July 22	(a) 1,500 2,500	\$ 10 \$ 10
Fleury Mica Mine, Ltd.	St-Joseph d'Alma ...	Oct. 7	30,000	\$ 1
Fort Chimo Mines, Ltd.	Quebec	Sept. 6	3,000,000	\$ 1
Gilmont Mines, Ltd... Grand Calumet Mining Co., Ltd.	Rouyn Montreal ..	Feb. 28 Oct. 17	3,000,000 3,000,000	\$ 1 \$ 1
Granit St.Jérôme Ltée (St.Jérôme Granite, Ltd.)	Montreal ..	May 1	400	\$100
Hargate Quarries, Ltd.	Montreal ..	Aug. 6	400	\$100
Hebecourt Gold Mines, Ltd.	Montreal ..	June 11	3,000,000	\$ 1
Helvetia Mining Co., Ltd.	Montreal ..	Dec. 23	3,000,000	\$ 1
Johnson's Asbestos Company	Thetford Mines	Dec. 14	500,000 (a) 500,000	\$ 1 \$ 1
Johnson's Co., Ltd...	Thetford Mines	Dec. 14	500,000 (a) 500,000	\$ 5 \$ 5
Kelgray Gold Mines, Ltd.	Cadillac ..	April 5	3,500,000	\$ 1
Lacar, Limited	Montreal ..	April 24	300,000	\$ 1
Lake Opawica Mines, Ltd.	Montreal ..	March 20	4,000,000	\$ 1
Lake Wasa Mining Corporation, Ltd. ..	Arncliffe .	Dec. 20	4,000,000	\$ 1

(a) Preferred shares.

Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Laprairie Gold Mines, Ltd.	Rouyn	March 22	40,000	\$ 1
Launay Gold Mines, Ltd.	Montreal ..	Aug. 15	3,500,000	\$ 1
Lithium Exploration Co., Ltd.	Montreal ..	June 4	20,000	\$ 1
MacLeod (D.E.) Granite Inc.	Grenville .	Aug. 22	500	\$100
Michael T. O'Malley Yellowknife Mines, Ltd.	Montreal ..	June 20	100,000	None
Mines Research Inc. .	Montreal ..	Jan. 15	400	\$ 50
Mogador Mines, Ltd. .	Montreal ..	July 25	3,000,000	\$ 1
Monpas Mines, Ltd. .	Montreal ..	April 11	3,000,000	\$ 1
Montpetit (E.) & Fils Ltée	Melocheville	March 11	(a) 1,000 998	\$ 50 \$ 50
Montreal Cut Stone, Ltd.	Montreal ..	Sept. 3	(a) 327 172	\$100 \$100
New Quebec Prospectors, Ltd.	Montreal ..	Feb. 27	45,000	\$ 1
Norancon Exploration (Quebec), Ltd.	Noranda ...	June 7	1,000,000	\$ 1
Northerre Mines, Ltd..	Amos	April 4	5,000,000	\$ 1
Northern Pioneers Exploration Company.	Montreal ..	April 18	60,000	\$ 1
Old Mill Gold Mines, Ltd.	Quebec	Sept. 17	5,000,000	\$ 1
Owl Lake Prospecting Syndicate, Ltd.	Montreal ..	Nov. 25	3,500,000	\$ 10
Paramount Mining and Developing Syndicate, Ltd.	Montreal ..	April 29	500,000	\$ 1
Pasmont Gold Mines, Ltd.	Montreal ..	Jan. 18	3,000,000	\$ 1
Phlogopite Mines, Ltd.	Val d'Or ..	Dec. 9	99,900	\$ 1
Pontiac Mining Co., Ltd.	Hull	April 1	100,000	\$ 1
Prahova Mines, Ltd...	Montreal ..	July 25	3,000,000	\$ 1
Premier Chibougamau Mines, Ltd.	Montreal ..	July 27	50,000	\$ 1
Quebec Oil Development, Ltd.	Montreal ..	May 7	5,000,000	\$ 1
Quebelle Mines, Ltd..	Montreal ..	Oct. 30	3,000,000	\$ 1
Roland Gold and Copper Mines, Ltd...	Val d'Or ..	Nov. 19	3,000,000	\$ 1
St. Johns Petroleum, Ltd.	St. Jean ...	Sept. 10	1,500	\$ 50
Saguenay Mining & Smelting Co., Ltd...	Montreal ..	Feb. 22	3,000,000	\$ 1
Second Gaspe Oil Ventures, Ltd.	Montreal ..	March 21	5,000,000	\$ 1
Selkirk Mines, Ltd...	Montreal ..	July 10	50,000	\$ 1
Sleepy Giant Gold Mines, Ltd.	Rouyn	Feb. 19	3,500,000	\$ 1
Suzorite Co., Ltd. .	Montreal ..	July 10	3,000,000	\$ 1
Tatara Gold Mines, Ltd	Quebec	Nov. 4	3,500,000	\$ 1
Tourbière de St-Fabien Inc. (La) ...	St-Fabien .	May 1	(a) 200 350	\$100 \$100

Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Touton Gold and Base Metals Corporation..	Montreal ..	March 5	3,000,000	\$ 1
Val d'Or Consolidated Mines, Ltd.	Quebec	Nov. 14	3,500,000	\$ 1
Valdora Mines, Ltd...	Montreal ..	Nov. 22	3,500,000	\$ 1
Valley Mining Co. ...	Quebec	April 15	400	\$100
Van Mers Mines, Ltd..	Montreal ..	May 25	3,000,000	\$ 1
White Gold Mines, Ltd.	Montreal ..	Jan. 9	20,000	\$ 1

Mining Companies with Ontario Charters Organized in 1946
to Operate in the Province of Quebec

Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Abremor Metal Mines, Ltd.	Toronto ...	July 27	3,000,000	\$ 1
Aiguebelle Goldfields Ltd.	Toronto ...	April 5	3,000,000	\$ 1
Aldu Mines, Ltd.	Toronto ...	Sept. 18	3,000,000	\$ 1
Allore Rouyn Metals Corporation, Ltd. ..	Toronto ...	July 23	3,500,000	\$ 1
Arthur Exploration & Mining Co., Ltd. ...	Toronto ...	May 16	400,000	None
Aylette Chibougamau Gold Mines, Ltd. ...	Toronto ...	April 12	3,000,000	\$ 1
Barbary Gold Mines, Ltd.	Toronto ...	Feb. 5	4,000,000	\$ 1
Bassique Mines, Ltd..	Toronto ...	April 17	3,000,000	\$ 1
Beaunorm Mines, Ltd..	Toronto ...	May 16	3,000,000	\$ 1
Beau Rand Gold Mines, Ltd.	Toronto ...	April 26	3,000,000	\$ 1
Bocabois Gold Mines, Ltd.	Toronto ...	March 13	3,000,000	None
Bonmartic Mines, Ltd.	Toronto ...	April 10	3,500,000	\$ 1
Budbois Gold Mines, Ltd.	Toronto ...	April 16	3,000,000	None
Candid Quebec Mines, Ltd.	Toronto ...	July 24	3,000,000	\$ 1
Cason Gold Mines, Ltd.	Toronto ...	May 27	3,600,000	\$ 1
Cerberian Mineral Explorers, Ltd.	Toronto ...	July 2	50,000	\$ 1
Chateau Mining Syndicate, Ltd.	Toronto ...	March 8	35,000	\$ 1
Chibou-Wica Goldfields, Ltd.	Toronto ...	April 8	4,000,000	\$ 1
Conti-Mac Mines, Ltd.	Toronto ...	Jan. 21	3,500,000	\$ 1
Cradgene Mining Corporation, Ltd.	Toronto ...	May 3	3,000,000	None
Daljo Gold Mines, Ltd.	Toronto ...	Feb. 8	3,500,000	\$ 1
Danis Quebec Gold Mines, Ltd.	Toronto ...	May 22	3,000,000	\$ 1
Dassoro Mines, Ltd...	Toronto ...	Nov. 14	3,000,000	\$ 1

Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Donmaque Gold Mines, Ltd.	Toronto ...	Jan. 15	3,000,000	\$ 1
Double Strike Mines, Ltd.	Toronto ...	Feb. 5	4,000,000	\$ 1
Ducore Mines, Ltd. ..	Toronto ...	Jan. 5	3,000,000	\$ 1
Duffree Rouyn Gold Mines, Ltd.	Toronto ...	April 4	3,000,000	\$ 1
Elmont Gold Mines, Ltd.	Toronto ...	Feb. 19	3,000,000	\$ 1
El Sol Gold Mines, Ltd.	Toronto ...	Aug. 28	4,000,000	\$ 1
Emens (W.H.) Mining Exploration, Ltd. ..	Toronto ...	March 2	3,000,000	\$ 1
Freegold Mining Co., Ltd.	Toronto ...	April 25	3,000,000	\$ 1
Golden Cache Mines, Ltd.	Toronto ...	June 14	3,000,000	\$ 1
Kabour Mines, Ltd. ..	Toronto ...	Feb. 15	3,500,000	\$ 1
Karado Explorations, Ltd.	Toronto ...	Aug. 27	5,000,000	\$ 1
Kilroy Gold Mines, Ltd.	Toronto ...	Dec. 6	3,500,000	\$ 1
Larderknife Gold Mines, Ltd.	Toronto ...	July 8	3,500,000	\$ 1
Lareva Gold Mines, Ltd.	Toronto ...	April 16	3,000,000	\$ 1
Lavicha Gold Mines, Ltd.	Toronto ...	Aug. 22	3,000,000	\$ 1
Leric Mines, Ltd.	Toronto ...	Sept. 18	3,000,000	\$ 1
Mackwa Mines, Ltd. ..	Toronto ...	May 1	3,000,000	\$ 1
Malbar Goldfields, Ltd.	Toronto ...	Nov. 8	3,500,000	\$ 1
Manontqueb Explorations, Ltd.	Toronto ...	June 6	5,000,000	\$ 1
Matico Mines, Ltd.	Toronto ...	March 2	3,000,000	\$ 1
New Comet Gold Mines, Ltd.	Toronto ...	Nov. 1	4,000,000	\$ 1
Nordis Gold Mines, Ltd.	Toronto ...	June 7	4,000,000	\$ 1
Norzone Rouyn Mines, Ltd.	Toronto ...	Feb. 14	3,000,000	\$ 1
Oregon Quebec Mines, Ltd.	Toronto ...	Jan. 22	3,000,000	\$ 1
Palermo Gold Mines, Ltd.	Toronto ...	Aug. 1	3,000,000	\$ 1
Pal Rouyn Mines, Ltd.	Toronto ...	Feb. 22	3,000,000	\$ 1
Pambelle Mining Co., Ltd.	Toronto ...	March 26	3,000,000	\$ 1
Patrice-Destor Gold Mines, Ltd.	Toronto ...	May 23	3,500,000	\$ 1
Plaza Rouyn Gold Mines, Ltd.	Toronto ...	Feb. 16	3,000,000	\$ 1
Provall Mines, Ltd. ..	Toronto ...	Oct. 17	3,000,000	\$ 1
Rico Rouyn Mines, Ltd.	Toronto ...	Jan. 24	4,000,000	\$ 1
Rouzone Mining Corporation, Ltd.	Toronto ...	Sept. 23	3,000,000	\$ 1
Rover Gold Mines, Ltd.	Toronto ...	April 1	3,000,000	\$ 1
Roybar Chibougamau Mines, Ltd.	Toronto ...	March 20	3,500,000	\$ 1
Sennepas Gold Mines, Ltd.	Toronto ...	Sept. 18	3,000,000	\$ 1
Servil Mines, Ltd. ..	Toronto ...	Feb. 12	3,000,000	\$ 1
South Duquesne Mines, Ltd.	Toronto ...	Jan. 17	3,000,000	\$ 1

Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Southmaque Gold Mines, Ltd.	Toronto ...	Nov. 22	3,000,000	\$ 1
Sullimaque Goldfields Ltd.	Toronto ...	June 1	3,500,000	\$ 1
Tel Gold Mines, Ltd..	Toronto ...	May 9	3,500,000	\$ 1
Tobruc Clericy Mines, Ltd.	Toronto ...	Sept. 18	3,000,000	\$ 1
Tralea Gold Mines, Ltd.	Toronto ...	May 17	3,000,000	\$ 1
Valdestor Mines, Ltd.	Toronto ...	March 18	3,000,000	\$ 1
Wakita Quebec Gold Mines, Ltd.	Toronto ...	Oct. 4	3,000,000	\$ 1
Zoneore Rouyn Mines, Ltd.	Toronto ...	Aug. 29	3,000,000	\$ 1

Mining Companies with Federal Charters Organized in 1946
to Operate in the Province of Quebec

Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Gatineau Hematite, Ltd.	Toronto ...	July 16	50,000	None
Harold Quinland Cut Stone, Ltd.	Ville Lasalle .	May 1	(a) 2,500 150	\$100 None
Kazabazua Corporation, Ltd.	Toronto ...	Nov. 18	50,000	None
Kazabazua Hematite, Ltd.	Toronto ...	June 11	50,000	None
Tetreault Mines, Ltd.	Montreal ..	Dec. 2	(a) 500 9,600	\$100 \$ 25

(a) Preferred shares.

COLLECTION OF DUES ON MINES

During the fiscal year ending March 31st, 1947, the Department of Mines received sworn returns of production from forty operating companies. These returns included statements of profits, with vouchers, as required by Division III, Sections 12 to 24 of the Quebec Mining Act. The dues collected from this source amounted to \$896,941.31.

Moreover, the acreage tax of 10 cents an acre on idle mining concessions brought in a total of \$1,535.13. The balance of holders of unproductive mining concessions, to the number of 137, sent in sworn state-

ments to the effect that at least \$200 had been spent in mining work on each concession. This is the statutory condition for the remittal of the acreage tax above mentioned.

S. Drouin is in charge of the collection of dues on mines.

TABLE IV

Comparative Statement of Revenue

Collected by the Department of Mines

During the Fiscal Years 1944-45; 1945-46; and 1946-47

(Prepared by Robert Samson, Chief Accountant)

	1944-45	1945-46	1946-47
Miner's certificates	\$ 67,280.00	\$ 85,420.00	\$ 56,840.00
Development licenses	255,152.46	500,468.63	628,401.08
Penalties	-----	-----	1,200.00
Sales of mining concessions	5,250.00	16,447.25	36,870.33
Fees for transfers of titles	23,519.00	37,215.00	20,155.00
Acreage tax on mining concessions	3,114.99	2,565.81	1,535.13
Dues on townsite lots	6,837.87	15,462.89	30,879.35
Dues on profits of mines	1,684,632.32	1,330,679.54	896,941.31
Sales of unwrought metal licenses ..	26.00	18.00	20.00
Sales of maps, blue prints, etc.	3,560.45	4,938.55	4,094.75
Sales of mineral collections	78.00	421.50	578.50
Fees for assays and analyses	381.05	7,376.70	2,952.10
Sampling plant:			
Rent and sale of supplies	2,483.13	1,916.00	2,040.01
Miscellaneous	149.90	782.90	1,397.35
Casual revenue ...	2,951.63	4,648.83	388.69
Totals:	\$2,055,416.80	\$2,008,361.60	\$1,684,293.60

GEOLOGICAL SURVEYS BRANCH

This Branch, under the direction of I.W. Jones, during the fiscal year 1946-47, continued investigating the nature, distribution, and structural relations of the rock formations in various parts of the Province. As an outcome of this kind of work the Department publishes geological reports, accompanied by geological maps, giving the results of the investigations. These maps and reports aid prospectors and others in their search for mineral deposits and they are consulted frequently also in the development of other natural resources and in engineering projects of various kinds.

The value of geological investigations - whether by government services or private enterprise - is generally recognized. Monies expended on these investigations are repaid many times. In some cases, for reasons such as handicaps of distance, beneficial results may show up only several years after the investigation, while in others, there may be immediate returns. To geologists, firstly of government service and more recently of private enterprise, must be given a large measure of credit for the very important developments taking place today in that northern part of the Province known as New Quebec or Ungava. The presence of iron in that then distant region was first made known as the result of the explorations made in 1893 and 1894 by a member of the Dominion Geological Survey, the only government geological service in the country at that time. In recent years, geologists of the Quebec Department of Mines discovered important ilmenite deposits (a source of titanium and iron) in the region immediately north of Havre St.Pierre, a port on the north shore of the lower St.Lawrence; others discovered geological structures in Eastern Gaspé, which are attracting considerable interest as possible sources of petroleum; and in northern Abitibi, still other geologists of the Department pointed the way to some of the interesting gold discoveries that prospectors have recently been making in this region.

The geological investigations undertaken by this Branch in the fiscal year under review numbered seven. It would have been desirable to have undertaken a greater number of projects, but it was impossible to find more geologists to do the much needed work. It may be mentioned that, even with twice as many geological parties in the field as there were in 1946, it would take more than 500 years to adequately cover the nearly 85 per cent of the Province that, as yet, has not been examined geologically in any way.

The field-work undertaken during the summer of 1946 was as follows:-

Northern Abitibi.

W.W. Longley examined the Bachelor Lake area, comprising about 250 square miles of territory bounded by latitudes 49°30' and 49°45' and longitudes 76°00' and 76°15'. The work of Dr. Longley contributed to the discovery of important gold deposits in the area by prospectors at the close of the 1946 season.

J. Claveau mapped the Iserhoff River area which, bounded by latitudes 49°30' and 49°45' and longitudes 76°45' and 77°00', comprises about 240 square miles.

O.D. Maurice examined the Razilly map-area, extending between latitudes 49°15' and 49°30' and between longitudes 77°45' and 78°00'. Comprising about 195 square miles, the area includes all the townships of Razilly and parts of Soissons, Barrin, Champdoré, Noyon and Vezza.

Northern Pontiac

W.G. Wahl, under the direction of F.F. Osborne, investigated the Cawatose area, bordering the Mont Laurier-Senneterre highway between latitudes 47°15' and 47°30' and longitudes 76°55' and 77°20'. In addition to constituting the commencement of a study of the relations between the two major geological sub-provinces - the Temiskaming, in which are situated the presently known gold-copper deposits of the Abitibi region, and the Grenville, which extends from this area southward to near the St. Lawrence valley - the investigation was undertaken in this particular area also so as to be able to examine the rocks exposed there before they are covered by the raising of the waters as a result of the construction of a dam at the outlet of Dozois lake.

St. Lawrence Lowlands

T.H. Clark continued investigating the St. Lawrence Lowlands between Montreal and Quebec. One of the main objects of this work is to determine the petroleum and natural gas possibilities of the region. The year 1946 saw the completion of the investigation as far as the lowlands south of the St. Lawrence are concerned. In order that the results to date would be made known without having to wait until the area north of the river has been completed, Dr. Clark prepared a summary geological report to cover the four seasons he had already spent on this project to the south of the St. Lawrence. This report, with a preliminary geological map, was published as P.R. No.204.

Gaspé Peninsula

L.S. Russell made a special study of the stratigraphy of the Forillon peninsula, Cap des Rosiers township. The rocks so well exposed in the sea-cliffs of this most eastern point of Gaspé furnished information that will be useful in the search for petroleum that is under way in this section of the Province. Interesting discoveries were made of bentonite, a material which, if found in beds of sufficient thickness, could have important industrial applications.

H.W. McGerrigle spent most of the time in compiling the very considerable amount of geological information that had been obtained in Gaspé during investigations undertaken since 1937. A comprehensive report on the geology of Eastern Gaspé will result. Dr. McGerrigle also made brief visits of inspection to the various places where petroleum is being sought by drilling operations in eastern Gaspé and to mineral occurrences in other parts of

the peninsula. Furthermore, Dr. McGerrigle spent considerable time in examining and recording the rocks encountered in the deep-drilling operations that were being conducted in the search for oil.

In addition to the work mentioned above, Dr. Jones and his staff had frequent occasion to deal with requests for information concerning the geology of the Province and related subjects. Members of the staff also took part in meetings of various geological, engineering and prospecting associations, such as the Geological Society of America, the Canadian Institute of Mining and Metallurgy, and the Prospectors and Developers Association. Dr. McGerrigle, in May 1946, presented a paper entitled "A Revision of the Gaspé Devonian" before the Royal Society of Canada at its Toronto meeting; the paper was subsequently printed in the transactions of the Society. Dr. Jones took part in the September, 1946, meeting of the Interprovincial Mines Ministers' Conference held in Winnipeg.

MINERAL DEPOSITS BRANCH

Bertrand T. Denis, chief of this Branch, reports as follows on the activities during the past fiscal year:-

The technical officers of this Branch make geological investigations of mineral occurrences, mining properties, or mining districts with a view to furthering the development of the mineral industry within the Province. Technical advice is given to prospectors and to companies engaged in exploration and development.

The resident geologists appointed to mining districts are attached to this Branch. The chief function of these officers is to compile and to correlate all the geological information brought to light in the course of mining exploration in their respective districts.

W.G. Robinson, resident geologist to the western half of the Western Quebec Mining Belt, has his headquarters in Rouyn. During the past year he has partially completed the compilation of the geology of five townships and some of these maps, in one quarter township sheets, will be ready for distribution to the public shortly.

W.N. Ingham has been recently appointed as resident geologist to the eastern half of the Western Quebec Mining Belt and will set up his headquarters in Val d'Or.

During the summer and early autumn, nine parties were in the field. The lack of trained personnel continues to be the principal factor limiting the field work of the Branch.

P.E. Auger is continuing the detailed study of an area in Temiscamingue county, centred around the Belleterre Mine in Guillet township. Sheet No.2 of the Belleterre Map-Area was completed and this sheet includes the Belleterre mine itself.

P.E. Bourret, Industrial Minerals technologist, examined 60 mines, quarries and prospects in the southern parts of the Province. The purpose of these visits is to advise the owners on the economic value of the deposits concerned, and to furnish information regarding development, mining and milling operations, and the marketing of their products.

J.P. Drolet commenced a study of ground-water conditions in the Western Quebec Mining Belt where procurement of suitable water supply for some of the mines and the centres of population presents difficulties. Professor A.A. MacLean acted in a consulting capacity to this party.

H. Girard closely followed developments in the peat industry throughout the Province and at frequent intervals gave technical advice to each of the operators engaged in the production of peat. He also made a systematic survey of large peat bog areas in the townships of Escoumains and Bergeronnes.

R.B. Graham continued the detailed geological study of a strip of territory in Duparquet and Hébécourt townships with a view to tracing a structural zone of metallic mineralization as far as the western boundary of the Province. The area covered includes the Beattie and the Donchester mines. A geophysical sub-party under the supervision of L. Massé was attached to this geological party.

W.N. Ingham made geological examinations of forty-one mining properties under development in the eastern half of the Western Quebec Mining District.

S.H. Ross made geological examinations of forty mining properties under development in the western half of the Western Quebec Mining Belt.

G.W. Waddington continued the examination and sampling of marl deposits in the southern part of the Province. This work has been undertaken at the suggestion of the Department of Agriculture. Information was gathered on 102 deposits and it is estimated that there remains but a few weeks work to complete this investigation. Seven deposits of minerals other than marl were also examined at the request of interested prospectors.

W.W. Weber commenced a programme of detailed geological mapping of an area in Abitibi-East county centred around several promising gold discoveries under development in Duvernay township, a few miles northeast of Amos.

The Mineral Deposits Branch has also been assigned the duty of examining reports submitted in support of requests for the acceptance of geological and geophysical surveys as assessment work. The regulations covering acceptance of such surveys have been revised and liberalized with the result that many more such surveys have been submitted since the first of January, 1947. Twenty-three such reports were examined in the last quarter of the

fiscal year, and it is anticipated that many more such reports will be submitted with the result of adding to the Department files much valuable information on mining properties under exploration.

DIVISION OF TECHNICAL INFORMATION
AND DISTRIBUTION OF PUBLICATIONS

Owing to the resignation of Jean Morency, who was transferred to the Board of Transportation and Communication Companies of the Province, his former assistant, Jean Lapointe, who is acting in charge of the Division, compiled the following report of its activities during the fiscal year 1946-47.

A.-Requests for information regarding mining companies	119
Requests from the interested public for information, and ensuing correspondence regarding matters of a technological nature; yearly reports of mining companies to their shareholders; and information on mining, geology, mineral deposits and other questions	254
B.-Careful examination of technical mining reports and prospectuses submitted by the Registrar of the "Quebec Securities Act" ..	52
C.-Examination of plans and reports submitted by the "Mineral Rights and Mining Titles Branch" of the Department of Mines, regarding mining concessions	17
D.-Requests from the public for various publications of the Department	3,452
Publications sent to the mailing list and also mailed on request of members of the staff	2,061
Mailing of notices of new publications	3,629

During the fiscal year the staff of the distribution of publications, under E. Brochu, has mailed 10,490 separate publications in answer to 2,731 written requests, and, in addition, 2,632 copies of our various publications were supplied to 721 visitors who came personally to the Department offices.

From the printers the Division received 19,950 copies of new publications.

This division mailed or expressed 913 outgoing parcels, and received 1,381 incoming ones, addressed to the various branches of the Department of Mines.

E.-In addition, the Division has kept up to date the filing and classifying of plans and records of all underground mine workings, which mining companies must send

yearly to the Department of Mines covering the work completed during the calendar year. For the year ending December 31st, 1946, the Division received plans, brought up to date, of underground workings from 55 operating mining companies. It also received copies of the yearly reports to shareholders, from 114 mining companies.

F.-Moreover, the Division collects, compiles and classifies items of interest, concerning the mining industry and mining companies, clipped from technical periodicals and newspapers.

INSPECTION OF MINES BRANCH

During the fiscal year under review there were no staff changes in this branch, and it comprised the following:

Chief Inspector of Mines	- R.H. Taschereau
Inspector of Mines (District No.6)	- M.O. Lafontaine
Mining Engineer, (District No.6)	- Marcel Papineau
Inspector of Mines (District No.5)	- Jean de Péron
Inspector of Mines (Districts No.1 and No.2)	- A.G. Michaud
Mine Constable (District No.6)	- E.O. Larivière
Mine Constable (District No.1)	- Arthur Baillargeon

The six mine inspection districts of the Province are, as follows:

- 1.-The Eastern Townships, from the Richelieu river, eastward to and including Lévis and Dorchester counties.
- 2.-The counties of Gatineau, Labelle, Papineau and Argenteuil, and the area south of the fifty-sixth parallel of latitude in Pontiac county.
- 3.-The area comprising the counties east of Joliette, to the north of the St-Lawrence river.
- 4.-The area east of Lévis and Dorchester counties, to the south of the St.Lawrence river, including the peninsula of Gaspé.
- 5.-The city of Montreal, and the immediate surrounding area.
- 6.-Western Quebec, comprising the counties of Abitibi-East, Abitibi-West, Rouyn-Noranda and Témiscamingue.

The duties of this Branch may be summarized as follows:

1.-The application of the Quebec Mining Act in general, and especially as it concerns the following sections:

- a) Section 198.-Inspection of mines, quarries and gravel pits.

- b) Section 13.-Sites of projected treatment plants.
- c) Section 123.-Tailings sites.
- d) Section 196.-Accident reports.
- e) Section 35.-Use of mining concessions for purposes other than mining.
- f) Section 70.-Buildings on Crown Lands.
- g) Section 201.-Report to the Minister.
- h) Section 199.-Plans of mining properties.

2.-The examination of mines and quarries with a view to keeping the Department generally informed on the progress of the mineral industry.

3.-The application of the Unwrought Metal Sales Act.

4.-Special duties assigned by the Minister.

The mine constables assist the inspectors in various phases of their work, and carry out other duties assigned to them by the Minister.

In the calendar year 1946-47, 977 inspections were made of mines, quarries and gravel pits, and reports of these inspections were transmitted to the Department with information concerning developments and the safety of workmen.

In accordance with the provisions of Section 196 of the Mining Act, all compensable accidents are reported by the mine and quarry operators to the inspectors, and the latter classify these reports and forward them to the Quebec office. In the case of accidents of a very serious nature, even where no loss of life may have occurred, the inspector makes a thorough investigation and report. These reports, in both languages, are multigraphed, and copies are forwarded to the mine and quarry operators, and to other parties interested in mine safety work.

In the fiscal year, Orders-in-Council were enacted approving the sites of new treatment plants on the properties of Malartic Gold Fields, Limited, and Louvicourt Goldfield Corporation, Limited. The latter property was brought into initial production in the spring of 1947. No approvals of tailings sites were granted in this twelve-month period.

Permission to ship concentrates outside the Province for treatment, as required under Section 13 of the Mining Act, was granted to the following companies:

Golden Manitou Mines, Limited
Molybdenite Corporation of Canada, Limited
New Calumet Mines, Limited
Normetal Mining Corporation, Limited
Waite-Amulet Mines, Limited

Twenty-six certificates in First Aid to the Injured were presented to employees of various mining companies who had successfully completed courses in this subject.

Under the provisions of the Unwrought Metal Sales Act, eight new licenses were issued during the fiscal year. Monthly reports of transactions were received from twenty-eight license holders.

DRAUGHTING AND CARTOGRAPHY BRANCH

Léon Valois, Prof. Eng. is in charge of this branch. Armand Blanchette is the assistant-chief. In addition the branch employs nine draughtsmen and a stenographer, altogether a staff of twelve.

During the year, topographical field maps were prepared for all the geological field parties of the Department of Mines; and also several maps and geological plans were compiled from manuscripts and notes of field-work performed previously. These maps and plans were then prepared for reproduction and publication.

This Branch also does all the drawing of plans and compilation of maps required by all the other branches and divisions of the Department of Mines.

The Branch keeps strictly up-to-date two sets, or series, of tracings on linen. On one of these sets of tracings are plotted all the mining claims, as they are staked out and recorded; on the other series are shown the landmarks and boundaries of the properties of mining companies. Each individual linen tracing, in both sets, covers the area of one township, approximately 100 square miles on a scale of 40 chains to the inch. The first series, of claims staked out, consists of 385 separate tracings, on which were plotted, during the year, the bounds of 16,332 mining 'claims'; the other set consists of 140 tracings. Of all these linens a total of 10,677 prints were struck off.

The following geological maps were prepared, and their lithographing was supervised by the Branch during the year.

Final Maps

(a) Completed:

- No.-544 - Nomingue Area
- No.-616 - Wetetnagami Lake Area

(b) In press:

- No.-545 - Sicotte Area
- No.-604 - Tonnancourt-Holmes Area
- No.-615 - Wetetnagami River Area
- No.-617 - Western Part of Beauchastel
- No.-618 - Desvaux Lake Area

(c) In preparation:

- No.-629 - Bergeronnes-Pontgravé Area
- No.-638 - Simon Lake Area

(d) Preliminary Maps:

- No.-623 - Lanaudière River (2 colours)
- No.-624 - Watshishou Quartz Hill
- No.-626 - Belleterre Area (Sheet I)
- No.-628 - Iserhoff River Area
- No.-631 - Forillon Peninsula
- No.-632 - Bachelor Lake Area
- No.-633 - Thirty-one Mile Lake Area
- No.-634 - Zinc Ore Deposit, Northfield
- No.-636 - Razilly
- No.-637 - Duvernay Area (2 colours)

Moreover, thirty-four (34) other geological plans, which are not intended for publication were traced on linen by our draughting staff.

Two editions of a special map of Abitibi Region, Nos. 630 and 635 respectively, were prepared, to serve as index maps for the series of linen tracings of the townships of "Western Quebec". On these are indicated the location of the holdings of mining companies. Two editions of a similar map of the Chibougamau region (Nos. 625 and 640) were also published.

Various other drawings, such as articles of office furnishings, machinery, graphs, and others, of artistic or useful nature, were also executed by our draughtsmen when requested.

DIVISION OF MINERAL STATISTICS

The main functions of the Division of Mineral Statistics are to collect the figures and data needed to compile: (1) the annual statistics regarding the mining industry of Quebec, which are published in the Annual Report of the Department of Mines, entitled "The Mining Industry of the Province of Quebec"; (2) other statistics of a more restricted general interest, which are kept in the files of the Department, for the information of its several branches, and also of the public interested in the mining industry of the Province; (3) the monthly statistics of production from which are made up the monthly and quarterly bulletins issued by the Department of Mines.

This division works in close collaboration with the Federal Bureau of Statistics; the latter uses the same source of information to compile and establish the mineral statistics of the Dominion. Our Division transmits to the Federal Bureau a copy of the returns that we receive, which the Federal Bureau may need for its purpose.

For the calendar year 1946, the activities of our Division comprised the usual work of collecting

the figures of production, as well as other information and data regarding our mines and quarries, necessary to compile and establish:

(a) the general annual statistics of production and other activities of all the mining and quarrying companies of the Province, such as output, shipments, employment, wages, supplies consumed in operations, power used, taxes paid, and many other items. This is the chief work of the Division;

(b) net funds received, from some specified sources, by the treasury of mining companies, operating, or holders of mining rights, in the Province;

(c) timber and lumber used by mine operators during the year;

(d) monthly production of the chief products of our mines and quarries.

To obtain the data necessary for the compilation of the 1946 general annual statistics, the Division sent out appropriate return forms to 3,011 operators of mineral substances asking for the required data. We received filled-in forms from 2,779 of these operators or 92 per cent of those sent out. The returns received comprised those of all operators of any importance. Of these 2,779 reports, 1,249 showed figures of production or shipments of products, 547 reported "no production", but gave statements and figures of development work and prospecting performed. The balance, 983, answered that no work of any kind had been done during the year.

For the same purpose we corresponded with 245 building and road construction contractors to enquire if they had knowledge of the temporary opening of sand or gravel pits during the year, and we received 213 answers.

As regards enquiry (b) as to the net amount of funds received in the treasury of mining companies from the sale of shares of their company; from the issue of bonds or other securities; and from long term loans contracted, from 949 questionnaires sent out, we received 768 answers. In scanning the list of organizations who did not answer, many had previously reported "no work done during the year", and it is unlikely that they effected financial transaction of any importance.

The compilation of the answers to this enquiry gave a total of \$27,250,000 taken in from the sources enumerated above. We sent out 788 questionnaire forms, and received 691 reports.

To ascertain the quantity of timber and lumber (other than fuel wood) used by the mines of the Province, we sent out 196 questionnaires to operators and 170 returned the filled-in forms.

To obtain the data needed for the compilation of the monthly reports supplied by 60 of the important operators of mines and quarries, we sent out forms

every month, and from the answers, the trend and tendencies of our mineral industry may be followed throughout the year.

In 1946, this division sent out, altogether, some 5,120 forms asking for the data needed for the purpose of the mineral statistics, and we received 4,650 answers giving the information requested. It also prepared and distributed each month 300 copies of the monthly reports of the principal minerals, and the same number of quarterly reports of the gold production giving the shipments of gold metal of each individual mining company.

LABORATORIES BRANCH

This Branch comprises the following divisions: I- the Department of Mines laboratories in Quebec, in Montreal and in Thetford Mines; II- the sampling and ore dressing plants near Val d'Or; III- the University course of lectures on prospecting; IV- elementary popular lectures to prospectors; V- Department of Mines Museum; VI- mineral displays at exhibitions.

Maurice Archambault is the chief of this Branch. His assistants are: G.S. Grant, manager of the Sampling and Ore Dressing plant; P.-E. Pelletier in charge of the laboratory of spectrography and radiocrystallography; Henri Boileau is chief chemist.

I - Laboratories

Chemistry, Spectrography, Radiocrystallography,

Mineralogy and Metallurgy

During the fiscal year 1946-47, the number of samples received at the various laboratories of the Department of Mines was 14,742, and on these 36,625 assays, analyses, and quantitative examinations were carried out, including microscope, spectrograph, and X-ray determinations. These operations were distributed as follows:

	LABORATORIES			
	Quebec	Montreal	Thetford Mines	Totals
Number of samples received	12,904	1,502	336	14,742
Assay coupons received	9,444	1,706	---	11,150
Quantitative Analyses:				
Dep't analyses ...	5,783	---	997	6,780
Paid analyses	1,926	474	---	2,400
Assays paid by coupons	9,767	1,706	---	11,573
Qualitative examinations	12,226	29	---	12,255
Spectrographic examinations	2,404	---	---	2,404
X-ray examinations ..	1,313	---	---	1,313
Totals	33,419	2,209	997	36,625

The work done at the Thetford laboratory consists exclusively in physical tests in connection with the quality and classification of the products of the asbestos industry. The Montreal laboratory performs routine quantitative analyses and assays.

The Quebec laboratories are, by far, the most important; they comprise:

- (1) - a division of Spectrography and X-ray
- (2) - a division of Chemistry
- (3) - a division of Mineralogy and Petrography
- (4) - a division of Metallurgy

The spectrography and X-ray is completely equipped for mineralogical and metallurgical analyses. During the year the work performed comprised 2,494 spectrographic analyses, 1,313 radiocrystallographic determinations and 10 radioactivity measurements.

The spectrographic work comprised 1,779 quantitative analyses, 625 qualitative determinations and 182 spectro-photo chemical analyses.

The X-ray spectrometer, the installation of which was mentioned in last year's report, has proved to be a valuable instrument to determine the crystallographic structures and to observe the phases of various thermal reactions. Moreover, it is an ideal tool to determine rapidly the quantitative molecular composition of a rock, or of a mixture.

Owing to the completeness of the equipment of this laboratory, we have had requests from provincial governments' departments to carry out special research work which could only be performed by spectrography or radiocrystallography. We thus co-operated with our departments of Health and of Agriculture and also with the Ontario Department of Mines.

In March 1947, our laboratories acquired a complete set of standard samples of the National Bureau of Standards at Washington, and we are completely equipped for constantly checking and verifying the methods of analyses currently used. In the near future another collection of metals and rare earths, at present obtainable only in Europe, will be added to the first collection.

In the fall of 1946, P.-E. Pelletier attended special lectures on the most recent methods of X-ray applications. These lectures were delivered in New York, under the auspices of the North American Philips Company.

The Chemistry division comprises a pyro-analysis laboratory; a general laboratory for quantitative and qualitative analyses; a fuel and electrolysis laboratory. All these laboratories are equipped with the most modern appliances, and are manned by a staff of seven chemists, who are all graduates of recognized universities.

The equipment of the pyroanalysis laboratory comprises among other apparatus, three electric furnaces, each with a capacity of 20 large crucibles, and two scales of a sensitivity of 0.001 milligramme.

The General Laboratory is equipped to perform geochemical analyses of rocks and minerals, which require extreme precision. In addition to the assaying and analytical work to meet the needs of prospection, the general laboratory did all the analyses required by the research work on certain ores of low tenor or refractory to treatment; also by the solution of various production problems of technical nature, submitted by small industries.

During the fiscal year, the division of chemistry did 11,448 determinations of precious metals, 4,281 general analyses including 212 complete analyses of minerals and 10 complete analyses of oil, waters and rocks. All these operations were done in duplicate at least, so as to check the results for exactitude.

In the division of mineralogy and petrography, Carl Faessler, A. Bleau and J. Lefavre, have examined 3,541 samples and specimens of rocks and minerals which required 12,179 determinations.

In the division of metallurgy, Louis Bourgoin worked on the refining of the titanium oxide which he had extracted from the low grade ilmenites of the Baie-Saint-Paul region to render them available as a white pigment for the manufacture of paints. He also worked on the problem of obtaining pure iron metal electrolytically from the same ore so that it could be used as a material for powder metallurgy.

B.J. Walsh 1) investigated the possibilities of separating molybdenite and bismuthinite in mill products from Molybdenite Corporation by means of air separator (Kipp-Kelly), cyanidation and blanket tabling. 2) Investigated the treatment of MacDonald Mines ore by flotation. 3) Investigated the treatment of Candego Mines ore by jigging, tabling and flotation. 4) Made preliminary investigation of flotation of apatite from High Rock mine using both fatty acids and amines.

In order to help and render services to the industries of the province who use products or by-products of our mines, or any mineral substances, as raw materials in their plants, Roger Potvin was given charge to make an enquiry regarding any difficulty or problem which the operators had to face. For this purpose he visited 123 plants, distributed in the districts of Quebec city, Trois-Rivières, Montreal, Sherbrooke, and Rivière-du-Loup. One hundred and sixteen (116) problems of this nature were submitted to him in the course of his visits. Sixty-eight (68) of these problems have been solved, some on the spot, after discussions and conferences with the interested parties; others within a few weeks, after further correspondence and advice. Twelve (12) considered to be of a general interest to that particular industry could not be solved without industrial research work, some of which would entail long and exacting labour.

In the few months which followed his visits, Dr. Potvin received 26 further requests of assistance to solve other problems, of manufacture and others and they were satisfactorily elucidated.

Jean Laneuville investigated some troubles which a newly installed electroplating factory was experiencing, and which were crippling it. He conducted a series of experiments and he determined the conditions which permitted to operate normally, and to produce adhering deposits of electrolytic nickel.

II - Sampling and Ore Dressing Plant

This plant is situated near the town of Val d'Or, in the county of Abitibi-East. G.S. Grant who is the manager submits the following report:-

Sampling Plant

Shipments of ore received for bulk sampling were as follows:

<u>Shipper</u>	<u>Type of Ore</u>	<u>Lots</u>	<u>Weight</u>
Oromaque Gold Mines, Ltd.	Gold	4	381 lb.
Quesabe Mines, Ltd.	Gold, copper	2	2,242 "
Val d'Or Mines, Ltd.	Gold, copper	1	6,740 "
Fontana Mines (1945), Ltd.	Gold	25	183,985 "
New Bidlamaque Gold Mines, Ltd.	Gold, copper	6	66,955 "
Formaque Gold Mines, Ltd.	Gold	25	51,826 "
Bargold Mines, Ltd.	Gold	17	3,400 "
Purdy Mica Mines, Ltd.	Gold	2	13,360 "
Totals		82	328,889 lb.

Treatment Plant

Gold.-81,380 lb. of gold ore were received from Duvay Gold Mines, Limited, for treatment. The main purpose of the treatment was to establish the grade of the shipment. Most of the values occurred as coarse free gold. 10.97 oz. of gold was recovered by the amalgamation of jig and blanket concentrates after grinding. The recovery was 72 per cent.

Concentration Plant

Seven hundred and fifty-one tons (wet) of gold, copper, zinc ore were received from Quemont Mining Corporation, Limited, for pilot mill test work at the rate of from 15 to 20 tons per 24 hours. This work was carried out under the direction of Mr. D.E. Bourke, metallurgist for Quemont Mining Corporation and Mr. C.G. McLachlan, consulting metallurgist for Noranda Mines, Limited.

Various flowsheets were tried out for the recovery of the copper and zinc in flotation concentrates. Tests for gold recovery in addition to that concentrated in the copper concentrate involved cyanidation of a sulphide concentrate before or after zinc flotation and the use of jigs, traps and blanket tables. Satisfactory recoveries and grades of concentrates were obtained.

In order to carry out this work much additional equipment was needed for the concentration plant some of which was supplied by Quémont Mining Corporation. Preparations for the test work covered a period of about four months and the treatment period including that taken up with making changes in flow sheet was about five months.

The Plant is now well equipped for work of this kind.

III - University Course of Lectures

on Prospecting

The Department of Mines has inaugurated this year, by a grant of money, a university course of lectures on prospecting. These lectures were delivered at the Science Faculty of Laval University, under the able direction of Abbé J.W. Laverdière, in charge of the department of Geological Sciences.

This advanced course included chemistry, fire-assaying, mineralogy, geology, drawing, theory of prospecting and field excursions. The lectures were given, without interruption, from April 22nd to May 25th. These 160 hours of lectures were diligently attended by 26 prospectors.

IV - Elementary Lectures to Prospectors

As in past years, the department of Mines organized free courses of lectures, mainly on elementary mineralogy and geology applied to the search for mineral deposits. They are intended for prospectors, and are delivered in various centres of population. Alphonse Bleau, of the permanent staff of the Department gave these lectures during the fiscal year under review.

Popular Lectures Given During Fiscal Year 1946-47

County	Town or Village	Number of Lectures	Total Attendance
Abitibi-East	Amos	5	88
" "	Senneterre	5	65
" "	Oskelaneo	5	34
Beauce	St-Théophile	4	12
Charlevoix	Baie-St-Paul	5	26
Drummond	Drummondville	5	67
Frontenac	Lac Mégantic	5	29
Labelle	Mont Laurier	5	78
"	L'Annonciation	1	21
"	Labelle	5	37
Laviolette	La Tuque	5	43
Rimouski	Rimouski	3	12
Rivière-du-Loup	Rivière-du-Loup	4	20
Rouyn-Noranda	Rouyn	6	127
Sherbrooke	Sherbrooke	5	44
Temiscamingue	Belleterre	5	21
12 Counties	16 Centres	73	724

In order to add to the efficiency of these lectures the Department distributed, free of charge, some 400 copies of the booklet "Notions Elémentaires de Minéralogie". Moreover, copies of "The Prospector's Handbook" and collections of typical minerals and rocks were offered for sale at nominal price.

V - Museum

Additions, by presentation, to the collection of minerals on display in the showcases of the department:

From Gulf Lead Mines, Limited:

Two samples of galena from Little Whale River, east coast of Hudson Bay.

A sample of sphalerite (Zinc blende) from Flint Island, off the east coast of Hudson Bay.

From MacDonald Mines, Limited:

A sample of massive iron pyrites from their claim in Dufresnoy township, about five miles east of the Waite Amulet mine.

From Candego Mines, Limited:

A sample of galena and sphalerite, from their claims in Boisbuisson township, Gaspé Peninsula.

VI - Displays at Exhibitions

The department had displays at the Sherbrooke, Quebec and Brome Exhibitions.

DIVISION OF EDITING AND PRINTING OF PUBLICATIONS

Maurice Brunet, editor of the Department, is in charge of this division. The functions of the division comprise: editing and preparing for reproduction, by printing or other processes, the manuscripts of all reports issued by the Department of Mines; correcting the proofs and generally supervising the printing of the reports. It also sees to the printing of all forms, letter-heads and other printed stationary. It is moreover responsible for the translation of the reports, which must be published in French and in English.

Regarding the publications issued during the fiscal year 1946-47, the chief of the division submits the following list, of which both versions, French and English, are available:

The Mining Industry of the Province of Quebec in 1945.

Geological Report No. 17 - Siscoe Mine Area,
by P.E. Auger.

- Geological Report No.20 - La Géologie de Québec, Volume II, by John A. Dresser and T.C. Denis (French version).
- Geological Report No.23 - Nominuingue and Sicotte Area, by E. Aubert de la Rüe.
- Geological Report No.27 - Lake Desvaux Area, by P.E. Auger.
- Geological Report No.29 - Lake Wetetnagami Area, by R.B. Graham.
- Geological Report No.31 - Peat in Quebec, by Henri Girard.

The Mining Industry and Geological Report 20 were issued in printed volumes. The others were reproduced by the photographic process "photo-litho". All are available in French and in English.

In addition the following preliminary reports (P.R.) have been published also in both languages:

- P.R. 195 - Stratigraphy of the Gaspé Limestone Series, by Loris S. Russell.
- P.R. 196 - Lac-des-Trente-et-Un-Milles Area, Gatineau and Labelle Counties, by E. Aubert de la Rüe.
- P.R. 197 - Iserhoff River Area, Abitibi-East County, by Jacques Claveau.
- P.R. 198 - Bachelor Lake Area, Abitibi-East County, by W.W. Longley.
- P.R. 199 - Minister's Report for Year Ending March 31st, 1946.
- P.R. 200 - Part of Duvernay Township, Abitibi-East County, by W.W. Weber.
- P.R. 201 - Razilly Map-Area, Abitibi-East County, by O.D. Maurice.
- P.R. 202 - Cawatose Area, Pontiac County, by Wm. G. Wahl and F.F. Osborne.
- P.R. 203 - Belleterre Map-Area, (Sheet No.2), Guillet Township, Témiscamingue County, by P.E. Auger.
- P.R. 204 - Saint-Lawrence Lowlands, South of the Saint-Lawrence River, by T.H. Clark.
- P.R. 205 - Mining Properties and Development in Abitibi and Témiscamingue Counties in 1945, by W.N. Ingham and S.H. Ross. Parts I, II, and III.

All the preliminary reports in the above list were reproduced by mimeograph, except No.199, which was made by photo-litho.

CIVIL ENGINEERING WORKS BRANCH

L.A. St-Pierre, P. Eng., chief of this Branch, reports as follows on the work carried out during 1946-47:

Construction of Mine Roads

During the fiscal year ending 31st March, 1947, the length of new mine roads built in the Province was 70.06 miles, bringing to a total of 1,150.73 miles the length of mine roads constructed by the Department of Mines. In addition to the above, a total of 73.60 miles of mine roads were repaired and maintained during the period under review.

The cost of new mine roads built by the Department during the fiscal year was \$809,651.95 which brings the total value of mine roads built by the Department of Mines in the Province to \$7,195,183.02.

The sum of \$809,651.95 expended on new road construction, on repairs and improvements, was met as follows: paid by the Province: \$753,755.39; paid by contributions of mining interests: \$55,896.56.

The following is a list of new mine roads built during this period:

<u>Townships and Counties</u>	<u>Road</u>	<u>Length in Miles</u>
Thetford, Megantic County	Road to Flintkote Mines, Ltd.	1.22
Malartic, Abitibi-East County	Road to East Amphi Gold Mines, Ltd. ..	0.50
Dubuisson & Vassan, Abitibi-East County ...	Road to Norbenite Malartic Mines, Ltd.	2.46
Roberval County	Road to Chibougamau ..	36.17
Seigneurie Fraser, Rivière-du-Loup County.	Road to Trump Peat Moss Corporation ...	0.50
Pershing, Abitibi-East County	Road through Pershing Township	6.00
Rouyn & Dufresnoy, Rouyn-Noranda County ..	Road to Quemont, Do- nalda & MacDonald Mines	9.20
Orford, Sherbrooke County	Road to Orford Marble Quarry	0.33
Lapotardière & Boisbuis- son, North-Gaspé County	Road to Candego Mines, Ltd.	8.00
Portneuf County	Road to Marvel Granite Quarry	4.00

Furthermore, an amount of \$15,000.00 was paid to Siscoe Metals, Limited, as our share of the cost of a road built by this company and leading to a large mica deposit in Suzor township. The plan and profile of this road was set by Guy Thibaudeau, P. Eng., of this Branch.

Contributions totalling \$11,955.00 were made to the Department of Public Works and the Department of Roads towards the cost of repairing bridges and improving the York River road in the counties of North-Gaspé and South-Gaspé. In addition, the Department spent \$964.17 in repairing a bridge spanning Rapide des Cèdres, on the Bell River, on the Senneterre-Lac Madeleine road.

In addition to these new roads, 69.36 miles of existing mine roads were maintained at a cost of \$18,846.37, to which an amount of \$2,939.36 was contributed by mining interests concerned.

These roads are as follows:

<u>Township and County</u>	<u>Road</u>	<u>Mileage Repaired or Improved</u>
Malartic, Abitibi-East County	Road to East Amphi Gold Mines, Ltd.	1.50
Bourlamaque, Abitibi- East County	Road to East Sullivan Mine	2.00
Bousquet, La Pause and Preissac, Abitibi- East County	Road from St-Maurice mine to the village of Cadillac	9.50
Beauchastel, Rouyn- Noranda County	Road to Elder Gold Mines, Ltd.	3.00
Bonaventure	Grand Cascapedia River road	36.00
Beauchastel, Rouyn- Noranda County	Road to Wasa Lake Gold Mines, Ltd.	0.55
Bourlamaque, Abitibi- East County	Road to Louvicourt Goldfields Corpora- tion	3.62
Bourlamaque, Abitibi- East County	Road to New Bidlamaque Gold Mines, Ltd.	1.70
St-Urbain, Charlevoix County	Road from Rang St-Jéro- me to Haut Fourneau mines	1.16
Tiblemont, Abitibi- East County	Road through Tiblemont township	10.33

Furthermore, 6.24 miles of mine road were improved and repaired during the period under review. The

cost of this is included in the total amount of \$809,651.95 shown above.

These roads are as follows:

<u>Township and County</u>	<u>Road</u>	<u>Mileage Repaired or Improved</u>
Thetford, Megantic County	Road from St-Antoine de Pontbriand to Flintkote Mines, Ltd.	2.00
Portland-West, Papineau County	Road to Lapointe Mine .	2.74
Potton, Brone County ..	Road to Baker Mining & Milling Co., Ltd. ...	1.50

In addition to the above work, a survey party headed by Philippe Landry and consisting of Marcel Petipas, P. Eng., instrument men, chainmen, etc., located approximately 42 miles of road ahead of the point where work ceased on the Chibougamau road during the autumn of 1946. Clearing parties followed this survey in order to prepare the road for the spring of 1947. This party started its work on the 16th October, 1946, and came out of the bush at the end of May, 1947.

Maintenance of Winter Roads

During the winter of 1946-47, the Department of Mines contributed an amount of \$14,109.50 towards the maintenance of 334.05 miles of winter roads. A distribution of this maintenance is shown below:

<u>County</u>	<u>Location</u>	<u>Length in Miles</u>
Abitibi-East	Val d'Or to Siscoe Gold Mines, Ltd.	5.25
" "	Siscoe Gold Mines, Ltd. to Amos ...	37.30
" "	Val d'Or to Norbenite Malartic Mines, Ltd.	10.50
" "	Val d'Or to Colombière	10.00
" "	Junction of Highways Nos. 58 and 59 to Senneterre	23.00
" "	Highway No. 59 at Pascalis to Pascalis R.R. Station, and Village of Pascalis and thence to Perron Gold Mines, Ltd.	8.20
" "	Village of Cadillac to Norbenite Malartic Mines, Ltd.	24.30
" "	Senneterre to Croinor Pershing Mines, Ltd.	30.00

Abitibi-West	La Sarre to Duparquet	22.70
"	" Duparquet to Waite-Amulet Mines, Ltd.	25.80
Rouyn-Noranda	Rouyn to Waite-Amulet Mines, Ltd..	6.00
"	" Rouyn to railway station at Cadillac	30.00
"	" Rouyn to the Ontario border	24.00
Temiscamingue	Belleterre to the Ontario border via Notre-Dame du Nord	77.00

Drainage of Peat Bogs and Their Exploitation

The Department of Mines contributed an amount of \$4,120.84 towards the cost of draining certain peat bogs. This work consisted as follows:

<u>Locality</u>	<u>Bog Operators</u>	<u>Length of Trenching</u>
St-Fabien de Rimouski	Tourbière St-Fabien Inc.	13,400 lin. ft.
St-Alban de Portneuf	Clovis Bourque	3,358 " "
St-Ulric de Matane	Louis & Roméo Roy	4,350 " "
Pointe-au-Père.	Dr. Henri Reid	1,650 " "
Ile-aux-Coudres	Excel Peat, Limited	1,000 " "

The depth of the trenches varies between three and eight feet and the width between three and six feet.

Mining Villages

Continued expansion of the mining industry had its reflection in the drastic shortage of housing in mining towns and villages in the Province. This is being met by mining interests by transferring housing from no longer existant war plants, by prefabricated housing and by such new accommodation as can be erected despite the acute shortage of building materials. Notwithstanding these handicaps, towns and villages are growing steadily both in population and area.

The town of Malartic is a typical example of the remarkable growth of mining communities. During the fiscal year under review, to meet the continuing increase in population, it became necessary to subdivide more area into building lots. One hundred and twelve (112) of these lots were placed on sale and 100 were

purchased during this period. An amount of \$21,326.51 was collected from these sales and placed in the Municipal Fund of the town of Malartic to be applied towards the cost of municipal works. During this period, an amount of \$58,934.98 was spent by the town authorities on the improvement and extension of waterworks, sewerage and streets. As a result of these transactions, \$5,922.49 was credited to the Consolidated Fund of the Province as cadastral fees on these new subdivisions.

The village of Cadillac is still expanding. During the fiscal year, 31 new building lots were sold with the result that \$8,213.93 was deposited in the Municipal Fund of the village of Cadillac to be applied towards municipal works. An amount of \$1,294.36 was credited to the Consolidated Fund of the Province as cadastral fees on new lots. Work is being carried out with a view to increasing the capacity of the waterworks and sewerage systems of the village. Several new streets are being opened to cope with increased building activity.

The shortage of housing is being particularly felt in the Rouyn-Noranda area. Sixty-eight (68) new building lots were sold in the village of Rouyn-South and \$13,702.32 was deposited in the Municipal Fund of the village of Rouyn-South from the proceeds of these sales. An amount of \$2,074.06 was credited to the Consolidated Fund of the Province as cadastral fees deriving from these sales. The town of Rouyn spent an amount of \$4,216.30 on improving and extending waterworks, sewerage and streets; this amount has been refunded to the town of Rouyn from the Municipal Fund of the village of Rouyn-South.

The town of Belleterre is progressing normally. Twenty-five (25) new building lots were sold during the fiscal year and an amount of \$4,779.62 was deposited in the Municipal Fund of the town of Belleterre to be applied to future municipal utilities.

As a result of the destruction by fire of the village of Pascalis, authority was granted Perron Gold Mines, Limited, to subdivide a certain area of their mining concession into building lots to accommodate their employees. As a result, 178 building lots were subdivided and an amount of \$4,984.04 was credited to the Consolidated Fund of the Province as cadastral fees on these lots. These will be placed on sale in the near future and monies deriving from their sale will be applied to the cost of municipal works in this new subdivision.

In anticipation of the completion of the Chibougamau road, preliminary surveys have been made with a view to selecting a suitable site for the establishment of a mining village in the mineralized belt in the Chibougamau Lake area. Further work in this regard will be carried out during the next fiscal period.

A topographical survey was made of a certain area of the mining concession of Arntfield Mining Corporation with a view to subdividing this land into building lots to accommodate the increasing population in this region.

Preliminary studies were made into the feasibility of establishing mining villages in the townships of Louvicourt and Pershing.

THE LIBRARY

The Librarian of the Department, Charles Dufault, reports that the number of books, technical reviews, reports and other volumes relating to the mineral industry, received at the library during the fiscal year 1946-47, was 197.

With these additions the total number of books in the bookcases of the Department of Mines' library is now 8,159. All of these works concern particularly mining, geology, mineralogy, chemistry, and applied physics.

These volumes were obtained by purchase and by gifts. Many are publications of the Canadian Government or of foreign governments, mostly from the United States and South American departments of mines, which we get as exchange for our own publications.

Our library now subscribes to ninety-four monthly reviews, which is four more reviews than in 1945-46. All these are accessible at any time to the members of our staff, and also to the public desirous of following the trend and the development of the mining industry, at home and abroad, as well as to consult the collection of geological maps of the province, both general and detailed.

There are always members of the technical staff at the offices of the Department of Mines who will give all the information available relating to the mineral resources of the Province of Quebec, in answer to enquiries relating to them or to other allied subjects.

The regular meetings of the "Library Committee" were held all year, on the third Monday of each month. At these meetings the members suggest and recommend the purchase of new volumes; they discuss and propose changes and improvements in the administration of the library to increase its usefulness and efficiency to both the staff and the public interested in the mineral resources of the Province and their exploitation.

EQUIPMENT SECTION

Arthur Boucher, Custodian of Equipment, reports to Dr. Jones that during the fiscal year 1946-47, instruments and camping equipment were furnished to 24 geological and engineering parties.

On the return of the different parties from their respective regions of work, each item is carefully examined and most of whatever repairs and adjustments which might be needed are effected by the personnel of this Section. The material is then kept in a store-room, so arranged that the various pieces are readily available at any time. With the increasing activities of the Department, a need is arising for greater space for storage and repair facilities.

Under the custodian of equipment are also kept the extensive departmental collection of photographs and lantern slides depicting various phases of the Province's mineral industry. During the fiscal year under review, 725 photographs, mostly taken by various members of the Department's technical staff in the course of their duties, were added to the collection, which now totals 8,925 photographs.

SCHOLARSHIPS

The Department of Mines, in 1946, followed its policy, adopted some years ago, to grant scholarships to young men desirous to specialize in the sciences of mining, geology, or metallurgy.

The Committee appointed by the Minister of Mines to recommend meritorious applicants for the award of these bursaries for the academic year 1946-47, consisted of: A.O. Dufresne, Deputy Minister of Mines, chairman; Adrien Pouliot, Dean of the Science Faculty of Laval University; Ignace Brouillet, Director of l'Ecole Polytechnique of the University of Montreal; J.U. MacEwan, Department of Mining Engineering and Metallurgy, McGill University; J.W. Laverdière, Director Department of Geology, Laval University; T.C. Denis, of the Quebec Department of Mines and G. Landreville, Secretary of the Committee.

As in previous years, the Committee of Awards gave first consideration to the applications of graduate engineers who intended to take post-graduate courses leading to higher university degrees, towards the doctorate; next came the applications for renewals of holders of scholarships of the preceding year, who satisfactorily fulfilled all the conditions for a continuation of their studies in a higher class; and finally those of undergraduates, by order of merit and of academical year.

For the university session of 1946-47, twenty-two (22) scholarships were granted, distributed as follows:

Candidates to higher university degrees ...	2
Students entering the final year	6
Students entering other academic years	14

Your obedient servant,

A.O. DUFRESNE,
Deputy Minister.

Quebec, August 1947.