

# GENERAL REPORT

OF THE

MINISTER OF MINES

OF THE

PROVINCE OF QUEBEC

FOR THE YEAR ENDING MARCH 31st

1945

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Quebec, September, 1945.

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 during the fiscal year 1944-45.

I have the honour to be, Sir,

Your obedient servant,

JONATHAN ROBINSON,

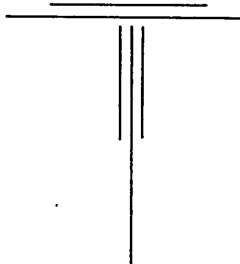
Minister of Mines.

REPORT OF THE DEPARTMENT OF MINES  
OF THE PROVINCE OF QUEBEC  
FOR THE FISCAL YEAR ENDING MARCH 31st, 1945

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REPORT OF THE DEPARTMENT OF MINES OF THE  
PROVINCE OF QUEBEC FOR THE FISCAL YEAR  
APRIL 1st, 1944, TO MARCH 31st, 1945

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

Sir:-

I have the honour to submit to you a summary report on the work carried out by the Department of Mines during the fiscal year April 1st, 1944, to March 31st, 1945, in conformity with Section 229 of the Mining Act, Chapter 196 of the Revised Statutes, 1941. The legislation provides that: The Minister of Mines shall submit, with his annual return to the Legislature, a statement respecting the mines in this Province.

THE MINING INDUSTRY OF QUEBEC

In the report for the fiscal year 1943-44, it was pointed out that the peak of the unprecedented mining activity resulting from war needs for base-metals and certain non-metallic minerals had been attained in the first half of 1943, and that the demand for such mine products was definitely decreasing in the first quarter of 1944, thus foreshadowing a falling off in the production of base-metals for the calendar year 1944. This surmise proved correct, the decrease amounting to 4 per cent as compared with 1943. It is to be expected that from now on, as the manufacture of war material decreases, the need for many of our mineral products will also grow less. However, to a large extent, this tendency may be compensated by greater activity in the manufacture of goods for civilian needs, which has been at a low ebb during the period of hostilities.

On May 8th, 1945, the unconditional surrender of Germany to the Allies was signed, thus bringing to an end the European phase of the war and signaling the first step in the return to normal peace conditions. This had been preceded by Italy's surrender, also unconditional.

The end of the fiscal year sees the Province of Quebec in great need of houses, particularly in urban centres. There has been almost no residential building for several years, and to remedy this state of things must be one of the first undertakings of post-war reconstruction. Our governments, both federal and provincial, are giving much thought to the question of providing suitable housing for families, and the putting into effect of such a programme will be an important help in restoring normal economic conditions, in many industries. Thus, lime-kilns, brickyards, and cement plants will benefit from these activities, as also will various branches of mining, both of metals and of non-metallic or industrial minerals.

In the report of the Department of Mines entitled "The Mining Industry of the Province of Quebec in 1944" will be found a detailed account of operations, as well as statistical data, for the calendar year 1944. In the first three months of 1945, which completed the fiscal year, shipments of asbestos were 20 per cent higher than for the corresponding three months of 1944, and cement production was 22 per cent higher. Among the metals, there was a decrease

in the output of gold (14 per cent) and of zinc (12 per cent), but copper production was 5 per cent higher than in the first quarter of 1944.

The efforts of the Provincial Government to establish a peat-fuel industry in the Province have so far met with little success, and during 1944 there was no commercial production of peat for use as fuel. However, in the course of the past five or six years a profitable peat-moss industry has been developed. Production of this material in 1944 was valued at \$313,000 as compared with \$298,307 in 1943, and the demand continued brisk in the first quarter of 1945. The peat-moss is put to numerous uses, chief of which are for soil amendment, absorbent material, heat insulation, packing material, and stable litter.

### MINING TITLES

The fiscal year 1944-45 saw a complete resumption of activity on the part of prospectors, which augurs well for the further development of mining in the Province. As shown in Table I, the number of miners' certificates issued (7,303) and the number of claims recorded (19,547) more than doubled as compared with the preceding year. The figures for 1944-45 are of the same order as those for periods of prospecting "rushes" in the Province.

The Chief of the Division of Administration is J.X. Mercier.

### TABLE I

#### Various Titles Issued by the Department of Mines

#### Fiscal Years 1943-44 and 1944-45

Designation of Title	1943-44	1944-45
Claims recorded, Amos .....	4,659	12,860
" " Noranda .....	3,373	5,465
" " Quebec .....	909	1,222
Total .....	8,941	19,547
Miners' certificates issued .....	3,113	7,303
Development licenses issued .....	725	2,012
Development licenses renewed .....	2,063	2,207
Mining concessions .....	3	3
Transfer of titles .....	978	2,358
Reports of work: days reported ...	*231,935	90,333
Reports of work: diamond drilling, feet .....	* 23,928	67,041

\*By an Act assented to May 29th, 1942, holders of claims and licenses are exempted, for the duration of the war and one year after, from doing assessment work.

TABLE II

Titles Issued Since 1930-31  
(Fiscal Years)

Fiscal Year	Number of Miners' 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

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

TABLE III

Comparative Statement of Exploration Work Performed on Claims and Licenses During the Calendar Years 1931-44

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 "

INCORPORATION OF MINING COMPANIES

Fifty-one new mining companies were incorporated under Quebec charters in 1944 and, in addition, 145 companies holding Ontario charters and 2 holding Federal charters acquired mining rights in the Province - a total of 198 companies. This compares with a total of 40 companies in 1943, comprising 19 new companies incorporated under Quebec charters and 21 holding Ontario charters.

Mining Companies Incorporated by

Quebec Charters in 1944

(Calendar Year)

Name of Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Arntfield Mining Corp., Ltd.	Arntfield	Feb. 15	3,500,000	\$ 1
Belle-Aura Mines, Ltd. ....	Arntfield	Sept. 23	3,500,000	1
Bevcourt Gold Mines, Ltd. ...	Montreal	Mar. 29	3,000,000	1
Brique St-Jean, Ltée, (La) ..	Deschailions	Feb. 3	200	100
British International Mining Corp., Ltd. ....	Montreal	Dec. 28	149,999	1
Broadback River Corporation	Montreal	Dec. 5	1,000	10
			300(a)	100
Colcourt Mines, Limited ...	Montreal	Jan. 4	49,990	10
Compagnie Beaugard, Limitée (La) .....	Ste-Anne-de-Stukely	May 25	49,999	1
Compagnie de Pierre Concasée Drummond, Ltée (La) .	Sherbrooke	Sept. 6	5,000	10
			2,500(a)	10
Consumers Industrial Minerals, Limited .....	Montreal	June 9	299,000	1
Conway Gold Mines, Limited.	Belleterre	July 14	3,000,000	1
Courville Mines, Limited ..	Duparquet	Sept. 25	3,000,000	1
Croinor Pershing Mines, Ltd.	Amos	April 1	3,000,000	1
Destor Valley Gold Mines, Limited .....	Montreal	Dec. 20	3,000,000	1
Doogood Mines, Limited ....	Val d'Or	Mar. 18	2,000	10
Drouin McLeod Mining Syndicate, Limited .....	Senneterre	Sept. 14	149,999	1
Droumaque Gold Mines, Ltd. .	Val d'Or	Feb. 22	3,000,000	1
Dupresnoy Mines, Limited. .	Duparquet	Mar. 27	3,000,000	1
East Dalquier Gold Mines, Limited .....	Montreal	Aug. 2	3,000,000	1
East Sullivan Mines, Ltd. .	Montreal	May 22	3,000,000	1
Feldspar & Mica Co., Ltd. .	Montreal	Jan. 29	200	100
Formaque Gold Mines, Ltd. .	Montreal	May 22	3,500,000	1
Gaspé Oil Ventures, Ltd. . .	Montreal	Nov. 23	3,000,000	1
Glidmac Mining Co., Ltd. . .	Montreal	Feb. 3	2,000	10
Kenda Pershing Mines, Ltd. .	Amos	May 5	3,000,000	1
L.C. Pharo Co., Limited ...	Thetford Mines	Sept. 1	49	1,000
Lasalle Quarry, Limited ...	Montreal	Aug. 2	200	100
Louvicourt Goldfield Corporation .....	Montreal	Apr. 18	3,000,000	1
Malartic River Mines, Ltd. .	Val d'Or	Feb. 2	100,000	1
Maple Leaf Peat, Limited ..	Rivière-du-Loup	Apr. 4	499	100
Mica Products, Limited ....	Montreal	Apr. 15	150,000	1
Mont-Laurier Oil, Ltée ....	Montreal	Nov. 15	20,000	1
Mudlac Gold Mines, Limited.	Montreal	Mar. 29	3,000,000	1
North Belleterre Gold Mines, Limited .....	Montreal	Aug. 3	3,000,000	1

Mining Companies Incorporated (Continued)

Name of Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Perkins Mills Mica Co., Ltd.	Montreal	Dec. 18	250,000	\$ 1
Quebec Yellowknife Gold Mines, Limited .....	Montreal	Aug. 18	3,000,000	1
Quebec Ore Zone, Limited ..	Duparquet	Sept. 25	3,000,000	1
Radar Corp'n, Limited .....	Belleterre	Nov. 16	100,000	1
R.H. Development Co., Ltd..	Montreal	June 27	100	10
Regcourt Gold Mines, Ltd...	Montreal	Mar. 14	3,000,000	1
St. Francis Mining Co., Ltd.	Sherbrooke	June 27	1,000,000	1
Saguenay Peat-Moss Co., Ltd.	Chicoutimi	May 29	10,000	1
Saline Inc. ....	St-Léon	Oct. 13	200	100
Simack Ilmenite Co., Ltd. .	Montreal	Feb. 4	4,500	10
Sources Abénakis Springs, Ltée .....	Sorel	May 9	100 <sup>(a)</sup>	100
			100	100
Thomaque Gold Mines, Ltd...	Val d'Or	Aug. 7	3,000,000	1
Titan Steel Corporation ...	Quebec	Mar. 30	7,960	25
Tourbière de St-André, Ltée.	St-André	Apr. 11	150	100
West Amulet Mines, Ltd. ...	Duparquet	Aug. 28	5,000,000	1
Wettring Gold Mines, Ltd...	Duparquet	Mar. 16	200,000	1
Yellowstone Mines, Ltd. ...	Noranda	July 31	3,000,000	1

(a) Preferred shares.

Mining Companies with Ontario Charters

That Acquired Mining Rights in Quebec in 1944

(Calendar Year)

Name of Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Abenakis Mines, Limited ...	Toronto	Sept. 23	3,000,000	\$ 1
Abuck Gold Mines, Limited .	Toronto	June 8	3,000,000	1
Acara Rouyn Mines, Limited.	Toronto	Oct. 5	3,000,000	1
Albontec Development Company, Limited .....	Toronto	Sept. 8	150,000	None
Alcan Yellowknife Gold Mines, Limited .....	Toronto	May 11	3,000,000	None
Amber Oils and Minerals, Limited .....	Toronto	July 10	4,000,000	None
Andar Gold Mines, Limited..	Toronto	Oct. 5	3,000,000	1
Ansley Gold Mines, Limited.	Toronto	May 22	3,000,000	1
Arken Gold Mines, Limited..	Toronto	Feb. 22	3,000,000	1
Aubelle Mines, Limited ....	Toronto	May 9	3,500,000	1
Audley Gold Mines, Limited.	Toronto	Aug. 10	3,000,000	1
Audora Porcupine Mines, Ltd	Toronto	June 8	3,000,000	1
Aukeko Gold Mines, Ltd. ...	Toronto	Aug. 28	3,000,000	1
Auterra Mines, Limited ....	Toronto	June 13	3,000,000	1
Auillebon Gold Mines, Ltd.	Toronto	Aug. 9	3,000,000	1
Balboa Explorations, Ltd...	Toronto	Aug. 4	4,000,000	None
Beaupete Gold Mines, Ltd...	Toronto	Aug. 4	3,000,000	1



Mining Companies Incorporated (Continued)

Name of Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Belgold Mines, Limited . . . .	Toronto	Mar. 11	3,000,000	\$1
Bellegrand Mines, Limited ..	Toronto	Aug. 10	3,000,000	1
Bellemac Mud Lake Mines, Ltd.	Toronto	Apr. 17	3,000,000	1
Bellezone Mines, Limited ...	Toronto	Aug. 9	3,000,000	1
Bell River Mines, Limited ..	Toronto	Feb. 15	3,000,000	1
Big Game Mines, Limited . . . .	Toronto	Mar. 27	1,000,000	1
Bluegrass Raymond Mines, Ltd.	Toronto	Mar. 29	3,000,000	1
Bluenose Pershing Mines, Ltd.	Toronto	Apr. 29	3,000,000	1
Bonsecour Mines, Limited ...	Toronto	July 27	3,000,000	1
Bontera Mining Corp'n, Ltd..	Toronto	Apr. 20	3,500,000	1
Border Malartic Gold Mines, Limited . . . . .	Toronto	Oct. 12	4,000,000	1
Bradnor Malartic Mines, Ltd.	Toronto	Mar. 4	3,000,000	1
Cadilartc Mines, Limited ..	Toronto	Aug. 11	3,000,000	1
Canateenah, Limited . . . . .	Toronto	Apr. 26	40,000	None
Caron Malartic Gold Mines, Limited . . . . .	Toronto	Sept. 12	3,000,000	1
Chieftain Pershing Gold Mines, Limited . . . . .	Toronto	July 14	3,000,000	1
Clarendon Gold Mines, Ltd. . .	Toronto	Feb. 17	1,000,000	1
Clarry Gold Mines, Limited. .	Toronto	Mar. 30	4,000,000	1
Cluny Gold Mines, Limited ..	Toronto	Sept. 13	3,000,000	1
Courageous Gold Mines, Ltd. .	Toronto	July 14	3,000,000	1
Deva-Lac Mines, Limited . . . .	Toronto	Dec. 13	3,000,000	1
Diaterre Gold Mines, Ltd. . .	Toronto	Nov. 7	3,000,000	1
Donabelle Mines, Limited ...	Toronto	Sept. 19	3,000,000	1
Donrand Mines, Limited . . . .	Toronto	Jan. 27	4,000,000	1
Dorbaska Gold Mines, Ltd. . .	Toronto	June 8	3,500,000	1
Dortera Mines, Limited . . . .	Toronto	Sept. 20	3,500,000	1
Dovercliff Gold Mines, Ltd. .	Toronto	July 7	4,000,000	1
Dulama Gold Mines, Ltd. . . . .	Toronto	Dec. 2	3,000,000	None
Duomalartic Gold Mines, Ltd.	Toronto	Aug. 17	3,500,000	1
Duvay Gold Mines, Limited ..	Toronto	Nov. 21	3,500,000	1
Edmor Mines, Limited . . . . .	Toronto	Dec. 11	3,500,000	1
Edwaska Gold Mines, Ltd. . . .	Toronto	May 22	3,000,000	1
Elder Gold Mines, Limited ..	Toronto	Jan. 21	4,000,000	1
Eldona Gold Mines, Limited . .	Toronto	Jan. 19	3,000,000	1
Figuery Gold Mines, Limited.	Toronto	Aug. 2	3,000,000	1
Garden Mines, Limited . . . . .	Toronto	May 4	3,000,000	1
Geometal Mines, Limited . . . .	Toronto	Aug. 10	3,000,000	1
Gilbert Gold Mines, Limited.	Toronto	Sept. 12	3,000,000	1
Girard Lake Mines, Limited .	Toronto	Apr. 22	3,000,000	1
Golden Valley Mines, Ltd. . . .	Toronto	May 10	3,000,000	1
Goldora Mines, Limited . . . . .	Toronto	Apr. 22	4,000,000	1
Goldvue Mines, Limited . . . . .	Toronto	Sept. 7	3,000,000	1
Governor Gold Mines, Ltd. . .	Toronto	May 26	3,000,000	1
Grango Pershing Mines, Ltd. .	Toronto	Oct. 4	3,500,000	1
Harwell Mining and Explora- tion Company, Limited . . . .	Toronto	Sept. 16	1,500,000	1
Hosco Gold Mines, Limited ..	Toronto	Jan. 21	3,000,000	1
Hoyle Mining Company, Ltd. . .	Toronto	July 24	3,500,000	None
Independent Mining Corpora- tion, Limited . . . . .	Toronto	Nov. 30	3,000,000	1
Kencour Gold Mines, Limited.	Toronto	Nov. 27	3,000,000	1
Kenikonda Mining Corp'n, Ltd.	Toronto	Oct. 28	3,000,000	1
Keymor Gold Mines, Limited. .	Toronto	May 31	3,000,000	1

Mining Companies Incorporated (Continued)

Name of Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Kimberley Yellowknife Gold Mines, Limited .....	Toronto	July 4	3,000,000	\$1
Kinojevis River Mines, Ltd.	Toronto	Aug. 11	3,500,000	1
Lady Rouyn Mines, Limited .	Toronto	Mar. 27	3,000,000	1
Lapalartic Mines, Limited .	Toronto	Mar. 31	3,000,000	1
Lapaska Mines, Limited ....	Toronto	Apr. 20	3,000,000	1
Largold Mining Co., Ltd. ..	Toronto	June 13	4,000,000	1
Leon Malartic Mines, Ltd. .	Toronto	Aug. 18	3,000,000	1
Lochland Pershing Mines, Limited .....	Toronto	June 23	3,000,000	1
Louvoire Gold Mines, Ltd. ..	Toronto	May 22	3,000,000	1
Macfort Gold Mines, Ltd. ..	Toronto	June 23	3,000,000	1
Main Malartic Gold Mines, Limited .....	Toronto	Feb. 2	3,500,000	1
Malartic River Mines, Ltd..	Toronto	Feb. 2	100,000	1
Manterre Gold Mines, Ltd. .	Toronto	Aug. 10	3,000,000	1
Markwell Gold Mines, Ltd. .	Toronto	Aug. 16	3,000,000	1
Marlon Rouyn Gold Mines, Limited .....	Toronto	Mar. 14	3,500,000	1
Metro Gold Mines, Limited .	Toronto	Feb. 17	3,000,000	1
Mintrock Mines, Limited ...	Toronto	Aug. 22	4,000,000	1
Molijevis Gold Mines, Ltd..	Toronto	Oct. 16	3,500,000	1
Murbell Gold Mines, Ltd. ..	Toronto	July 14	3,000,000	1
New Bidlamaque Gold Mines, Limited .....	Toronto	Mar. 20	3,000,000	1
Newport Gold Mines, Ltd. ..	Toronto	Sept. 12	3,000,000	1
Newroy Mines, Limited .....	Toronto	Sept. 21	3,000,000	1
Norford Pershing Mines, Ltd.	Toronto	Nov. 27	3,000,000	1
Norhill Gold Mines, Ltd. ..	Toronto	June 28	3,000,000	1
Normar Gold Mines, Ltd. ...	Toronto	Aug. 24	4,000,000	1
Northbreak Gold Mines, Ltd.	Toronto	Aug. 2	3,500,000	1
Nortyne Gold Mines, Ltd. ..	Toronto	June 1	3,000,000	1
Oneonta Pershing Mines, Ltd.	Toronto	May 26	3,000,000	1
Ordala Mines, Limited .....	Toronto	May 6	3,000,000	1
Orevita Gold Mines, Ltd. ..	Toronto	June 2	3,000,000	1
Oromaque Mines, Limited ...	Toronto	July 25	3,000,000	1
Ortona Gold Mines, Ltd. ...	Toronto	Jan. 12	3,500,000	1
Orvalley Gold Mines, Ltd...	Toronto	May 16	3,500,000	1
Paramaque Mines, Ltd. ....	Toronto	Nov. 14	3,000,000	1
Parbec Malartic Gold Mines, Limited .....	Toronto	June 23	3,000,000	1
Parent Lake Mines, Ltd. ...	Toronto	June 24	3,000,000	1
Parterre Gold Mines, Ltd. .	Toronto	Oct. 19	3,000,000	1
Pen-Rey Gold Mines, Ltd. ..	Toronto	Feb. 15	3,500,000	1
Peribec Gold Mines, Ltd. ..	Toronto	June 10	3,000,000	1
Phelps Gold Mines, Ltd. ...	Toronto	Dec. 21	3,000,000	1
Poulmaque Gold Mines, Ltd..	Toronto	July 13	3,000,000	1
Rambull Gold Mines, Ltd....	Toronto	Aug. 1	3,000,000	1
Randona Quebec Gold Mines, Limited .....	Toronto	Feb. 2	3,000,000	None
Rayon d'Or Mines, Ltd. ....	Toronto	Mar. 2	3,000,000	1
Renfort Gold Mines, Ltd. ..	Toronto	Apr. 12	4,000,000	1
Revelartic Mines, Ltd. ....	Toronto	Feb. 7	3,000,000	1
Ribago Rouyn Mines, Ltd. ..	Toronto	Feb. 16	3,000,000	1
St. Maurice Gold Mines, Ltd.	Toronto	Dec. 27	3,000,000	1
Sables Gold Mines, Ltd. ...	Toronto	June 9	3,000,000	1

Mining Companies Incorporated (Continued)

Name of Company	Head Office	Date of Incorporation	Number of Shares	Par Value
Sand Lake Gold Mines, Ltd..	Toronto	Nov. 27	3,000,000	\$1
Sanita Gold Mines, Ltd. ...	Toronto	Mar. 4	3,000,000	1
Scout Pershing Mines, Ltd..	Toronto	Apr. 26	3,500,000	1
Sedalia Mining Co., Ltd. ..	Toronto	Oct. 12	40,000	None
Starlight Mines, Limited ..	Toronto	May 12	3,000,000	1
Steeber Malartic Mines, Ltd.	Toronto	July 18	3,500,000	1
Structure Drilling Corporation, Limited .....	Toronto	Nov. 30	1,000,000	None
Tasmaque Gold Mines, Ltd....	Toronto	June 20	3,500,000	1
Templor Gold Mines, Ltd....	Toronto	Mar. 1	3,500,000	1
Terrebonne Mines, Limited ..	Toronto	Sept. 13	3,000,000	1
Torbec Mines, Limited .....	Toronto	Apr. 19	3,000,000	1
Transcan Investors, Ltd. ..	Toronto	Nov. 30	5,000,000	None
Trans-Canada Mines, Ltd. ..	Toronto	Nov. 29	4,000,000	1
Trivio-Bell River Mines, Limited .....	Toronto	May 10	3,000,000	1
Trojan Gold Mines, Ltd. ...	Toronto	Nov. 14	3,000,000	1
Valdina Gold Mines, Ltd. ..	Toronto	Aug. 4	3,000,000	1
Vaumont Mines, Ltd. ....	Toronto	Sept. 16	3,000,000	1
Vauze Dufault Mines, Ltd. .	Toronto	Dec. 15	4,000,000	1
Vianor Malartic Mines, Ltd.	Toronto	May 27	3,000,000	1
Vincent Mining Corp'n, Ltd.	Toronto	Sept. 13	5,000,000	None
Vine Pershing Mines, Ltd....	Toronto	Nov. 27	3,000,000	1
Vinray Malartic Mines, Ltd.	Toronto	Dec. 19	3,000,000	1
Wakeko Mines, Limited .....	Toronto	May 30	3,000,000	1
Walterra Gold Mines, Ltd....	Toronto	Dec. 19	3,000,000	1
Wassanor Gold Mines, Ltd....	Toronto	May 29	3,000,000	1
Wavo Gold Mines, Limited ..	Toronto	July 31	3,000,000	1
Wingait Gold Mines, Ltd....	Toronto	May 16	3,000,000	1
Winru Gold Mines, Ltd. ....	Toronto	May 20	3,000,000	1

Mining Companies Incorporated in 1944 by Dominion

Charters That Acquired Mining Rights in Quebec

(Calendar Year)

Name of Company	Head Office	Date of Incorporation	Number of Shares	Par Value
U.K. Exploration Co., Ltd....	Toronto	Nov. 7	200,000	\$1
Stadacona Mines (1944), Limited .....	Stadacona Mine	May 15	5,000,000	None

### LEGISLATION

In the session of the Quebec Legislature which was opened on February 2nd, 1945, and closed by prorogation on June 1st, an important measure affecting the mineral industry was assented to and became law on May 24th. This was an Act aiming to encourage the development of the mineral resources of the Territory of New Quebec, which lies to the north of the 52nd degree of latitude.

The operation of producing mines in a district greatly helps the development of its other natural resources and its settlement, thereby providing employment and benefiting the whole Province. The ordinary regulations governing the exploration for and development of the natural resources of the settled part of the Province must be modified to apply efficiently to outlying regions, such as the hinterland of New Quebec. To effect this, the new legislation replaces the first paragraph of Section 228 of the Quebec Mining Act (Revised Statutes, 1941, chapter 196) by the following:

"The Lieutenant-Governor in Council, on the recommendation of the Minister of Mines, may grant to a company, firm, or corporation formed or incorporated under the laws of the Province, mineral exploration licenses and leases for a term of not more than twenty years, for mining of all minerals in the territory of New Quebec. For such purpose he may determine the area, duration as determined above, terms, conditions, and restrictions of such licenses and leases, and the issue and renewal thereof".

### COLLECTION OF DUES ON MINES

In the fiscal year 1944-45, sworn returns reporting production were received from forty-two mining companies. These returns gave full information on operations during the year, as required by the Quebec Mining Act, and included a statement of the profits made during the fiscal year, accompanied by vouchers, as required by Division III of the Act. These profits are subject to a duty, collected by the Department of Mines. In 1944-45, the amount collected from this source was \$1,684,632.

Division VIII, Section 50, of the Act states that a tax of 10 cents an acre shall be paid on mining concessions which remain idle during the fiscal year. From this source, \$3,134 was collected from eighty-seven holders of mining concessions. Sworn statements were received from ninety other holders of concessions that at least \$200 was expended during the year in mining work on each concession held by them. This is the statutory condition for remittal of the acreage-tax.

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

TABLE IV

Comparative Statement of Revenue Collected by  
the Department of Mines, 1942-43 to 1944-45

(Prepared by Robert Samson, Chief Accountant)

(Fiscal Years)

	1942-43	1943-44	1944-45
Miners' certificates ...	\$ 17,405.00	\$ 31,430.00	\$ 67,280.00
Development licenses ...	105,180.83	138,462.18	255,152.46
Mining concessions .....	2,817.35	1,314.85	5,250.00
Fees for transfer of titles .....	4,393.41	9,500.00	23,519.00
Dues on mining conces- sions .....	2,206.72	1,966.64	3,114.99
Dues on village lots ...	15,576.12	2,291.15	6,837.87
Dues on profits of mines	1,859,520.82	1,855,220.23	1,684,632.32
Sale of unwrought metal licenses .....	52.00	50.00	26.00
Sale of maps, blue- prints, etc. ....	665.85	1,268.54	3,560.45
Sale of mineral collec- tions .....	293.50	148.50	78.00
Assay fees .....	137.50	301.45	381.05
Sampling Plant:			
Sale of recovered gold	19,815.27		
Rent and sale of supplies .....	17,785.60	3,802.38	2,483.13
Miscellaneous .....	81.60	71.09	149.90
Casual revenue .....	1,014.10	137.96	2,951.63
<b>Totals .....</b>	<b>\$2,046,945.67</b>	<b>\$2,045,964.97</b>	<b>\$2,055,416.80</b>

DIVISION OF GEOLOGICAL SURVEYS

I.W. Jones, Chief of this Division, reports that during the year under review the Division carried on its principal function, which is to investigate the nature, distribution, and structural relations of the rock formations in various sections of the Province. During the summer and autumn months of 1944, there were five geological parties conducting investigations under the auspices of this Division. The geologists in charge of them, and the objects of their work, named in the east-west order of their respective territories, were as follows:

J. Claveau - A continuation of the work done the previous year by W.W. Longley along the lower north shore of the St-Lawrence. In 1944, the fifty-five mile stretch of shore between Aguanish and Washicoutai bay was covered. Brief examinations were also made of parts of the shore as far east as Blanc Sablon.

H.W. McGerrigle - Continuation of a reconnaissance exploration of western and southwestern Gaspé peninsula. A large territory was covered in that part of the peninsula lying between the

Cascapédia and Matapédia River valleys, and north of the bay of Chaleurs. In addition to this work, Dr. McGerrigle spent a considerable part of the winter of 1944-45 in examining and recording the nature of the rocks encountered in deep-drilling operations that were conducted by private enterprise in the search for oil and gas in various parts of the Province.

C. Faessler - An examination of the geology along and near the principal routes of travel between Quebec and lake Saint-Jean. In 1944, the investigation was made along Highway No.56, between St-Urbain, near Baie St-Paul, on the St-Lawrence, and Grande Baie, on the Saguenay.

T.H. Clark - Investigation of the geology and petroleum possibilities of the St-Lawrence lowlands between Montreal and Quebec, continuing the work south of the St-Lawrence river which had been commenced two years previously.

E. Aubert de la Rüe - Investigation of nearly 200 square miles between the Lièvre and Gatineau rivers, in Labelle and Gatineau counties. Being a continuation eastward of the work done by the same geologist in 1943, the investigation covered the township of Bouthillier and parts of Robertson, Wabasse, and Dudley townships.

During the course of the investigations by these qualified geologists, geological mapping of the various areas was done mostly on the scale of half a mile to one inch, to permit eventual publication of maps on a one-mile scale. Compilation of such maps and preparation of the reports which they accompany - entailing, as they do, a considerable amount of research and office study - take up a large part of the geologist's time during the winter months.

In addition to their direct value to the mining industry by serving as a guide to prospectors and geologists in their search for mineral deposits, the geological reports and maps are also used extensively in other fields of activity. Very often they furnish the only descriptions available of a region, whether it be in a settled or in a remote, uninhabited section of the country. They are consulted by engineers in connection with projects of railway or highway building, water-power and forestry developments, and bridge and industrial-plant construction; they frequently give information useful to trappers and others who have occasion to travel through otherwise little-known regions; and they often are usefully consulted in colonization and agricultural developments.

Even though this Province is well to the fore in the task of geologically surveying its territory, it must be pointed out that about eighty-five per cent of the Province yet remains unexplored by the geologist and that, at the best rate of progress of the past, it would take more than five hundred years to prepare the needed one-mile geological maps of the whole of the Province.

Attention was drawn in last year's report to the lack of qualified personnel to assist the already too few geologists available. The situation did not improve - rather, it deteriorated - during the period under review. Not only is there a serious lack of qualified geologists and of geologists-in-training to staff the various governmental departments which employ geologists, but the acute shortage extends to the supply of geologists for work in the mining industry as a whole. In view of the lengthy university and practical training required for the profession of geology, it is foreseen that the need for more geologists will be urgent for several years to come.

DIVISION OF MINERAL DEPOSITS

Bertrand T. Denis, Chief of this Division, reports as follows on the work carried out during the past fiscal year:

Under this Division, geological investigations are made 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.

Before the middle of the year 1944, it was apparent that the situation regarding minerals immediately useful for the conduct of the war had improved considerably in comparison with that which obtained in the years 1940-43. As a consequence, it was possible, when making plans for the 1944 field work, to provide for resumption of activities designed to promote the orderly long-term development of our mineral resources, both for normal peace-time purposes and for the period of post-war reconstruction. Six parties were in the field throughout the summer and early autumn.

P.E. Auger completed a detailed study of the lead and zinc deposits of Lemieux township, Gaspé peninsula.

P.E. Bourret, Industrial Mineral Technologist, examined eighty mines, quarries, and prospects, mainly in southwestern Quebec, along the North shore of the Saint-Lawrence, and in the Saguenay-Lake Saint-Jean area. The purpose of these visits was to determine the economic value of the deposits concerned, and to furnish owners with information regarding development, mining and milling operations, and the marketing of their mine products. The minerals or substances involved were: brucite (1), calcite (2), common clay (3), dolomite (3), feldspar (11), fluorite (2), garnet (1), natural gas (2), gold (2), granite (6), ilmenite (6), iron (1), limestone (8), magnesite (2), mica (13), molybdenite (3), ochre (3), phosphate (5), silica (4), zinc and lead (2).

J.P. Drolet undertook preliminary studies and sampling of six peat bogs in various parts of the Province. He also carried out detailed examinations and sampling of seven other bogs which were being actively exploited, with a view to supplying the operators with information essential to plans for their future operations.

R.B. Graham commenced a detailed geological study of a strip of territory in Destor, 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 Beattie mine, an important gold producer, lies within this belt, and the principal object of the investigation was to obtain data for the guidance of exploration activities in the search for gold and base-metal deposits in this section of the county of Abitibi East.

W.N. Ingham made geological examinations of seventy mining properties in the Western Quebec mining belt in Abitibi and Temiscamingue counties. In the time available, it was not possible for him to cover this field thoroughly, as claim-staking and exploration - largely by diamond drilling - reached an all-time high during the 1944 field season. The assignment given to Dr. Ingham could easily have kept several field parties fully occupied.

G.W. Waddington continued the investigation of iron ore deposits, mostly in the Saguenay region. The major part of his field season was spent in outlining by dip-needle survey a large area of magnetic anomaly discovered by the party in the townships

of Taché and Bourget. An ochre deposit, situated near Almaville, in Cap-de-la-Madeleine Seigniory, was sampled with a view to assisting the operator to plan future developments on the property.

Henri Girard closely followed developments in the peat industry throughout the Province and at frequent intervals gave technical advice to each of the eighteen operators engaged in the production of peat.

#### DIVISION OF TECHNICAL INFORMATION

Jean Morency, mining engineer, is in charge of this Division, which was recently created to carry on and expand the work previously done by a sub-division.

Mr. Morency reports that, during the fiscal year, his Division attended to correspondence requesting various data concerning ninety mining companies, and replied to 170 letters received from the interested public in which information was sought on many questions concerned with the geology, mineral deposits, mining, and prospecting in the Province.

At the request of the Registrar of the Quebec Securities Act, the Division carefully examined twenty-five technical reports in connection with the application of the Act, and furnished the Registrar with comments on these reports.

The Division received numerous manuscript reports and plans from the technical officers of the Department, and also documents from outside mining engineers and other technicians. These were all classified and indexed, in order to be easily available for reference.

Routine duties of the new Division include the following:

It collects, compiles, and classifies items of interest concerning the mining industry and mining companies, clipped from technical periodicals and newspapers.

It keeps the plans and records of all underground mine workings, which, in conformity with the provisions of the Quebec Mining Act, mining companies must send in to the Department. Such plans and records, covering work completed during the year ended December 31st, 1944, were received from thirty-five mining companies.

It keeps copies of advertisements and of various articles published by or concerning the Department.

It attends to the distribution of the publications of the Department. In the course of the fiscal year under review, the staff of this Division sent out 24,900 copies of our various publications, in response to 3,960 written requests received from the interested public. In addition, a large number of reports and other publications were given to visitors who came personally to the Department, but of these no record was kept.

New publications of the Department to the number of 24,100 copies were received from the printers during the year.

Arsène Joubert, of the staff of the Division, mailed 600 parcels during the year and received 800 parcels addressed to the Department, which were distributed to the various Divisions for which they were intended.



DIVISION OF INSPECTION OF MINES

The duties of this Division, of which R.H. Taschereau is Chief, 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.—Tailing 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 Province is divided into six mine inspection districts, as follows:

- (1) Eastern Townships, from 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 forty-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 and Témiscamingue and Abitibi Territory.

The staff of this Division remained unchanged during the fiscal year under review, and is constituted as follows:

Chief Inspector of Mines .....	: <u>R.H. Taschereau</u>
Inspector of Mines (District No.6)	: <u>M.O. Lafontaine</u>
Inspector of Mines (District No.5)	: <u>Jean de Péron</u>
Mine Constables (District No.6) ..	: <u>E.O. Larivière</u> and <u>E. Jolin</u>
Mine Constable (District No.1) ...	: Arthur <u>Baillargeon</u>

Jean de Péron also carried out the inspection of quarries and gravel pits in the No.4 inspection district.

Jules Leblanc was retained as consulting electrical engineer to the Department. Mr. Leblanc inspected all new electrical installations at mines in the Province, and advised the Department on

more advanced electrical problems and on accepted practices.

The three mine constables assisted the Inspectors in various phases of their work, and carried out other duties assigned to them by the Minister.

In the calendar year 1944, the accident frequency rate in mines and quarries, based on the number of compensable accidents per thousand men employed, was 128.4, an increase over the figure for the previous year. The fatal accident frequency rate of 1.5 per thousand full-year workers showed little change. 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 the 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 mine and quarry operators, and to other parties interested in mine safety work.

In the calendar year 1944, a total of 18,499 men were employed in the mining industry of the Province, a decrease of 3.6 per cent as compared with the year 1943. Inspections of mines, quarries, and gravel pits totalled 705, and reports on these were transmitted to the Department with information concerning developments and the safety of workmen.

During the fiscal year under review, no applications for approval of sites of ore treatment plants were received by the Department.

Applications for permission to ship concentrates outside the Province for treatment were received from Golden Manitou Mines, Limited, Normetal Mining Corporation, and New Calumet Mines, Limited, and approval to these requests was granted by Orders in Council.

No applications were received for the approval of new tailing sites under the provisions of section 123 of the Mining Act, but an Order in Council was enacted, in conformity with section 37 of the Mining Act, to permit Canadian Malartic Gold Mines, Limited, to make use of an additional tract of land, covered by claims held in the name of Malartic Gold Fields, Limited, as a tailing site. This permission was accorded with the approval of the holder of the Mining Development license and subject to the payment of a yearly acreage rental.

Under the provisions of the Unwrought Metal Sales Act, fifteen licenses for carrying out transactions in unwrought precious metals were issued during the fiscal year.

#### DIVISION OF DRAUGHTING AND CARTOGRAPHY

This Division, of which Léon Valois is Chief, employs six draughtsmen and one stenographer. Armand Blanchette, who was in charge during the interim between the resignation of Marc Boyer and the appointment of the present chief, was promoted to assistant-chief. Demetrius Boucher, draughtsman of the Division, died in October, 1944, after thirty years of loyal service to the Provincial Government. His death was a loss greatly deplored by the Division.

In June, 1944, the Division moved into much larger and more suitable working quarters, where the staff can work in comfort and with greater efficiency.

During the year, numerous base-maps were prepared for the geological field parties of the Department, and several geological maps and plans were compiled from field maps and notes of previous field work. Three of these geological maps, prepared for reproduction and printed in colours under the supervision of the Division, were issued during the year:

Map No.531.—Opaoka River Area  
Map No.582.—Romaine River Area  
Map No.600.—Moisie Area

At the end of March, 1945, the following map, in colours, was in course of being printed:

Map No.602.—Matanece Area

In addition to the coloured maps, eight geological maps were prepared and printed in black and white to accompany Preliminary Reports of field-work done in 1943 and 1944, and twenty-seven geological plans, which are not to be published, were traced on linen.

The Division keeps up to date two series of tracings on linen, each tracing covering an entire township, or about one hundred square miles. On one series, comprising 341 tracings, are plotted all stakings of mining claims; on the other, consisting of 97 tracings, the boundaries and landmarks of mining companies are shown. The series showing claims was brought up to date by addition of 19,547 new claims. Of all these tracings, 9,200 prints were made during the year.

As an index to the series of tracings showing mining properties, a special map (No.612), entitled "Mining Properties of Western Quebec", was prepared, on which the boundaries of the townships are outlined and the properties owned by mining companies, located. It is the intention to revise this map from time to time, as may be necessary.

In addition to draughting and cartography as indicated above, the Division prepares miscellaneous plans, graphs, and designs, - as, for example, of machines and office equipment - for all other Divisions of the Department.

#### DIVISION OF MINERAL STATISTICS

The main function of this Division, which is in charge of C.O. Beaudet, is to collect and compile annual and monthly statistics of mining operations and of mineral production. A part of the data thus obtained is published in the Annual report of the Department of Mines entitled "The Mining Industry of the Province of Quebec" as well as in monthly and quarterly bulletins. These bulletins, of which some 300 copies are printed, are sent to newspapers and technical publications, mining companies, and a few individuals. The Division also makes special compilations of statistical and other data on specific phases of the industry, in response to requests from the interested public.

All such data are compiled from returns which are furnished annually or periodically by all operators of mines, quarries, and sand and gravel pits, as required by the Quebec Mining Act. During

the calendar year 1944, forms calling for the information needed were mailed by the Division to 2,586 operators, and in many cases these had to be followed by letters urging prompt attention to the matter. Of the 2,427 returns received, 1,137 reported and gave details of production, or of shipments from stocks; 220 gave particulars of exploratory work on claims which were not producing; and 1,072 were from owners of properties that were idle throughout the year. No replies were received from 159, or 6 per cent of the total, but it is known that most of the properties concerned were inactive.

To ensure completeness of the data for compiling the mineral statistics, requests for information were sent to 154 builders and road contractors who, in the course of their work, frequently open and operate, for a time, stone quarries, sand pits, or gravel pits. To these requests, 134 replies were received.

The monthly statistical bulletins are based on returns received each month from sixty-five of the main operators of mines and quarries of the Province.

At the request of Federal authorities, the Division sent a special form to 111 of the principal operators of mines and quarries in the Province, asking for an estimate of certain expenditures and disbursements expected for the year 1945. This form was duly filled in and returned by 106 of these operators.

For the information of the Provincial Department of Mines, the Division made a survey of the actual cash receipts in 1944 by the treasuries of all mining companies operating in the Province from the sale of shares and bonds, and also from long term loans, such funds being therefore an integral part of the financial structure of their respective enterprises. For this purpose, a questionnaire was sent to 568 companies, and of these 470 furnished the requested information.

A survey was also started of the amount of construction lumber and mine timber used in 1944 by the mines of the Province. This survey is not yet completed. Special forms for these returns were sent to 110 operators and, at the time of writing, 101 had sent in their report. It is expected that some of the remaining nine will yet report, following which the data will be compiled.

## DIVISION OF MINERALOGY, CHEMISTRY, AND ORE DRESSING

This Division has under its charge (I) the Department of Mines' laboratories in Quebec city, Montreal, and Theiford Mines; (II) a sampling and ore dressing plant; (III) lectures for prospectors and others; (IV) the Department of Mines' museum; and (V) mineral displays at exhibitions. Maurice Archambault is Chief of the Division.

### I.-Laboratories

In the course of the fiscal year, the three laboratories received for examination 6,048 samples, on which 13,103 assays, analyses, and microscopic and other determinations were carried out. These were distributed as follows:

Laboratory	No. of Samples Rec'd	Assay Coupons Rec'd	Quantitative Analyses			Qualitative Examinations	Totals
			Dept. Analyses	Paid Analyses	Coupon Analyses		
Quebec ...	5,037	3,258	4,796	488	3,288	2,418	10,990
Montreal .	716	812	---	262	812	92	1,166
Thetford Mines ..	295	---	947	---	---	---	947
Totals .	6,048	4,070	5,743	750	4,100	2,510	13,103

The Thetford Mines laboratory deals exclusively with grading and classification of asbestos products. The Montreal laboratory makes routine quantitative analyses and assays. The Quebec laboratories are, by far, the most important. Besides having the usual facilities for making analyses, assays, and determinations of minerals and rocks, they are equipped to make complicated and accurate geochemical analyses and mineralogical and petrographical studies, and to carry on research work in hydrometallurgy, pyrometallurgy, and mineral dressing.

Among the special investigations carried out in our Quebec laboratories were the following:

P.E. Pelletier and Henri Boileau made eleven complete analyses of water, oils, rocks, and minerals.

Charles E. Brunette carried out (1) tests on the total absorption and power of retentivity of silica obtained by lixiviation of suzorite (using sulphuric acid) in comparison with various other types of silica, such as silica gel, active silica, etc; (2) corrosion tests on various metals and alloys; (3) research work on the pyrometallurgical treatment of suzorite and a number of ores of low aluminium content with various substances, or with basic ores, for the commercial recovery of alumina and alkalis.

Jean Lavallée (1) examined 750 samples of rocks and minerals, on which 2,334 determinations were made; (2) made a microscopic study of a number of thin sections of rocks and minerals, necessitating 70 optical determinations; (3) continued his study of the highly micaceous igneous rock, "suzorite", on which pneumatic tabling, wet tabling, flotation, and magnetic separation tests were carried out. The possibilities of a special method for crushing the material, based on the explosive shattering effect of suddenly released, compressed water-vapour, was studied. Other work by Mr. Lavallée included (4) a mineralogical examination, magnetic separation tests, and study of the economic possibilities of 16 samples of black sand from Natashquan river; (5) a mineralogical study of a garnetiferous rock submitted by the Canada Garnet Company, and a microscopic examination of the numerous products obtained in the various separation tests carried out on the rock; (6) pneumatic separation tests on two samples of asbestiferous rocks; (7) polishing tests on two samples of granitic rocks, and chemical tests to determine their resistance to the action of atmospheric gases; (8) a study of the possibility of recovering barite from the tailing of Moulton Hill copper-lead-zinc ore.

B.J. Walsh made (1) briquetting tests on the apatite slimes from ore of the High Rock mine; (2) concentration tests on ore received from the Canada Garnet Company.

Louis Bourgoïn made a hydrometallurgical study of ilmenite ores from the Furnace mine and General Electric mine (Baie St-Paul Titanic Iron Ore), including differential lixiviation, hydrolysis of the titanium, and electrolysis of the iron.

II.-Government Sampling and Ore

Dressing Plant

This plant adjoins the Mine School, near Val d'Or, Abitibi East county. G.S. Grant is Manager of the plant.

Sampling Plant:

Shipments of ore received for bulk sampling were as follows:

Shipper	Lots	Type of Ore	Weight
Toussaint C��r��, Val d'Or	1	Gold	11.5 lb.
J.P. H��roux, Malartic	1	"	62.0 "
Roger Henri, Malartic	1	"	5.5 "
Rambull Gold Mines, Limited	16	"	8,819.0 "
J.F.B. Davies, Amos	1	"	140.0 "
Wm. Peacock, Noranda	6	"	1,460.0 "
Totals .....	26		10,498.0 lb.

Batch Cyanide & Amalgamation Plant:

A sample (92.5 lb.) of gold ore received from Toussaint C  r  , Val d'Or, was treated in this plant, with recovery of 1.124 oz. gold.

Experimental Work:

Garnet Ore

Two samples of garnet ore, consisting, respectively, of 38,945 lb. of lump ore and 184,835 lb. of crushed ore (90 per cent minus-10 mesh), were received from the Canada Garnet Company for concentration.

The lump ore contained approximately 19.1 per cent garnet in grains averaging about 1/16-inch in diameter. Recovery of garnet was as follows:

By jigging: 61.1% or 5,082 lb. in a 93.8% garnet concentrate  
 By tabling: 23.3% or 1,935 " " " 46.9% " "  
 Total recovery ..... 7,017 " " " 84.4% " "

The crushed ore contained 22.7 per cent garnet in grains averaging about 1/16-inch in diameter. It was a screened product, in which there was but little minus-65 mesh material.

By jigging alone, 78.4 per cent of the garnet content of the ore was recovered in a concentrate containing 93.4 per cent garnet.

From one carload of the material, a recovery of 92.6 per cent of the garnet was made in a 95.6 per cent concentrate.

To be marketable, the product had to be crushed and screened to a minus-20, plus-35 mesh size. There was a loss of 43.5 per cent of the garnet during this process, due to the fines made in grinding and to the presence of some minus-35-mesh material in the original screened ore.

#### Titanic Iron Ore

Two shipments, totalling 204,800 lb., made by Baie St-Paul Titanic Iron Ore were received for treatment. A series of tests were carried out on this ore, having as their object the elimination of as much as possible of the gangue without production of an excessive amount of fines.

The ore of the first shipment contained 43.32 per cent  $TiO_2$  and 7.82 per cent gangue. In the tests that were made with this ore, the best results were obtained by crushing to minus- $\frac{1}{4}$ -inch, which liberated most of the gangue; screening out the minus-14-mesh material; and then jiggling the plus-14-mesh fraction and tabling the minus-14-mesh fraction. By this method, the grade of the ore was raised to 45.44 per cent  $TiO_2$  and the content of gangue reduced to 3.2 per cent, with a recovery of 96.6 per cent.

The ore of the second shipment contained 39.00 per cent  $TiO_2$  and 4.6 per cent gangue. In order to liberate the gangue, it was found necessary to crush to minus 14 and even minus 20 mesh. The whole shipment was tabled and a concentrate containing 40.59 per cent  $TiO_2$  was made, with elimination of most of the gangue. There was a loss in fines of 30 per cent of the  $TiO_2$  and it is doubtful if it would be economic to attempt to beneficiate such an ore in view of the fact that the maximum grade obtainable was below 41 per cent.

#### Suzorite

Crushing and screening tests were made on a 320-lb. sample of suzorite, a rock containing approximately 60 per cent mica, 13 per cent feldspar, 13 per cent pyroxene, and 8 per cent apatite. This work was done in conjunction with tests being made in the Quebec laboratories for the recovery of the mica and other minerals from the rock.

#### Molybdenite

Some experimental work was done on a 5,420 lb. sample of molybdenite concentrates, received from the La Corne mine, operated by Wartime Metals Corporation. The concentrates, which contained some bismuthinite, were tabled under varying conditions with the object of reducing the bismuth content.

#### Brick

A shipment of 1,070 lb. of brick, received from Mr. Laval Goulet, of Amos, was crushed at the plant.

III.—Lectures to Prospectors

As in past years, the Department of Mines organized courses of free lectures for prospectors. These were delivered by two experienced mining engineers and geologists, P.E. Auger and Pierre Mauffette. Particulars of these courses are tabulated below:

Centre	Number of Lectures	Total Attendance	Lecturer
Belleterre, Témiscamingue county ..	14	169	Pierre Mauffette
Sayabec, Matapedia county .....	10	173	P.E. Auger
Maria, Bonaventure county ....	8	136	P.E. Auger
Chandler, Gaspé South county ....	10	56	P.E. Auger
Ste-Agathe, Terrebonne county .....	11	286	Pierre Mauffette
Grand Cascapedia, Bonaventure county ....	2	21	P.E. Auger
Totals .....	55	841	

To add to the usefulness of the courses, the Department distributed, free of cost, about 400 copies of the pamphlet "Notions Elémentaires de Minéralogie" and also offered for sale, at nominal prices, the "Prospectors Handbook" and collections of minerals and rocks.

Special lectures were delivered by A.O. Dufresne, Deputy Minister of Mines, B.T. Denis, and L. Valois, officers of the Department, at the Ecole des Hautes Etudes Commerciales, on economic aspects of the mining industry. Some forty students attended these special lectures.

IV.—The Museum

Additions, by presentation, to the mineral collections on display in the show-cases of the Departmental Museum included an exceptionally fine specimen of mountain leather, 5 in. by 7 in., from a shear zone on the 15th level of the Horne mine, Noranda, presented by Noranda Mines, Limited.

V.—Exhibition Displays

As part of the Provincial educational programme in connection with the re-establishment in civilian occupations of men of the armed forces, exhibits of minerals, rocks, photographs, and maps were placed on display in the Education Hut at Valcartier Camp during December, 1944.

The Department did not send displays of ores or mine products to any of the exhibitions held during the year in various centres of the Province.



DIVISION OF PUBLICATIONS

The Division of Publications is responsible for the editing, translation, and printing of French and English editions of all geological reports and other reports and bulletins on the mineral industry issued by the Department. It also has charge of the printing of all forms, letter-heads, and other printed supplies used by the several Divisions of the Department.

Albert Côté, who had been Chief of the Division since 1939, resigned that position in March, 1945, since which time his assistant, André Champagne, has been acting as Chief.

During the fiscal year under review, the Division edited and supervised the printing of the following reports:

The Mining Industry of the Province of Quebec in 1943.

Geological Report No.20.-Geology of Quebec, Vol.II, by J.A. Dresser and T.C. Denis.

The work of translating this volume into French was completed during the year and the manuscript will be ready for the printer at an early date.

Geological Report No.21.-Moisie Area, by Carl Faessler.

Geological Report No.22.-Matamec Lake Area, by E.W. Greig.

Notions Élémentaires de Minéralogie.-Revised edition.

In addition to the above publications, the following preliminary or special reports were issued, either mimeographed or printed by the photo-litho process:

P.R. No.185.-General Report of the Minister of Mines for the Fiscal Year ending March 31st, 1944.

P.R. No.186.-Special Report on the Microtexture of Certain Quebec Iron Ores, by F.F. Osborne.

P.R. No.187.-Bouthillier Map-Area, Labelle and Gatineau Counties, by E. Aubert de la Rue.

P.R. No.188.-North Shore of the Saint-Lawrence, Aguanish to Washicoutai Bay, by Jacques Claveau.

P.R. No.189.-Duquesne Map-Area, West Part of Destor Township, Abitibi County, by R. Bruce Graham.

All the geological reports, as well as the preliminary and special reports, were issued both in French and in English.

The following collaborated in the issuing of the above publications: André Champagne, Walter Delorey, R. Lesage, and R. Brown. R.P.D. Graham edited the English manuscripts and corrected the proofs.

### THE LIBRARY

Charles Dufault, Librarian of the Department of Mines, reports that a total of 225 books, technical reviews (bound), and annual reports concerning mines and the mining industry, were added to the library in the course of the fiscal year 1944-45, bringing the total number of volumes on the shelves to 7,724. These books were acquired in part by purchase and the balance by way of exchanges. Most of the newly acquired books treat of the mining and allied industries, geology, mineralogy, and chemistry. The greatest increase was in volumes concerned with chemistry.

The library also received, by paid subscription, eighty-seven scientific and technical publications and periodicals relating to the mining and other industries. This is four more than in the preceding year.

The library catalogue renders good service and is appreciated by all who use it. It may here be mentioned that the interested public have the same access to the library as the staff of the Department, and that anyone seeking information is given a cordial reception and willing help.

As in previous years, the Library Committee met regularly on the third Monday in each month to discuss general matters relating to the library.

### DIVISION OF CIVIL ENGINEERING WORKS

Early in the summer of 1944, the "Division of Mine Roads and Peat Bogs Drainage" and the "Division of Mine Villages" were merged into one organization with the above designation. L.A. Saint-Pierre is Chief of this new Division.

#### Road Construction

During the fiscal year ending March 31st, 1945, new mine roads aggregating 23.31 miles in length were constructed, which brought to 1,042.98 miles the total length of mine roads in the Province. In addition, 10.06 miles of roads were completed and improved, and 42 miles repaired and maintained. The Division also aided in the construction of a track with timber rails, five miles in length, in Louvicourt township, Abitibi county.

The cost of these works amounted to \$149,244.55, bringing to \$5,723,551.69 the total cost of mine roads in the Province. The amount spent in the fiscal year under review is subdivided as follows:

Paid by the Province .....	\$103,468.87
Federal Government contribution.	42,500.00
Contribution of mining companies	3,275.68
	<hr/>
	\$149,244.55

The Department of Mines also paid \$5,225.90 for the maintenance of certain summer roads, and an amount of \$10,302.50 was expended to facilitate transportation in mining districts during the winter season.

Construction of New Mine Roads

<u>Township and County</u>	<u>Road</u>	<u>Miles</u>
Bagotville, Chicoutimi Co...	Peat bog road .....	0.72
St-Ulric, Matane Co. ....	Peat bog road .....	0.29
Talon, Montmagny Co. ....	Asbestos mine road .....	0.34
Louvicourt, Abitibi-East Co.	Road to property of Obaska Lake Mines, Limited .....	5.00
Rouyn, Rouyn-Noranda Co. ...	Road to property of Rouyn Merger Gold Mines, Limited	0.66
Letellier, Saguenay Co. ....	Lac-des-Rapides road .....	2.25
Tiblemont and Pershing, Abitibi-East Co. ....	Road to Pershing Township mines .....	11.0
Malartic, Abitibi-East Co. .	Road to East Amphi and Parbec mines .....	3.05

The cost of completion and improvement of the following roads was also paid from this item:

Bousquet, La Pause and Preissac, Abitibi-East Co.	Road from St-Maurice mine to Cadillac .....	9.5
Ile-aux-Coudres, Charle- voix Co. ....	Peat bog road .....	0.56

Drainage of Peat Bogs

The Department continued the draining of certain peat-bogs, as a measure to assist their development. In the course of the year, \$3,912.66 was expended in the drainage of the following bogs:

<u>Locality</u>	<u>Operator</u>	<u>Length of Trenches</u>
Ile-aux-Coudres ....	Excel Peat, Limited ....	1,000 feet
Pointe-au-Père .....	Pointe-au-Père peat bog.	2,000 feet

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

Mine Villages

The greatly increased activity in the mining industry in the fiscal year 1944-45 had its effect on conditions in the centres of population in the mining districts. Thus, in Bourlamaque, Val d'Or, Noranda, and Rouyn, there is a keenly felt shortage of housing.

The town of Malartic progressed normally. New lot subdivisions were approved in the course of the year and the sale of lots was very active. This town also carried out important municipal works. It is to be noted that, during the year, the town entirely extinguished its debt.

The town of Cadillac developed normally and the loan which this municipality contracted from the Canadian National Bank will be wholly paid off within a few months.

The town of Rouyn continued the construction of roads and sewers and of the water distribution system in South Rouyn. These

municipal works are paid for from the municipal funds resulting from the sale of building lots.

In the village of Belleterre there was marked activity and progress. There are now in this municipality a large number of residences, several stores, and one church. It is expected that, as soon as priorities on building materials are rescinded, more stores and a hotel will be erected.

There is nothing of note to report regarding the municipality of Bousquet Village.

The village of Pascalis was completely destroyed by fire on July 7th, 1944. Following this disaster, the directorate of Parron Gold Mines, Limited, was authorized to subdivide a portion of its mining concession into building lots. The Company erected twelve houses, of trim appearance, for its employees, and these were occupied as soon as they were built. It is very likely that the village of Pascalis will rise again from its ashes if, and when, the Cournor and the other mines of the neighbourhood resume operations.

#### SCHOLARSHIPS

For a number of years, the Department of Mines has awarded annually a number of scholarships to deserving students taking university courses in Mining, Metallurgy, or Economic Geology, and in 1944 this policy was continued. In granting these scholarships, every care is taken that they shall be awarded only to students of outstanding promise who signify their intention of specializing in one or other of the subjects named, and who satisfy the Committee of Awards and the university authorities that they have the necessary prerequisite qualifications to undertake the course they plan, and earnestness to carry it to completion.

The 1944 Committee of Awards consisted of: A.O. Dufresne, Deputy Minister of Mines, chairman; Adrien Pouliot, Dean of the Science Faculty of Laval University; Armand Circé, Principal of Ecole Polytechnique, University of Montreal; O.N. Brown, Professor of Mineral Dressing, McGill University, Montreal; J.W. Laverdière, Secretary of the Science Faculty, Laval University; T.C. Denis, of the Quebec Department of Mines; and Jacques Bernier, Secretary of the Committee.

Each application for a Bursary is judged on its merits, but in making the awards first consideration is given to students who have a university degree in mining or metallurgical engineering, or in natural science with geology as major subject, and who wish to take a post-graduate course leading to a higher university degree in mining, metallurgy, or geology. Next are considered applications from students entering their final undergraduate year, and, lastly, those from students in junior years.

For the academic year 1944-45, the Committee granted eighteen scholarships as follows:

University graduates proceeding to higher degrees	4
Undergraduates entering their final year	6
Undergraduates entering other years	8

The four post-graduate students successfully passed all the examinations in their respective courses of study for the degrees of Doctorate in Metallurgy (one), and Master of Science (three).

Of the six undergraduate students who entered their final year, four graduated successfully with the Bachelor's degree, one in mining engineering and the others in metallurgy. The remaining two students passed all their examinations, but the theses they submitted as part requirement were not judged of sufficient merit for the granting of a degree. They have been advised that they must submit new and satisfactory theses before they will be entitled to receive the degree of Bachelor of Applied Science.

Of the eight students who entered other years, six were successful in their examinations and proceeded to higher years; one, owing to illness, attended only the first term of the university session and in consequence received only one-half of the bursary he had been awarded; and one failed to obtain the necessary standing in his examinations for promotion to a higher year.

The Committee wishes to express to the Honourable the Minister of Mines its appreciation of the real service rendered by the Government of the Province in helping deserving young men to pursue University courses that will fit them for effective service in the development of our mineral resources.

I have the honour to be, Sir,

Your obedient servant,

A. O. DUFRESNE,  
Deputy Minister of Mines

Quebec, September, 1945

