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**Mines Branch (Canada Centre for Mineral and Energy Technology)
and Mineral Resources Division (Mineral Development Sector)**

ENERGY, MINES AND RESOURCES

1967

ÉNERGIE, MINES ET RESSOURCES

**Direction des Mines (Centre canadien de la technologie
des minéraux et de l'énergie)
et Division des ressources minérales (Secteur de l'exploitation
minérale)**

CANADIAN GOVERNMENT
PUBLICATIONS

DU GOUVERNEMENT CANADIEN

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ÉNERGIE, MINES ET RESSOURCES
DIRECTION DES MINES ET
DIVISION DES RESSOURCES MINÉRALES

MINES BRANCH AND
MINERAL RESOURCES DIVISION
ENERGY, MINES AND RESOURCES

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SECTIONAL CATALOGUE No. 12

JULY 1967 JUILLET

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THE QUEEN'S PRINTER

— L'IMPRIMEUR DE LA REINE

OTTAWA, CANADA

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3rd edition as Sectional Catalogue No. 12

Note.—To keep this catalogue up-to-date insert under the appropriate headings, the publications listed in the Monthly Catalogue of the Queen's Printer.

La bibliographie n° 12 des publications du Gouvernement du Canada: *Division des publications de la Direction des Mines et de la Division des Ressources minérales, Ministère de l'Énergie, des Mines et des Ressources* a été compilée par la Bibliothèque des documents, Département des Impressions et de la Papeterie Publiques avec la collaboration de la Division des Ressources minérales du Ministère des Mines et des Relevés techniques.

Troisième édition, juillet 1966

Note.—On peut tenir à jour cette bibliographie en insérant aux endroits appropriés, les publications du Ministère qui paraissent dans le Catalogue mensuel de l'Imprimeur de la Reine.

ROGER DUHAMEL, F.R.S.C.
Queen's Printer and
Controller of Stationery

ROGER DUHAMEL, m.s.r.c.
Imprimeur de la Reine et
Contrôleur de la Papeterie

OTTAWA, 1967

PREFACE

In this "Catalogue and Index of Mines Branch and Mineral Resources Division Publications" certain changes have been made.

Issued in the Sectional Catalogue Series of the Documents Library, Department of Public Printing and Stationery, the presentation of the material was adapted to the style of this series. All reports and maps appear in numerical order with the necessary cross-references from English to French versions of the same report, from maps to accompanying reports and from advance chapters or separates to main reports and vice versa. Added to the contents are a few historical notes on the Mines Branch and the Mineral Resources Division. Explanation of the new publication series of these two issuing authorities have been added.

The index was carefully prepared to make it as comprehensive as possible. The subjects, titles, authors (in capital letters), and place names concerned are listed together in one alphabetical order.

To assist in the identification of the publication series of the Mines Branch and the Mineral Resources Division, this catalogue has been divided into five parts:

Part 1—Introduction.

Part 2—The early Mines Branch publications series. It should be noted that some publications of the Mineral Resources Division are included up to 1959.

Part 3—The new publication series of the Mines Branch, commenced in 1958.

Part 4—The new publication series of the Mineral Resources Division, commenced in 1958.

Part 5—Index.

John Convey,
Director,
Mines Branch.

W. Keith Buck,
Chief,
Mineral Resources Division.

Ottawa, June 30, 1967.

PRÉFACE

Cette édition du «Catalogue de la Direction des Mines et de la Division des Ressources minérales» comporte quelques modifications.

Étant publiée dans la série des bibliographies spéciales de la Bibliothèque des documents du Département des Impressions et de la Papeterie Publiques, la présentation de la matière a été adoptée au style de cette série. Tous les rapports et toutes les cartes géographiques sont en ordre numérique avec les renvois réciproques nécessaires des versions anglaises ou françaises d'un même rapport, des cartes géographiques accompagnant ces rapports et des chapitres anticipés ou séparés des rapports principaux. Nous avons cru bon d'ajouter également quelques notes historiques sur la Direction des Mines et la Division des Ressources minérales, ainsi que quelques mots explicatifs des nouvelles séries de documents publiées sous leur autorité.

L'index, aussi complet que possible, a été préparé avec soin. Les auteurs (en majuscule), les titres, les sujets et les noms de lieux ont été groupés en un seul ordre alphabétique.

Pour faciliter l'identification des items publiés par ces organismes, ce catalogue a été divisé en cinq parties:

Partie 1—Introduction.

Partie 2—La série première des publications de la Direction des Mines. Il est à noter que quelques publications de la Division des Ressources minérales ont été énumérées ici jusqu'à 1959.

Partie 3—La série nouvelle de publications de la Direction des Mines commencée en 1958.

Partie 4—La série nouvelle de publications de la Division des Ressources minérales commencée en 1958.

Partie 5—Index.

John Convey,
Directeur,
Direction des Mines.

W. Keith Buck,
Chef,
Division des Ressources minérales.

Ottawa, le 30 juin 1967.

SECTIONAL CATALOGUE No. 12—BIBLIOGRAPHIE N° 12

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HOW TO ORDER

Publications listed in this catalogue and accompanied by a price may be purchased from Information Canada, Ottawa, or from the Publications, Sales and Distribution Office, Canada Centre for Mineral and Energy Technology, (CANMET), Department of Energy, Mines and Resources, 555 Booth Street, Ottawa, Canada.

Remittance must be made in advance of shipment of publications. Cheque or money orders should be made payable to the Receiver General of Canada. Postage stamps are not an acceptable form of currency in Canada.

No extra charge is made for postage on documents forwarded to points in Canada. To cover cost of postage, 20% is added to the selling price when publications are mailed outside Canada.

The term 'out-of-print' indicates there are fewer than 20 copies remaining on file at the time of reprinting this catalogue. Further inquiry as to price and availability should be addressed to the Publications, Sales and Distribution Office, Canada Centre for Mineral and Energy Technology, (CANMET), Department of Energy, Mines and Resources, 555 Booth Street, Ottawa, Canada.

GUIDE DE L'ACHETEUR

On peut se procurer les publications inscrites au présent catalogue et marquées d'un prix en s'adressant à Information Canada, Ottawa, ou au Bureau des publications, des ventes et de la distribution, Centre canadien de la technologie des minéraux et de l'énergie (CANMET), ministère de l'Énergie, des Mines et des Ressources, 555, rue Booth, Ottawa, Canada.

Les commandes doivent être réglées à l'avance par mandats-poste ou chèques visés, payables au Receveur général du Canada. Les timbres-poste ne sont pas acceptés comme monnaie au Canada.

Aucun supplément de port n'est exigé pour l'expédition de colis à destination du Canada. Dans le cas des envois pour l'étranger, il faut ajouter, au titre des frais de port, 20% au prix de vente.

Le terme «épuisé» indique qu'il restait moins de 20 exemplaires en stock au moment de la réimpression du présent catalogue. Pour de plus amples renseignements sur le prix et la disponibilité des publications, s'adresser au Bureau des publications, des ventes et de la distribution, Centre canadien de la technologie des minéraux et de l'énergie (CANMET), ministère de l'Énergie, des Mines et des Ressources, 555, rue Booth, Ottawa, Canada.

**MINES BRANCH AND
MINERAL RESOURCES
DIVISION**

**DIRECTION DES MINES ET
DIVISION DES RESSOURCES
MINÉRALES**

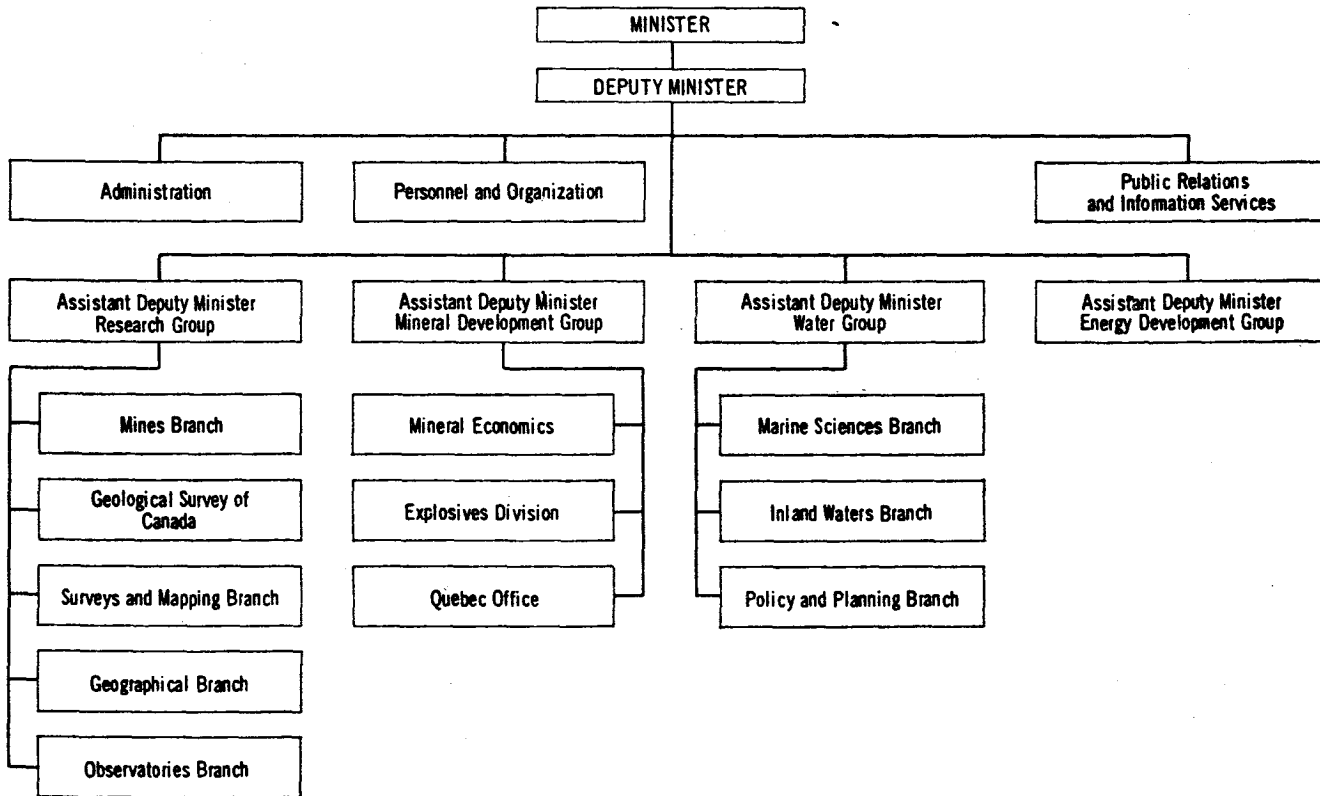
Sectional Catalogue No. 12

Bibliographie n° 12

Part I

INTRODUCTION

DEPARTMENT OF ENERGY, MINES AND RESOURCES



A: HISTORICAL NOTES

1884-1907: Department of the Interior

The appointment of a Superintendent of Mines for Manitoba and Northwest Territories is well explained in the following quotation from the annual report of the Department of the Interior for the year 1884. "The increased accessibility, by means of the Canadian Pacific Railway, now in operation beyond the summit of the Rocky Mountains, and the growing importance of the available mineral resources of the North-West necessitated the appointment of a Superintendent, and Mr. William Pearce, the Inspector of Dominion Land Agencies, was selected for that post." Mr. Pearce was the Superintendent of Mines up to June 5, 1901, when he was transferred to the office of Chief Inspector of Surveys.

The history of the Mineral Resources Division may be said to date back to 1886, when the Division of Mineral Statistics and Mines of the Geological Survey was organized to collect statistics and issue annual reports on the mineral industries of Canada.

A new step was taken towards the organization of the Mines Branch with the appointment, on the 5th of June 1901, of Professor Eugene Haanel, Ph.D., as Superintendent of Mines. In the annual report for the year 1901, the Deputy Minister of the Interior said: "It may be explained in this relation that in view of the recent development of mining industries in the Yukon Territory and other sections of the country where the lands are under control of the Dominion government, it was felt that provision should be made for the appointment of a special technical officer whose scientific knowledge and practical experience in mining matters would fit him to take charge of this particular branch, such officer to advise the department upon the requirements in connection with this service and prepare reliable information for publication."

1907-1936: Department of Mines

The first Department of Mines was created by the Geology and Mines Act, S.C., 1907, chapter 29. The Department was divided into two branches, the Geological Survey and the Mines Branch. By an order in Council dated May 15, 1907, the Mines Branch was transferred from the Department of the Interior to the Department of Mines, and Dr. Haanel shortly afterwards received his appointment as Director of the Mines Branch.

In 1907 the Division of Mineral Statistics and Mines was transferred to become the nucleus of the newly created Mines Branch, as the Division of Mineral Resources and Statistics.

The functions of the Mines Branch were to collect and publish full statistics of the mineral production and of the mining and metallurgical industries of Canada, and such data regarding the economic minerals as relate to the processes and activities connected with their utilization, to make detailed investigations of mining camps and areas containing economic minerals or deposits of other economic substances, and to make such chemical, mechanical and metallurgical investigations as were found expedient to aid the mining and metallurgical industry of Canada.

1936-1949: Department of Mines and Resources

The Department of Mines and Resources which came into being on December 1, 1936, under the authority of chapter 33 of the Statutes of Canada, 1936, was divided into five branches. The functions of the new Department were those of the former Departments of Mines, Interior, Indian Affairs, and Immigration and included, as well, those of the Hydrographic Service Division which previously was part of the old Department of Marine.

The Mines and Geology Branch discharged the duties and activities of the former Department of Mines, together with air and topographical surveys transferred from the Topographical and Air Survey Bureau of the former Department of the Interior. The Branch comprised four main units: the Bureau of Geology and Topography, replacing the former Bureau of Economic Geology; the Bureau of Mines, replacing the former Mines Branch; the National Museum of Canada; and the Dominion Fuel Board.

1949- : Department of Mines and Technical Surveys

The Department of Mines and Technical Surveys was created by an Act of Parliament (13 George VI, chapter 17) which received Royal Assent on December 10, 1949, and came into force by Order in Council P.C. 2/330 of January 20, 1950. Its establishment resulted from the organization of certain former government departments into new departments.

As now constituted, the Department is an integrated organization whose primary functions are to provide technological assistance in the development of Canada's mineral resources through studies, investigations, and research in the fields of geology, mineral dressing, and metallurgy, and to carry out geodetic, topographic, hydrographic, and other surveys of use in the development of Canada's natural resources.

The Department has six branches, namely, the Surveys and Mapping Branch, the Geological Survey of Canada, the Mines Branch, the Dominion Observatories, the Geographical Branch, and the Marine Sciences Branch.

1956

On June 26, 1956, the Mineral Resources Division, was transferred from the Mines Branch to the Office of the Deputy Minister of Mines and Technical Surveys through the Director General of Scientific Services. This organizational change resulted in the Mineral Resources Division setting up its own publication series separate and distinct from the Mines Branch series.

1959

A reorganization regrouped a major part of the function of the Mines Branch into three new Divisions: the Mineral Processing Division, the Extraction Metallurgy Division, and the Mineral Sciences Division. In addition to these, the Mines Branch is composed of the Physical Metallurgy Division, the Fuels and Mining Practice Division, and the Technical Services Division.

B: FUNCTIONS OF THE MINES BRANCH

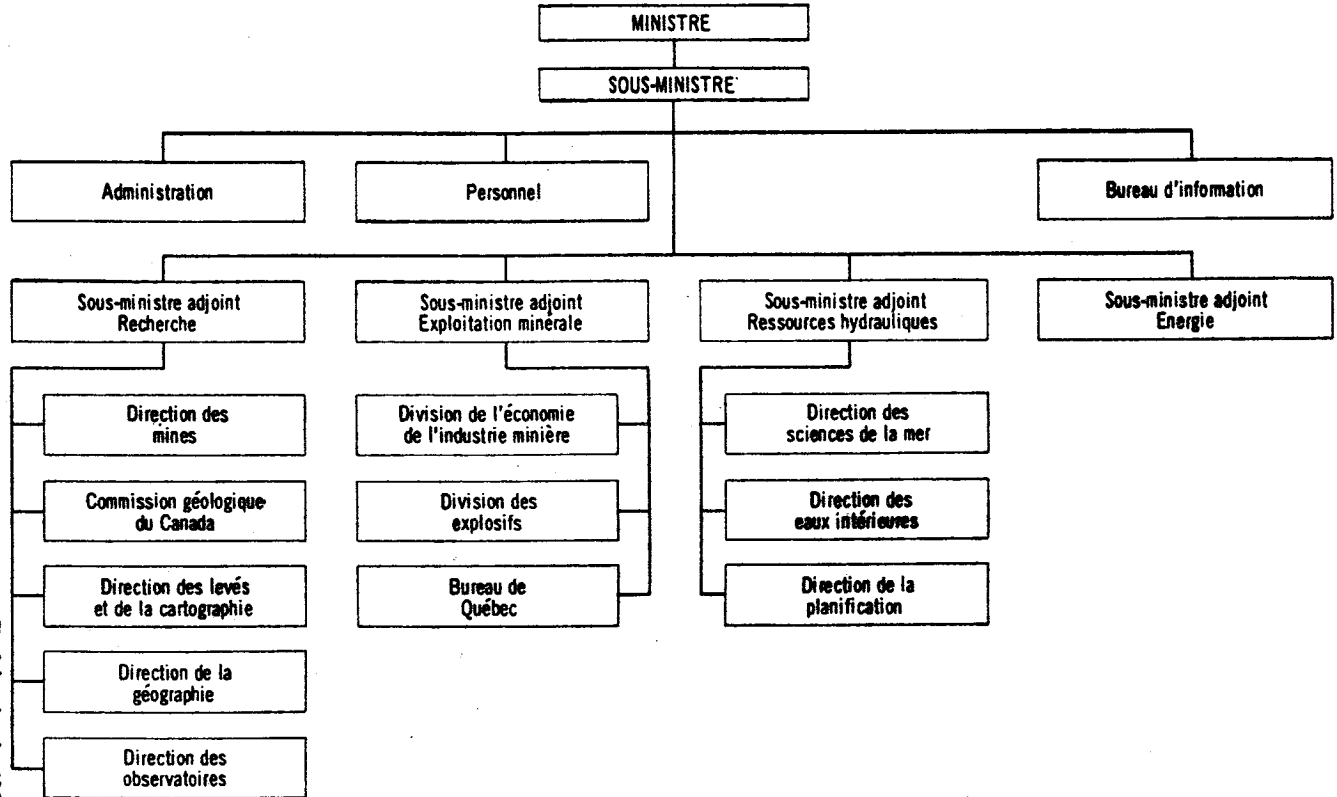
The **Mines Branch** is primarily concerned with the technological problems of the mineral industry and maintains well-equipped ore testing, mineral dressing, fuel research, ceramic, radioactivity, industrial waters and physical metallurgy laboratories to handle these problems. The scope of its activities ranges from relatively minor tests on the lowly sands to fundamental research on the rare metals, from handling routine inquiries to such highly important and specialized assignments as handling the metallurgical problems of the atomic energy project at Chalk River, Ontario.

Within this broad range come tests and research on ores and radioactive minerals designed primarily to work out and to improve treatment methods; investigations on industrial minerals aimed largely toward the greater utilization of Canadian sources of these minerals; work in the ceramic laboratories; intricate studies in the spectrographic and mineralographic laboratories; research on Canadian fuels; and investigations in physical metallurgy.

FUNCTIONS OF THE MINERAL RESOURCES DIVISION

The work of the Division lies in the mineral resources, mineral economics, mineral legislation, mineral taxation, and government administrative fields. The Division has the important role in the Department of Mines and Technical Surveys of advising senior departmental and other government officials on matters affecting Canadian mineral policy. The Division collects, records, compiles and prepares information and advice for the use of the Department, other government departments, Crown corporations, foreign embassies, private industry, and the general public on mineral resources; mining and oil companies; technical-economic aspects of exploration, development, production and marketing; and on mineral industry legislation and taxation. It carries out technical-economic studies on all phases of the Canadian mineral industry, and also maintains a considerable record on the mineral industries of foreign countries. The Division is responsible for the administration of the Emergency Gold Mining Assistance Act.

MINISTÈRE DE L'ÉNERGIE, DES MINES ET DES RESSOURCES



A: NOTES HISTORIQUES

1884-1907: Ministère de l'Intérieur

La nomination du premier surintendant des Mines pour le Manitoba et les régions du Nord-Ouest est ainsi justifiée par le ministre de l'Intérieur dans son rapport annuel pour l'année 1884. "La facilité d'accès aux mines, dans la région du Nord-Ouest, par le moyen du Chemin de fer Pacifique, ouvert aujourd'hui jusqu'au delà de la ligne de faite des montagnes Rocheuses, et l'importance croissante de ces richesses minérales, ont rendu nécessaire la nomination d'un surintendant. M. William Pearce, inspecteur des agences des terres fédérales, a été choisi pour remplir le nouvel emploi."

M. Pearce fut surintendant jusqu'au 5 juin 1901 alors qu'il fut promu au poste d'inspecteur en chef des arpentages.

L'histoire de la Division des Ressources minérales remonte à 1886, quand la Division des Statistiques minérales et des Mines de la Commission géologique du Canada fut organisée pour recueillir les statistiques et émettre des rapports annuels sur les industries minérales du Canada.

La nomination, le 5 juin 1901, du professeur Eugène Haanel, Ph.D., minéralogiste de renom, au poste de surintendant des mines, marque une nouvelle étape dans l'histoire de la Division des mines. Le sous-ministre de l'Intérieur, dans son rapport annuel pour l'année 1900-1901 explique ainsi cette nomination d'un spécialiste: "Vu le développement récent de l'industrie minière dans le Yukon et dans d'autres régions où le terrain est sous le contrôle du gouvernement canadien, il devenait nécessaire de nommer un employé spécial dont les connaissances scientifiques et l'expérience en matière minière le rendissent compétent pour cet emploi particulier."

Le nouveau surintendant devait organiser la division pour répondre aux nouvelles exigences et était chargé de la compilation des renseignements exacts et des statistiques officielles concernant les mines dans tout le Canada.

Les premiers rapports de la Division des mines parurent dès 1902.

1907-1936: Ministère des Mines

Le premier ministère des Mines fut créé par la "Loi de la géologie et des mines" sanctionnée le 27 avril 1907 (chapitre 29 des Statuts du Canada, 1907). Le ministère comprend deux sections, l'une appelée Section des Mines, et l'autre, Service géologique (1907, c.29, a. 5).

En vertu d'un arrêté en conseil du 15 mai 1907, la Division des mines du ministère de l'Intérieur fut transférée au nouveau ministère des Mines et le Docteur Eugène Haanel fut nommé peu après, directeur de la Division.

En 1907 la Division des Statistiques minérales et des Mines fut transférée pour devenir le noyau de la nouvelle Division des Mines créée sous le nom de la Division des Ressources minérales et des Statistiques.

D'après la loi (1907, c.29, a. 6.), les fonctions de la section des Mines sont: a) de recueillir et publier des statistiques complètes sur la production minérale et les industries minières et métallurgiques du Canada, et toutes informations, au sujet de ses minéraux économiques, se rapportant aux procédés et aux travaux liés à leur utilisation, b) de se renseigner en détail sur les camps miniers et les régions contenant des minéraux économiques ou des dépôts d'autres substances économiques, c) de faire les recherches chimiques, mécaniques et métallurgiques jugées utiles pour aider l'industrie minière et métallurgique du Canada.

1936-1949: Ministère des Mines et des Ressources

Le ministère des Mines et des Ressources, créé le 1^{er} décembre 1936, en vertu du chapitre 33 des Statuts du Canada de 1936 se compose de cinq divisions dont les fonctions sont celles des anciens ministères des Mines (Division des Mines et de la Géologie), de l'Intérieur (Division des Terres, Parcs et Forêts et des Arpentages et du Génie), des Affaires Indiennes (Division des Affaires Indiennes) et de l'Immigration (Division de l'Immigration).

La division des Mines et de la Géologie remplit les fonctions et accomplit le travail de l'ancien ministère des Mines; elle exécute également les levés topographiques aériens et terrestres dont était chargé auparavant le Service des levés topographiques et aériens de l'ancien ministère de l'Intérieur.

Cette division comprend maintenant quatre services principaux: le Service de Géologie et de Topographie qui remplace l'ancien Bureau de la Géologie appliquée, le Musée national du Canada, le Service des Mines qui remplace l'ancienne Division des Mines, et la Commission fédérale du Combustible.

1949- : Ministère des Mines et des Relevés techniques

Le ministère des Mines et des Relevés techniques a été créé par une loi du Parlement (13 George VI, chapitre 17) qui a reçu la sanction royale le 10 décembre 1949 et est entrée en vigueur par l'arrêté en conseil C.P. 2/330 du 20 janvier 1950. Sa création a résulté de l'organisation d'anciens ministères de l'État en trois nouveaux ministères.

Comme il est présentement constitué, le ministère des Mines et des Relevés techniques forme un organisme complet qui a pour fonction première d'apporter une aide technique à l'exploitation des ressources minérales du Canada au moyen d'études, d'investigations et de recherches dans le domaine de la géologie, de la préparation mécanique du minerai et de la métallurgie, ainsi que dans les relevés topographiques, géodésiques et autres.

Le ministère compte six sections à savoir: la Direction des levés et de la cartographie, la Commission géologique du Canada, la Direction des Mines, les Observatoires fédéraux, la Direction de la géographie et la Direction des Sciences marines.

1956

Le 26 juin 1956, la Division des Ressources minérales fut transférée de la Direction des Mines au Bureau du sous-ministre des Mines et Relevés techniques par le Directeur général des Services scientifiques. Ce changement dans l'organisation provient de ce que la Division des Ressources minérales préparait ses propres séries de publications séparées et distinctes des séries de la Direction des mines.

1959

Une réorganisation regroupa une majeure partie des fonctions de la Direction des mines et trois nouvelles divisions: la Division du traitement des minéraux, la Division de la métallurgie extractive et la Division des sciences minéralogiques. En plus de ces divisions, la Direction des mines se compose de la Division de la métallurgie physique, la Division des combustibles et des techniques minières et la Division des services techniques.

B: FONCTIONS DE LA DIRECTION DES MINES

La Direction des mines s'intéresse surtout aux problèmes techniques de l'industrie minérale et possède des laboratoires bien outillés pour faire l'épreuve du minerai, la préparation mécanique des minéraux, les recherches concernant le combustible, la céramique, la radioactivité, les eaux industrielles et la métallurgie physique afin de résoudre ces problèmes. L'étendue de son activité est aussi considérable que les besoins techniques de l'industrie qu'elle dessert. Son domaine comprend les épreuves relativement secondaires concernant les sables jusqu'à la recherche fondamentale des métaux rares ainsi que les investigations courantes jusqu'aux tâches importantes et spécialisées se rattachant à la solution de tous les problèmes métallurgiques de l'entreprise d'énergie atomique à Chalk-River.

Dans ce vaste champ d'action, on peut mentionner: les travaux d'analyse de minerais dont le but principal est d'élaborer et d'améliorer les méthodes de traitement et d'aider ainsi à diminuer le coût du bocardage; les investigations relatives aux minéraux industriels visant en grande partie à une utilisation plus absolue des sources canadiennes de ces minéraux; l'activité dans les laboratoires céramiques; les études compliquées faites dans les laboratoires pectrographiques et minéralogiques; les recherches ayant trait aux combustibles canadiens; les analyses et autres travaux concernant les minéraux radio-actifs et les investigations variées en métallurgie physique.

FONCTIONS DE LA DIVISION DES RESSOURCES MINÉRALES

L'activité de la Division s'étend sur les ressources minérales, l'économie minérale, la législation minérale, la taxation minérale et les champs administratifs du gouvernement. La Division remplit, au sein du Ministère des Mines et des Relevés techniques, le rôle important de fournir des renseignements et des conseils aux officiers supérieurs du ministère et du gouvernement sur les matières affectant la politique minérale canadienne. La Division collecte, enregistre, compile, prépare l'information et donne des conseils sur les ressources minérales pour l'usage du ministère et divers autres ministères, des Corporations de la Couronne, des ambassades étrangères, de l'industrie privée et des particuliers; des Compagnies minières et d'huile; sur les aspects techniques et économiques d'exploration, de développement, de production et du marché; sur la législation minière industrielle et sur la taxation. Elle rédige des études techniques et économiques sur toutes les phases de l'industrie minérale canadienne et maintient un registre considérable sur les industries minérales des pays étrangers. La Division est responsable de l'application de la Loi d'urgence sur l'aide à l'exploitation des mines d'or.

Part II

Mines Branch Publications

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REPORTS AND MAPS RAPPORTS ET CARTES

Reports and magnetic survey maps of economic interest published by the Mines Branch. No. 1-865, 1902-1959.

Rapports de la Direction des mines. N° 1-865, 1902-1959.

Note.—Tous les rapports de la Division des mines n'ont pas été publiés en français. Dans la liste complète qui suit les rapports en anglais ou en français figurent sous leur numéro de série respectif et la référence à l'édition correspondante dans l'autre langue est donnée dans chaque cas.

- 1.—Report on copper belt and coal lands near Whitehorse, Y.T., and on the mining conditions of the Klondike, Y.T., by Eugene Haanel. 1903. 26p. 8 pls., 4 figs., 1 map. (in Sessional Paper No. 25-1903.)

At head of title Appendix to the report of the Superintendent of Mines. (Annual report of the Department of the Interior, 1901-02, Part VI.)

Out of print.

Cat. No. M32-1

- 2.—Report on the great landslide at Frank, Alberta, 1903, by R. G. McConnell and R. W. Brock. 1904. 17p. 14 pls., 2 figs., 2 maps. (in Sessional Paper No. 25-1904).

Extract from the Annual report of the Department of the Interior, 1902-03, Part VIII.

Out of print.

Cat. No. M32-2

- 3.—Report of the Commission appointed to investigate the different electro-thermic processes for the smelting of iron ores, and the making of steel, in operation in Europe, by Eugene Haanel. 1904. 223p. 24 pls., 64 figs.

Appendix.—*Treatise on electro metallurgy of iron, by Henri Harmet.—The electrical manufacture of steel, by Gustave Gin.—Electro-thermic process for the reduction of iron ore, by Ernesto Stassano.—Lecture on the treatment of copper ores by the electric furnace, (Keller process), by M. Ch. Vantler.*

Voir le rapport n° 4 pour l'édition française.

Out of print.

Cat. No. M32-3

- 4.—Rapport de la Commission nommée pour étudier les divers procédés électro-thermiques pour la réduction des minerais de fer et la fabrication de l'acier employés en Europe, par Eugene Haanel. 1905. 24 planches, 64 figures.

See Report No. 3 for English edition.

Édition épuisée.

N° de cat. M32-4F

- 5.—On the location and examination of magnetic ore deposits by magnetometric measurements, by Eugene Haanel. 1904. 132p. 13 pls., 54 figs.

Out of print.

Cat. No. M32-5

- 6.—Calabogie mine, Bagot township, Renfrew County, Ontario; magnetic survey map, vertical intensity, by E. Nystrom. 1904. 60' : 1".

See also map No. 249.

Out of print.

Cat. No. M32-6

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 7.—Preliminary report on the limestones and the lime industry of Manitoba, by J. Walter Wells. 1905. 68p. 8 pls., tables.
Out of print. Cat. No. M32-7
- 8.—Preliminary report on the industrial value of the clays and shales of Manitoba, by J. Walter Wells. 1905. 41p. 9 pls., tables.
Out of print. Cat. No. M32-8
- 9.—Preliminary report on the raw materials, manufacture, and uses of hydraulic cements in Manitoba, by J. Walter Wells. 1905. 70p. 7 pls.
Out of print. Cat. No. M32-9
- 10.—Mica: its occurrence, exploitation, and uses, by Fritz Cirkel. 1905. 148p. 1 pl., 38 figs., 2 maps.
Voir le rapport n^o 264 pour l'édition française. See also reports Nos. 118 and 701.
Out of print. Cat. No. M32-10
- 11.—Asbestos: its occurrence, exploitation and uses, by Fritz Cirkel. 1905. 170p. 19 pls., 1 map.
See also Reports Nos. 69 and 707.
Out of print. Cat. No. M32-11
- 12.—Report of the Commission appointed to investigate the zinc resources of British Columbia and the conditions affecting their exploitation, by Walter Renton Ingalls, and others. 1905. 399p. 68 pls., 32 figs., 2 maps.
Out of print. Cat. No. M32-12
- 13.—Belmont iron mines, Belmont township, Peterborough county, Ontario; magnetic survey map, vertical intensity, by B. F. Haanel. 1905. 60' : 1".
See also map No. 186.
Out of print. Cat. No. M32-13
- 14.—Wilbur Mine, Lavant township, Lanark county, Ontario; magnetic survey map, by B. F. Haanel. 1905. 60' : 1".
See also map No. 441.
Out of print. Cat. No. M32-14
- 15.—Iron ore deposits at Austin Brook, Gloucester county, New Brunswick; magnetic survey map, vertical intensity, by E. Lindeman. 1906.
Out of print. Cat. No. M32-15
- 16.—Report of the experiments at Sault Ste. Marie, Ontario, under Government auspices, in the smelting of Canadian iron ores by the electro-thermic process, by Eugene Haanel. 1907. 140p. 23 pls., 21 figs., tables.
This includes the Preliminary Report No. 16A, published in 1906.
Out of print. Cat. No. M32-16
- 16A.—Preliminary report on the experiments made at Sault Ste. Marie, Ont., under Government auspices, in the smelting of Canadian iron ores by the electro-thermic process, by Eugene Haanel. 1906. 23p. 4 pls., tables.
See also report No. 16.
Out of print. Cat. No. M32-16A

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Reports and maps—Rapports.—Continued—Suite.

- 17.—Report on the present and prospective output of the mines of the silver-cobalt ores of the Cobalt district, by Eugene Haanel. 1907. 13p.
Out of print. Cat. No. M32-17

- 18.—Graphite: its properties, occurrence, refining, and uses, by Fritz Cirkel. 1907. 307p. 20 pls., 52 figs., 44 tables, 9 maps.
Voir le rapport n° 202 pour l'édition française. See also report No 511.
Out of print. Cat. No. M32-18

- 19.—Peat and lignite: their manufacture and uses in Europe, by E. Nystrom. 1908. 247p. 34 pls., 228 figs., tables.
Voir le rapport n° 198 pour l'édition française.
Out of print. Cat. No. M32-19

- 20.—Report on the iron ore deposits of Nova Scotia (Part I), by J. E. Woodman. 1909. 226p. 63 pls. or maps.
Out of print. Cat. No. M32-20

- 21.—Summary report of the Mines Branch of the Department of Mines for the fiscal year 1907-08. 1908. 100p. 1 fig., tables. (Sess. Paper No. 26a-1908).

Contents.—DIRECTORS' REPORT, by Eugene Haanel.—Special reports: Iron ore deposits of Vancouver and Texada islands, by E. Lindeman; Alleged iron ore deposits of Ontario and Quebec, by B. F. Haanel; Visit of gas producer plants in and around New York, by B. F. Haanel; Mineral production in 1907 (see report No. 27).—Appendices: Comparison of induction furnaces employed for production of steel, by A. Grönwall; Experiments in intensified nitrification, by means of peat beds, by Müntz and Lainé.

Voir le rapport n° 21A pour l'édition française.
Out of print. Cat. No. M32-21

- 21A.—Rapport sommaire de la Division des mines du ministère des Mines pour l'exercice 1907-08. 1908. 111p. 1 figure, tableaux. (Doc. parl. n° 26a-1908.)

Sommaire.—RAPPORT DU DIRECTEUR, par Eugene Haanel.—RAPPORTS SPÉCIAUX: Gisements de fer de l'île de Vancouver, par E. Lindeman; Gisements de fer dans les provinces de Québec et Ontario, par B.F. Haanel; Installations de gazogères aux États-Unis; par B. F. Haanel; Rapport préliminaire sur la production minérale du Canada en 1907, par John McLeish.—Appendices: Comparaisons des divers fours à induction usités dans la fabrication de l'acier, par A. Grönwall; Extrait des travaux de MM. Müntz et Lainé sur la nitrification intensive.

See report No. 21 for English edition.
Édition épuisée. N° de cat. M32-21F

- 22.—Report on the examination of some iron ore deposits in the districts of Thunder Bay and Rainy River, Province of Ontario, by F. Hille. 1908. 65p. 7 pls., 18 figs. or maps.
Out of print. Cat. No. M32-22

- 23.—Report on the iron ore deposits along the Ottawa (Quebec side) and Gatineau rivers, by Fritz Cirkel. 1909. 147p. 5 pls., 15 figs., 2 maps.

See maps Nos. 53 and 54.
Out of print. Cat. No. M32-23

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Reports and maps—Rapports.—Continued—Suite.

- 24.—Report on the mining and metallurgical industries of Canada, 1907-08. 1908. 972p. 75 pls., 16 figs., 6 maps.

See also report No. 597.

Out of print.

Cat. No. M32-24

- 25.—Report on the tungsten ores of Canada, by T. L. Walker. 1909. 56p. 10 pls., 6 figs.

Voir le rapport n° 156 pour l'édition française.

Out of print.

Cat. No. M32-25

- 26.—Annual report on the mineral production of Canada during the calendar year 1906, by John McLeish. 1909. 182p. Tables. (Sess. Paper No. 26b-1908.)

Voir le rapport n° 26A pour l'édition française.

Out of print.

Cat. No. M32-26

- 26A.—Rapport annuel de la production minérale du Canada, durant l'année 1906, par John McLeish. 1909. 182p. Tableaux. (Doc. parl. n° 26b-1908.)

See report No. 26 for English edition.

Édition épuisée.

N° de cat. M32-26F

- 27.—Preliminary report on the mineral production of Canada in 1907, by John McLeish. 1908. 15p. Tables.

Separate part of report No. 21.

Out of print.

Cat. No. M32-27

- 27A.—Preliminary report on the mineral production of Canada in 1908, by John McLeish. 1909. 16p. Tables.

Separate part of report No. 28.

Out of print.

Cat. No. M32-27A

- 28.—Summary report of the Mines Branch of the Department of Mines for the nine months ending December 31, 1908. 1909. 96p. Tables. (Sess. Paper No. 26a-1909.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—Coal tests at McGill University, by J. B. Porter.—Reports: Chemical Laboratories, by F. G. Watt; Division of Mineral Resources and Statistics, by John McLeish; Assay Office, Vancouver, by G. Middleton.—PRELIMINARY REPORTS ON FIELD WORK: Tungsten ores of Canada, by T. L. Walker; Chrome iron ores and asbestos in province of Quebec, by Fritz Cirkel; Iron ores of Nova Scotia, part II, by J. E. Woodman; Iron ore deposits in New Brunswick and Northwestern Ontario, by E. Lindeman; Magnetometric survey of the Huron Mountain mine, by B. F. Haanel; Magnetite iron ore deposits in Mayo Township, Ont., by Howells Fréchette; Smelting of titaniferous iron ores in the electric furnace of Welland, Ont., by B. F. Haanel; Coal samples for testing Canadian coals at McGill University, by Theophile Denis; Tests made in Scotland of oil-shales sent from New Brunswick, by R. W. Ellis; Peat bogs of Canada, by E. Nystrom and A. Anrep; Coal and coal mining in Nova Scotia, by Joseph G. S. Hudson; Gypsum deposits and industry of Nova Scotia and New Brunswick, by W. F. Jennison; Visit to some producer gas plants in and around Berlin, Germany, by B. F. Haanel.—Appendices: Progress of electric smelting in Norway, by O. Stalhane; Mineral production, 1908 (see report No. 27A).

Voir le rapport n° 28A pour l'édition française.

Out of print.

Cat. No. M32-28

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

28A.—**Rapport sommaire de la Division des Mines du ministère des Mines, pour les neuf mois finissant le 31 décembre 1908.** 1909. 110p. Tableaux (Doc. parl. n° 26a-1909.)

Sommaire.—RAPPORT GENERAL DU DIRECTEUR, par Eugene Haanel.—RAPPORTS: Essais de charbon à l'université McGill, par J. B. Porter; Laboratoires de chimie, par F. G. Wait; Bureau des ressources minières et des statistiques, par John McLeish; Essayerie du Dominion à Vancouver, par G. Middleton.—RAPPORTS PRÉLIMINAIRES DES TRAVAUX DE RECHERCHES: Minerais de tungstène, par T. L. Walker; Minerais de fer chromé et amiante de la province de Québec, par Fritz Cirkel; Minerais de fer de la Nouvelle-Écosse, 2^e campagne, par J. E. Woodman; Gisements de minerai de fer au Nouveau-Brunswick et dans le nord-ouest d'Ontario, par Einar Lindeman; Relevé magnétique du mont Huron, par B. F. Haanel; Gisements de magnétite du township Mayo, Ont., par Howells Fréchette; Essai de fonte de minerai de fer titanifère dans le four électrique de Welland, Ont., par B. F. Haanel; Prélèvement d'échantillons de charbon pour les essais de charbons canadiens à l'université McGill, par Théophile Denis; Essais effectués en Écosse, sur les schistes pétrolifères envoyés du Nouveau-Brunswick, par R. W. Ells; Les tourbières du Canada, par E. Nystrom et S. A. Anrep; La houille et l'extraction de la houille en Nouvelle-Écosse, par Joseph G. S. Hudson; Les dépôts et l'industrie du gypse en Nouvelle-Écosse et au Nouveau-Brunswick, par W. F. Jennison; Visite à quelques installations de gazogènes dans la cité de Berlin et aux alentours, par B. F. Haanel.—Annexes: Progrès de la fonte électrique en Norvège, par O. Stalhane; Production minérale en Canada 1907-08, par John McLeish.

See report No. 28 for English edition.

Édition épuisée.

N° de cat. M32-28F

29.—**Report on the chrome iron ore deposits in the Eastern Townships, province of Quebec, by Fritz Cirkel.** 1909. 141p. 11 pls., 15 figs., tables, 1 map.

APPENDICES: I—Notes on the metallurgy of chromium, by W. Borchers. II—Experiments with chromite at McGill University under the direction of J. B. Porter.

Voir le rapport n° 226 pour l'édition française. See also map No. 57.

Out of print.

Cat. No. M32-29

30.—**Investigation of the peat bogs and peat fuel industry of Canada during the season 1908-09, by Erik Nystrom and S. A. Anrep.** Second edition. 1909. 25p. 6 maps. (Bulletin No. 1.)

See maps Nos. 36, 37, 38, 39, 40, and 41.

Out of print.

Cat. No. M32-30

31.—**The production of cement in Canada during the calendar year 1908, by John McLeish.** 1909. 4p. Tables.

Advance chapter of report No. 58.

Out of print.

Cat. No. M32-31

32.—**Report on the investigation of an electric shaft furnace, Domnarfvet, Sweden, by Eugene Haanel.** Second edition. 1909. 40p. 5 pls., 8 figs.

Out of print.

Cat. No. M32-32

33.—**Mayo township, lot 1, concession VI, Hastings county, Ontario; (magnetite occurrence) magnetometric survey map, vertical intensity, by Howells Fréchette.** 1909. 60' : 1"

See also map No. 191.

Out of print.

Cat. No. M32-33

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- 34.—Mayo township, lots 2 and 3, concession VI, Hastings county, Ontario; (magnetite occurrence) magnetometric survey map, vertical intensity, by Howells Fréchette. 1909. 60' : 1".
See also map No. 191.
Out of print. Cat. No. M32-34
- 35.—Mayo township, lots 10, 11, and 12, concession IX, and lots 11 and 12, concession VIII, Hastings county, Ontario; (magnetite occurrence) magnetometric survey map, by Howells Fréchette. 1909. 60' : 1".
See also map No. 191.
Out of print. Cat. No. M32-35
- 36.—Mer Bleue peat bog, Gloucester township, Carleton county, and Cumberland township, Russel county, Ontario; survey map, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. Cat. No. M32-36
- 37.—Alfred peat bog, Alfred and Caledonia townships, Prescott county, Ontario; survey map, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. Cat. No. M32-37
- 38.—Welland peat bog, Wainfleet and Humberstone townships, Welland county, Ontario; survey map, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. Cat. No. M32-38
- 39.—Newington peat bog, Osnabruck, Roxborough and Cornwall townships, Stormont county, Ontario; survey map, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. Cat. No. M32-39
- 40.—Perth peat bog, Drummond township, Lanark county, Ontario; survey map, by Erik Nystrom and A. Anrep. 1909. 1056' : 1".
Accompanying report No. 30.
Out of print. Cat. No. M32-40
- 41.—Victoria Road peat bog, Bexley and Carden townships, Victoria county, Ontario; survey map, by Erik Nystrom and A. Anrep. 1909. 200' : 1".
Accompanying report No. 30.
Out of print. Cat. No. M32-41
- 42.—The production of iron and steel in Canada during the calendar years 1907 and 1908, by John McLeish. 1909. 35p. Tables.
Advance chapter of report No. 58.
Out of print. Cat. No. M32-42

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Reports and maps—Rapports.—*Continued—Suite.*

- 43.—The production of chromite in Canada during the calendar years 1907-08, by John McLeish. 1909. 6p. Tables.
Advance chapter of report No. 58.
Out of print. *Cat. No. M32-43*
- 44.—The production of asbestos in Canada during the calendar years 1907-08, by John McLeish. 1909. 8p. Tables.
Advance chapter of report No. 58.
Out of print. *Cat. No. M32-44*
- 45.—The production of coal, coke, and peat in Canada during the calendar years 1907 and 1908, by John McLeish. 1909. 34p. Tables.
Advance chapter of report No. 58.
Out of print. *Cat. No. M32-45*
- 46.—Production of natural gas and petroleum in Canada during the calendar years 1907 and 1908. 1909. 16p. Tables.
Advance chapter of report No. 58.
Out of print. *Cat. No. M32-46*
- 47.—Iron ore deposits of Vancouver and Texada islands, British Columbia, by Einar Lindeman. 1910. 29p. 5 maps.
See maps No. 48, 49, 50, 51 and 52.
Out of print. *Cat. No. M32-47*
- 48.—Magnetic survey of Iron Crown claim at Klanch River, Vancouver Island, B.C.; map of vertical intensity, by E. Lindeman. 1908. 60' : 1".
Accompanying report No. 17. See also map 442.
Out of print. *Cat. No. M32-48*
- 49.—Magnetic survey of the Western Steel Iron claim at Sechart, Vancouver Island, B.C.; map of vertical intensity, by E. Lindeman. 1908. 60' : 1".
Accompanying report No. 47. See also map No. 438.
Out of print. *Cat. No. M32-49*
- 50.—Vancouver Island, B.C.; index map to iron ore deposits of Vancouver and Texada islands, by E. Lindeman. 1910. 24m : 1".
Accompanying report No. 47.
Out of print. *Cat. No. M32-50*
- 51.—Iron mines, Texada Island, B.C.; map, by F. H. Shepherd. 1908. 500' : 1".
Accompanying report No. 47.
Out of print. *Cat. No. M32-51*
- 52.—Sketch map of bog iron ore deposits, West Arm, Quatsino Sound, Vancouver Island, B.C., by L. Frank. 1908. 100' : 1".
Accompanying report No. 47.
Out of print. *Cat. No. M32-52*

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- 53.—Iron ore occurrences, Ottawa and Pontiac counties, Quebec; map, by James White and Fritz Cirkel. 1908. 4m : 1".
Accompanying report No. 23.
Out of print. Cat. No. M32-53
- 54.—Iron ore occurrences, Argenteuil county, Quebec; map, by James White and Fritz Cirkel. 1908. 4m : 1".
Accompanying report No. 23.
Out of print. Cat. No. M32-54
- 55.—Joint report on the bituminous or oil-shales of New Brunswick and Nova Scotia, also, on the oil shale industry of Scotland. (Part I) Economics, and, (Part II) Geology, by R. W. Ellis. 1909-1910. 1 vol.
Prepared in cooperation with the Geological Survey Branch.
Contents.—PART I: Report on tests made in Scotland of oil-shale sent from New Brunswick in the Spring of 1908, with a view of ascertaining its economic value; especially as regards the yield of crude oil, and sulphate of ammonia, by R. W. Ellis; with an appendix; The technology of the Scottish shale oil industry, by W. A. Hamor, 1910, 61p. 15 pls., 6 figs., tables. (Mines Branch report 55).—PART II: Geological position and character of the oil-shale deposits of Canada, by R. W. Ellis. 1909. 75p. Tables. (Geological Survey Branch report 1107).
Voir le rapport n° 56 pour l'édition française.
Out of print. Cat. No. M32-55
- 56.—Rapport conjoint sur les schistes bitumineux ou pétrolifères du Nouveau-Brunswick et de la Nouvelle-Écosse, ainsi que sur l'industrie des schistes pétrolifères de l'Écosse. Première partie: Industrie; seconde partie: Géologie, par R. W. Ellis. 1914. 65+86p. 15 planches, 6 figures, tableaux. (Rapport de la Commission géologique n° 1108.)
See report No. 55 for English edition.
Édition épuisée. N° de cat. M32-56F
- 57.—The productive chrome iron ore district of Quebec; map, by Fritz Cirkel. 1909. 1m : 1".
Accompanying report No. 29.
Out of print. Cat. No. M32-57
- 58.—Annual report on the mineral production of Canada during the calendar years 1907 and 1908, by John McLeish. 1910. 286p. Tables.
See reports No. 31, 42, 43, 44, 45, and 46, for advance chapters.
Out of print. Cat. No. M32-58
- 59.—Report of analysis of ores, non-metallic minerals, fuels, etc., made in the Chemical Laboratories during the years 1906, 1907, 1908, arranged by F. G. Wait. 1909. 126p. 2 pls., tables.
Appendix: Description of commercial methods and apparatus for the analysis of oil-shales, by H. A. Leverin.
Out of print. Cat. No. M32-59

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Reports and maps—Rapports.—Continued—Suite.

- 60.—Bristol mine, Pontiac county, Quebec; magnetometric survey map, vertical intensity, by E. Lindeman. 1909. 200' : 1".
Accompanying report No. 67. See also map No. 443.
Out of print. Cat. No. M32-60
- 61.—Bristol mine, Pontiac county, Quebec; topographical map, by E. Lindeman. 1909. 200' : 1".
Accompanying report No. 67.
Out of print. Cat. No. M32-61
- 62.—Preliminary report on the mineral production of Canada, during the calendar year 1909, by John McLeish. 1910. 18p. Tables.
Out of print. Cat. No. M32-62
- 63.—Summary report of the Mines Branch of the Department of Mines for the calendar year 1909. 1910. 181p. 4 pls., tables. (Sess. Paper No. 26a-1910.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—Coal test at McGill University, by J. B. Porter.—REPORTS ON WORK: Chemical Laboratories, by F. G. Wait; Division for Mineral Resources and Statistics, by John McLeish; Dominion of Canada Assay Office, Vancouver, by G. Middleton.—PRELIMINARY REPORTS ON FIELD WORK: Molybdenum ores of Canada, by T. L. Walker; Magnetic concentration of iron and copper nickel ores, by Geo. C. Mackenzie; Manganese ore deposits in Nova Scotia and New Brunswick, by Théophile C. Denis; Iron ores and metallurgical limestones of Nova Scotia, 3rd season, by J. E. Woodman; Magnetic survey of some mining locations at Temagami, Ont., by Einar Lindeman; copper mining industry in Quebec, by Alfred W. G. Wilson; Nicolet antimony mine, Spalding iron locations, talc and soapstone in Mégantic county, Quebec, by Alfred W. G. Wilson; Iron ore properties in Northeastern Ontario, by Howells Fréchette; Gypsum resources of Nova Scotia, by W. F. Jennison; Asbestos deposits in the province of Quebec, by Fritz Cirkel; Iron ore occurrences in the provinces of Ontario, Quebec and New Brunswick, by B. F. Haanel; Harris peat gas process, by B. F. Haanel; Peat bogs of Canada, by A. Anrep; Coal mining in Nova Scotia, by Joseph G. S. Hudson; Accidents in mines, by Joseph G. S. Hudson.—Appendices: Mineral production in Canada in 1909 (See report No. 62); Description of commercial methods and apparatus for the analysis of oil-shales, by Harold Leverin; Prevention of mine explosions; Examination of magnetic ore deposits, by Howells Fréchette.

Voir le rapport n^o 63A pour l'édition française.

Out of print.

Cat. No. M32-63

- 63A.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile 1909. 1910. 176p. 4 planches, tableaux. (Doc. sessionnel n^o 26a-1910.)

Sommaire.—RAPPORT GÉNÉRAL DU DIRECTEUR, par Eugene Haanel.—RAPPORTS: Essais de charbon à l'Université McGill, par J. B. Porter; Laboratoires de chimie, par F. G. Wait; Bureau des ressources et statistiques minières, par John McLeish; Essayerie de la Puissance du Canada, Vancouver, par G. Middleton.—Rapports préliminaires des travaux de recherches: Minerais de molybdène au Canada, par T. L. Walker; Concentration magnétique des minerais de fer et de cuivre-nickel, par Geo. C. Mackenzie; Gisements de minerai de manganèse en Nouvelle-Écosse et Nouveau-Brunswick, par Théophile C. Denis; Minerais de fer et calcaires métallurgiques de Nouvelle-Écosse, 3^e campagne, par J. E. Woodman; Relevé magnétique de quelques emplacements miniers à Temagami, Ont., par Einar Lindeman; Industrie des mines de cuivre dans Québec, par Alfred W. G. Wilson; Mine d'antimoine de Nicolet, emplacement de fer de Spalding, et, existence de talc et de saponite dans le comté de Mégantic, Québec, par Alfred W. G. Wilson;

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Reports and maps—Rapports.—Continued—Suite.

Gites de minéral de fer dans le nord-est d'Ontario, par Howells Fréchette; Ressources de gypse de la Nouvelle-Écosse, par W. F. Jennison; Gisements d'amiante de la province de Québec, par Fritz Cirkel; Gites de minéral de fer signalés dans les provinces d'Ontario, Québec et Nouveau-Brunswick, par B. F. Haanel; Recherche sur le procédé de gaz de tourbe de Harris, par B. F. Haanel; Tourbières du Canada, par A. Anrep; Extraction de la houille en Nouvelle-Écosse, et, Accidents dans les mines par Joseph G. S. Hudson.—Annexes: Rapport préliminaire de la production minérale, 1909, par John McLeish; Méthode commerciale pour l'analyse des schistes pétrolières, par H. Leverin; Prévention des explosions de mines; Examen des gisements de minéral magnétique, par Howells Fréchette.

See report No. 63 for English edition.

Édition épuisée.

N^o de cat. M32-63F

- 64.—Index map of part of the province of Nova Scotia showing distribution of occurrences of gypsum, by W. F. Jennison. 1911. 15m : 1".
Accompanying report No. 84.
Out of print. Cat. No. M32-64
- 65.—Index map of part of the province of New Brunswick showing distribution of occurrences of gypsum, by W. F. Jennison. 1911. 20m : 1".
Accompanying report No. 84.
Out of print. Cat. No. M32-65
- 66.—Map of the Magdalen Islands showing gypsum deposits, by W. F. Jennison. 1911. 1½m : 1".
Accompanying report No. 84.
Out of print. Cat. No. M32-66
- 67.—Iron ore deposits of the Bristol mine, Pontiac County, Que.; magnetometric survey, etc., by E. Lindeman: Magnetic concentration of ores, by Geo. C. Mackenzie. 1910. 15p. 2 pls., 2 figs., 2 maps. (Bulletin No. 2.)
Voir le rapport n^o 314 pour l'édition française. See maps No. 60 and 61.
Out of print. Cat. No. M32-67
- 68.—Recent advances in the construction of electric furnaces for the production of pig iron, steel, and zinc, by Eugene Haanel. 1910. 76p. 1 pl., 17 figs. (Bulletin No. 3.)
Voir le rapport n^o 263 pour l'édition française.
Out of print. Cat. No. M32-68
- 69.—Chrysotile-asbestos: its occurrence, exploitation, milling, and uses, by Fritz Cirkel. Second edition. 1910. 316p. 66 pls., 88 figs., 2 maps.
Appendix: *The testing of heat-insulating materials, by Frederick Bacon.*
Voir le rapport n^o 81 pour l'édition française. See also report No. 707 and maps No. 78 and 86.
Out of print. Cat. No. M32-69
- 70.—Northeast Arm iron range, Lake Temagami, Nipissing district, Ontario; magnetometric survey map, by E. Lindeman. 200' : 1".
See Summary report No. 63. See also map No. 444.
Out of print. Cat. No. M32-70

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Reports and maps—Rapports.—Continued—Suite.

- 71.—Investigation of the peat bogs and peat industry of Canada during the season 1909-10, by Aleph Anrep. Second edition. 1910. 44p. 17 pls., 6 figs., 6 maps. (Bulletin No. 4.)
Appendices.—Mr. Alf. Larson's paper on Dr. M. Ekenberg's wet-carbonizing process, translated by A. Anrep from "Teknisk Tidsskrift", No. 12, December 26, 1908.—Lieut. Ekelund's pamphlet entitled "A solution of the peat problem", 1909, describing the Ekelund process for the manufacture of peat powder, translated by Harold A. Leverin. (Note: The first edition does not contain the translation of Lieut. Ekelund's pamphlet.)
 Voir le rapport n° 196 pour l'édition française.
 See maps No. 72, 73, 74, 75, 76, and 77.
 Out of print. Cat. No. M32-71
- 72.—Brunner peat bog, Perth county, Ontario; map, by A. Anrep. 1910. 1056' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-72
- 73.—Komoka peat bog, Middlesex county, Ontario; map, by A. Anrep. 1910. 1000' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-73
- 74.—Brockville, peat bog, Leeds county, Ontario; map, by A. Anrep. 1910. 1000' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-74
- 75.—Rondeau peat bog, Kent county, Ontario; map, by A. Anrep. 1910. 1056' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-75
- 76.—Alfred peat bog, Prescott county, Ontario; map of government peat bog, by A. Anrep. 1910. 440' : 1".
 Accompanying report No. 71.
 Out of print. Cat. No. M32-76
- 77.—Profile of main ditch, Government peat bog, Alfred, Ontario; map, by A. Anrep. 1910.
 Accompanying report No. 71.
 Out of print. Cat. No. M32-77
- 78.—Asbestos region, Quebec; map, by Fritz Cirkel. 1910. 1m : 1".
 Accompanying report No. 69.
 Out of print. Cat. No. M32-78
- 79.—The production of iron and steel in Canada during the calendar year 1909, by John McLeish. 1910. 35p. Tables.
 Advance Chapter of report No. 88.
 Out of print. Cat. No. M32-79
- 80.—The production of coal and coke in Canada during the calendar year 1909, by John McLeish. 1910. 36p. Tables.
 Advance chapter of report No. 88.
 Out of print. Cat. No. M32-80

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- 81.—**Amiante-chrysotile; gisements, exploitation, ateliers de préparation et usages, par Fritz Cirkel.** 2^e édition. 1911. 321p. 66 planches, 88 figures, 2 cartes.

Appendice.—De l'essai de substances isolatrices de la chaleur, par Frédéric Bacon.

See report No. 69 for English edition.

Édition épuisée.

N^o de cat. M32-81F

- 82.—**Magnetic concentration experiments with: iron ores of the Bristol Mines, Que.; iron ores of the Bathurst Mines, N.B.; a copper nickel ore from Nairn, Ontario, by George C. Mackenzie.** 1910. 28p. 4 figs., tables. (Bulletin No. 5.)

Out of print.

Cat. No. M32-82

- 83.—**An investigation of the coals of Canada with reference to their economic qualities, as conducted at McGill University under the authority of the Dominion Government, by J. B. Porter, R. J. Durley and others.** 1912. 6 volumes.

Short title: *Coals of Canada: an economic investigation.*

See also report No. 338, volume 7. Voir le rapport n^o 308 pour l'édition française.

CONTENTS

Vol. 1.—**Report, part 1 to 6.** 243p. 46 pls., 31 figs., tables, 5 maps.
See maps No. 95, 96, 97, 98, and 99.

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Vol. 2.—**Report, part 7 to 9.** 189p. 17 pls., 25 figs., tables.

Out of print.

Cat. No. M32-83/2

Vol. 3.—**Appendix 1: Detailed results of the coal washing trials, by J. B. Porter.** 168p. Tables, graphs.

Out of print.

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Vol. 4.—**Appendix 2: Detailed results of the boiler trials, by R. J. Durley.** 352p. Tables, graphs.

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Cat. No. M32-83/4

Vol. 5.—**Appendix 3: Detailed results of the gas producer trials, by R. J. Durley.** 318p. Tables, graphs.

Out of print.

Cat. No. M32-83/5

Vol. 6.—**Appendix 4: Manufacture and testing of coke, by J. B. Porter and E. Stansfield. Appendix 5: Work of the chemical laboratory, by Edgar Stansfield.** 120p. 3 pls., 6 figs., tables.

Out of print.

Cat. No. M32-83/6

Separate parts of volume 1

Vol. 1, part 1.—**Introductory, by J. B. Porter.** 18p.

Out of print.

Cat. No. M32-83/11

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Reports and maps—Rapports.—Continued—Suite.

- Vol. 1, part 2.—**The coal fields of Canada**, by T. C. Denis. Pp. 21-126. 27 pls., tables.
Out of print. *Cat. No. M32-83/12*
- Vol. 1, part 3.—**Collecting the coal samples**, by T. C. Denis and E. Stansfield. Pp. 129-153.
Out of print. *Cat. No. M32-83/13*
- Vol. 1, part 4.—**Sampling in the testing plant and laboratory**, by J. B. Porter. Pp. 157-160. 3 pls., 1 figure.
Out of print. *Cat. No. M32-83/14*
- Vol. 1, part 5.—**Mechanical purification of coal: commonly called coal washing**, by J. B. Porter. Pp. 163-200. 15 pls., 28 figs., tables.
Out of print. *Cat. No. M32-83/15*
- Vol. 1, part 6.—**Manufacture and testing of coke**, by E. Stansfield and J. B. Porter. Pp. 205-233. 3 figs., tables.
Out of print. *Cat. No. M32-83/16*
- Separate parts of volume 2**
- Vol. 2, part 7.—**Boiler tests**, by R. J. Durley. 51p. 1 pl., 6 figs., tables.
Out of print. *Cat. No. M32-83/27*
- Vol. 2, part 8.—**Gas producer tests**, by R. J. Durley. Pp. 55-118. 5 pls., 12 figs., tables.
Out of print. *Cat. No. M32-83/28*
- Vol. 2, part 9.—**Work of the chemical laboratory**, by Edgar Stansfield. Pp. 121-184. 11 pls., 7 figs., tables.
Out of print. *Cat. No. M32-83/29*
- 84.—**Report on the gypsum deposits of the Maritime Provinces**, by W. F. Jennison. 1911. 171p. 36 pls., 19 figs., 3 maps.
Voir le rapport n^o 233 pour l'édition française. See also reports No. 245 and 714 and maps No. 64, 65, and 66.
Out of print. *Cat. No. M32-84*
- 85.—**The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1909**, by John McLeish. Ottawa, 1910. 47p. Tables.
Advance chapter of report No. 88.
Out of print. *Cat. No. M32-85*
- 86.—**General distribution of serpentine in the Eastern Townships, Quebec; map**, by Fritz Cirkel. 1910. 20m : 1".
Accompanying report No. 69.
Out of print. *Cat. No. M32-86*
- 87.—Not published.
- 88.—**Annual report on the mineral production of Canada during the calendar year 1909**, by John McLeish. 1911. 291p. Tables.
Out of print. *Cat. No. M32-88*

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- 89.—Proceedings of Conference on proposed legislation to regulate the manufacture, importation, and testing of explosives, held in Ottawa, Sept. 23 and 30, 1910. Reprint, 1911. 49p.
Out of print. Cat. No. M32-89
- 90.—The exploitation of our peat bogs for the production of fuel for domestic and industrial purposes, by Eugene Haanel. 1910. 8p. (Reprint of presidential address delivered at the fourth annual meeting of the American Peat Society, held at Ottawa, July 25, 1910.)
Out of print. Cat. No. M32-90
- 91.—Not published.
- 92.—Report on the explosives industry in the Dominion of Canada, by Arthur Desborough. 2nd edition. 1911. 16p.
Out of print. Cat. No. M32-92
- 93.—Report on the molybdenum ores of Canada, by T. L. Walker. 1911. 64p. 14 pls., 10 figs.
Voir le rapport n^o 197 pour l'édition française.
Out of print. Cat. No. M32-93
- 94.—Cobalt, Gowganda, Shiningtree and Porcupine districts, Temiscaming county, Ontario; map, by L. H. Cole. 1911. 7m : 1".
Accompanying report No. 103.
Out of print. Cat. No. M32-94
- 95.—General map of Canada, showing coal and lignite fields, by J. B. Porter. 1911. 100m : 1".
Accompanying report No. 83, Vol. I.
Out of print. Cat. No. M32-95
- 96.—Coal fields of Nova Scotia and New Brunswick; general map, by J. B. Porter. 1911. 12m : 1".
Accompanying report No. 83, Vol. I. See also map No. 434.
Out of print. Cat. No. M32-96
- 97.—Coal fields in Alberta, Saskatchewan, and Manitoba; general map, by D. B. Dowling. 1911. 35m : 1".
Accompanying report No. 83, Vol. I.
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- 98.—Coal fields in British Columbia; general map, by J. B. Porter. 1911. 35m : 1".
Accompanying report No. 83, Vol. I.
Out of print. Cat. No. M32-98
- 99.—Coal fields in Yukon Territory; general map, by J. B. Porter. 1911. 32m : 1".
Accompanying report No. 83, Vol. I.
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Reports and maps—Rapports.—Continued—Suite.

- 100.—Report on the building and ornamental stones of Canada; Vol. I; Ontario, by W. A. Parks. 1912. 376p. 77 pls., 21 figs., tables.

Contents.—PART I: Introduction containing general information with regard to the quarrying, testing and handling of stones.—PART II: Systematic description of the building and ornamental stones of Ontario.

Voir le rapport n° 100A pour l'édition française. See also reports No. 203, 279, 388 and 452.

Out of print.

Cat. No. M32-100

- 100A.—Rapport sur les pierres de construction et d'ornement du Canada; Vol. I; Ontario, par W. A. Parks. 1912. 437p. 77 planches, 21 figures, tableaux.

Sommaire.—PARTIE I: Introduction contenant des renseignements généraux sur l'exploitation, l'essai et la manutention des pierres.—PARTIE II: Description systématique des pierres de construction et d'ornement de l'Ontario.

See report No. 100 for English edition. Voir aussi rapports n°s 280, 389.

Édition épuisée.

N° de cat. M32-100F

- 101.—Not published.

- 102.—Preliminary report on the mineral production of Canada during the calendar year 1910, by John McLeish. 1911. 21p. Tables.

Part of report No. 103.

Out of print.

Cat. No. M32-102

- 103.—Summary report of the Mines Branch of the Department of Mines for the calendar year 1910. 1911. 243p. 16 pls., 1 fig., tables, 1 map. (Sess. paper No. 26a-1911.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—REPORTS: Chemical Laboratories, by F. G. Wait; Statistical Division, by John McLeish; Assay Office, by G. Middleton; Fuel Testing Station, by B. F. Haanel; Metallurgical Laboratory, by G. C. Mackenzie.—PRELIMINARY REPORTS ON FIELD WORK: Molybdenum ores of Ontario and British Columbia, by T. L. Walker; Copper mining industry in Ontario and Maritime Provinces, by Alfred W. G. Wilson; The Austin-Brook iron-bearing district, New Brunswick, by E. Lindeman; Iron ore deposits at Torbrook, Annapolis Co., N.S., and, Magnesite deposits, township of Grenville, Argenteuil Co., Que., by Howells Fréchette; Tin-ore, in the vicinity of Arnprior, Ont., Cobalt-silver district, Gowganda and Elk Lake silver district, Shiningtree and Rosey Creek Silver district, Porcupine gold district, by L. H. S. Cole; Mica deposits of Ontario and Quebec, by Hugh S. de Schmidt; Building and ornamental stones of Ontario and south of the Ottawa and French rivers, by Prof. W. A. Parks; Peat bogs of Canada, and manufacture of peat fuel at the Government peat plant, Alfred, Ont., by A. Anrep; Tests of Blaugas, by Edgar Stansfield; Explosives industry in the Dominion of Canada, by Capt. Arthur Desborough; Explosives factories of Canada, and of the collection of data relating to mining operations, Explosion of "Virté" at Hull, Que., Explosion of "Blasters' Friend" at Sand Point, near Arnprior, Ont., coal mine disaster at Bellevue mine, near Frank, Alta., by J. G. S. Hudson.—APPENDICES: Mineral production of Canada for 1910 (see report No. 102); Conference on proposed legislation to regulate the manufacture, importation, and testing of explosives; Bill 79, The Explosives Act, 1910-11.

Voir le rapport n° 103A pour l'édition française. See map No. 94.

Out of print.

Cat. No. M32-103

- 103A.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile 1910. 1912. 239p. 16 planches, 1 figure, 1 carte. (Doc. parl. n° 26a-1911.)

Sommaire.—RAPPORT GÉNÉRAL DU DIRECTEUR, par Eugène Haanel.—RAPPORTS: Laboratoires de chimie, par F. G. Wait; Division des richesses et statistiques

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minières, par John McLeish; Essayerie de la Puissance du Canada, par G. Middleton; Station d'essai de combustible, par B. F. Haanel; Laboratoire de métallurgie et de préparation de minéral, par C. Mackenzie.—RAPPORTS PRELIMINAIRES DES TRAVAUX SUR LE TERRAIN: Minéral de molybdène d'Ontario et Colombie-Britannique, par T. L. Walker; Industrie de l'extraction du cuivre dans Ontario et les Provinces maritimes, par Alfred W. G. Wilson; District ferrifère d'Austin Brook, N.-B., par E. Lindeman; Investigation sur les gisements de minéral de Torbrook, comté d'Annapolis, Nouvelle-Écosse, et les gisements de magnésite, canton de Grenville, comté d'Argenteuil, Qué., par Howells Fréchette; Investigation sur une prétendue découverte de minéral d'étain dans le voisinage d'Arnprior, Ont., District argentifère de Cobalt, de Gowganda et Elk Lake, de Shingitree et Rosey Creek, de Porcupine, par L. H. Cole; Gisements de mica d'Ontario et Québec, par Hugh S. de Schmid; Pierres de construction et d'ornement d'Ontario, au sud de la rivière Ottawa et de la rivière au Français, par W. A. Parks; Tourbières du Canada et la fabrication de la tourbe combustible à la fabrique de tourbe du gouvernement à Alfred, Ont., par A. Anrep; Essais de Blaugas, par Edgar Stansfield; Industrie des explosifs en Canada, par Arthur Desborough; Fabriques d'explosifs du Canada et de la réunion de données relatives aux opérations minières, Explosion de virite à Hull, Qué., Explosion de "Blaster's Friend" à Sand Point, près d'Arnprior, Ont., Catastrophe de la mine de houille de Bellevue, près de Frank, Alta., par J. G. S. Hudson.—Annexes: Production minérale du Canada en 1910, par John McLeish; Conférence sur la législation projetée pour réglementer la fabrication, l'importation et l'essai des explosifs, par Eugène Haanel; Bill 79, Loi des explosifs, 1910-11.
See report No. 103 for English edition.
Édition épuisée.

N^o de cat. M32-103F

- 104.—Catalogue of publications of the Mines Branch, 1907-11, containing tables of contents of the various technical reports, monographs, bulletins, etc., together with a list of magnetometric survey maps, working plans, etc.; including also a digest of technical memoirs and the annual summary of reports of the Superintendent of Mines issued by the Department of the Interior, 1902-1906. 1912. 135p.
Out of print. Cat. No. M32-104
- 105.—Austin Brook iron-bearing district, New Brunswick, by Einar Lindeman. Ottawa, 1913. 15p. 3 pls., 5 figs., 3 maps in pocket.
Voir le rapport n^o 219 pour l'édition française. See maps No. 106, 107, and 108.
Out of print. Cat. No. M32-105
- 106.—Austin Brook iron-bearing district, Bathurst township, Gloucester county, N.B.; geological map, by E. Lindeman. 1912. 400' : 1".
Accompanying reports No. 105 and 217, Vol. I.
Out of print. Cat. No. M32-106
- 107.—Austin Brook iron-bearing district, Gloucester county, N.B., magnetometric survey map, vertical intensity, by E. Lindeman. 1912. 400' : 1".
Accompanying reports No. 105 and 217, Vol. I.
Out of print. Cat. No. M32-107
- 108.—Index map showing iron-bearing area at Austin Brook, by E. Lindeman. 1911. 400' : 1".
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- 109.—Not published.
- 110.—Western portion of Torbrook iron ore deposits, Annapolis county, N.S., by Howells Fréchette. 1912. 20p. 4 pls., 1 map. (Bulletin No. 7.)
See map No. 141.
Out of print. *Cat. No. M32-110*
- 111.—Diamond drilling at Point Maminse, Ontario, by Alfred C. Lane, with introductory by A. W. G. Wilson. 1911. 59p. 5 pls., 1 fig., 1 map. (Bulletin No. 6.)
See map No. 112.
Out of print. *Cat. No. M32-111*
- 112.—Sketch plan showing geology of Point Maminse, Ont., by Professor A. C. Lane. 1912. 4,000' : 1".
Accompanying report No. 111.
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- 113.—Holland peat bog, Ontario; map, by A. Anrep. 1912. 1600' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-113*
- 114.—The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1910, by John McLeish. 1911. 60p. Tables.
Advance chapter of report No. 143.
Out of print. *Cat. No. M32-114*
- 115.—The production of iron and steel in Canada during the calendar year 1910, by John McLeish. 1911. 38p. Tables.
Advance chapter of report No. 143.
Out of print. *Cat. No. M32-115*
- 116.—The production of coal and coke in Canada during the calendar year 1910, by John McLeish. 1911. 31p. Tables.
Advance chapter of report No. 143.
Out of print. *Cat. No. M32-116*
- 117.—General summary of the mineral production of Canada during the calendar year 1910, by John McLeish. 1911. 37p. Tables.
Part of report No. 143.
Out of print. *Cat. No. M32-117*
- 118.—Mica: its occurrence, exploitation, and uses, by H. S. de Schmid. Second edition. 1912. 411p. 38 pls., 67 figs., 22 maps.
Voir le rapport n° 264 pour l'édition française. See also report No. 701.
See maps No. 119 to 140 inclusive.
Out of print. *Cat. No. M32-118*
- 119.—Mica mines and occurrences in townships of East and West Portland, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-119*

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- 120.—Mica mines and occurrences in township of Derry, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
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- 121.—Mica mines and occurrences in township of Villeneuve, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-121*
- 122.—Mica mines and occurrences in townships of Bigelow and Wells, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-122*
- 123.—Mica mines and occurrences in township of Templeton, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
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- 124.—Mica mines and occurrences in township of Wakefield, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
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- 125.—Mica mines and occurrences in township of Hull, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
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- 126.—Mica mines and occurrences in townships of Aylwin and Hincks, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
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- 127.—Mica mines and occurrences in township of Blake, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
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- 128.—Mica mines and occurrences in townships of Wright and Northfield, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
Accompanying report No. 118.
Out of print. *Cat. No. M32-128*
- 129.—Mica mines and occurrences in township of Alleyn, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
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Out of print. *Cat. No. M32-129*
- 130.—Mica mines and occurrences in township of Cawood, Quebec; map, by H. S. de Schmid. 1912. 2m : 1".
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Out of print. *Cat. No. M32-130*

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- 131.—Mica mines and occurrences in township of Loughborough, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
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- 132.—Mica mines and occurrences in township of Bedford, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
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- 133.—Mica mines and occurrences in townships of North and South Burgess, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
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- 134.—Mica mines and occurrences in townships of Oso and Sherbrooke South, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
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- 135.—Mica mines and occurrences in township of North Crosby, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
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Out of print. *Cat. No. M32-135*
- 136.—Mica mines and occurrences in township of South Crosby, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
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- 137.—Mica mines and occurrences in township of Bastard, Ontario; map, by H. S. de Schmid. 1912. 2m : 1".
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Out of print. *Cat. No. M32-137*
- 138.—Map showing location of principal mines and occurrences in the Quebec mica area, by Hugh S. de Schmid. 1911. 3.95m : 1".
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- 139.—Map showing location of principal mines and occurrences in the Ontario mica area, by Hugh S. de Schmid. 1911. 3.95m : 1".
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- 140.—Map showing distribution of the principal mica occurrences in the Dominion of Canada, by Hugh S. de Schmid. 1911. 100m : 1".
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- 141.—Torbrook iron-bearing district (southwest part), Annapolis county, N.S.; topographic map, by Howells Fréchette. 1912. 400' : 1".
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- 142.—Summary report of the Mines Branch of the Department of Mines for the calendar year 1911. 1912. 208p. 16 pls., 6 figs., 1 map. (Sess. paper No. 26a-1912.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—REPORTS: Chemical laboratories, by F. G. Wait; Division of Mineral Resources and Statistics, by John McLeish; Assay Office, by G. Middleton; Fuels and Fuel Testing Division, by B. F. Haanel; Investigation of peat bogs, 1911, by A. Anrep; Chemical laboratory of Fuel Testing Station, by E. Stansfield; Ore Dressing and Metallurgical Laboratory, by G. C. Mackenzie.—PRELIMINARY REPORTS ON FIELD WORK: Building and ornamental stones of Maritime Provinces, by W. A. Parks; Sudbury nickel field, by A. P. Coleman; Copper and pyrites, by A. W. G. Wilson; Iron ore deposits along Central Ontario railway, by E. Lindeman; Calabogie iron-bearing district, by E. Lindeman; Magnetometric survey of a nickeliferous pyrrhotite deposit in Sudbury district, by E. Lindeman; Canadian market for various mineral products in a crude or partially prepared state, by Howells Fréchette; Gypsum and salt industries of central and western Canada, by L. H. Cole; Phosphate and feldspar deposits of Ontario and Quebec, by Hugh S. de Schmid; Determination of moisture in fuels, by E. Stansfield; Tests on pyrene, by E. Stansfield; An electrically heated tube furnace suitable for making ultimate organic analyses, by E. Stansfield; Explosion of explosives at Sand Point, Ont., Beloeil and Rigaud, Que., by J. G. S. Hudson.—Appendices: Preliminary report on mineral production, 1911 (See report No. 150); On Explosives
Voir le rapport n° 142A pour l'édition française. See map No. 166.
Out of print. Cat. No. M32-142

- 142A.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année 1911. 1913. 200p. 16 planches, 6 figures, 1 carte. (Doc. parl. n° 26a-1912.)

Sommaire.—RAPPORT GÉNÉRAL DU DIRECTEUR, par Eugene Haanel.—RAPPORTS: Laboratoire de chimie, par F. G. Wait; Section des statistiques et des ressources minérales, par John McLeish; Laboratoire fédéral de Vancouver, C.-B., par G. Middleton; Section des combustibles et de l'essai des combustibles, par B. F. Haanel; Recherche sur les tourbières, par A. Anrep; Laboratoire de chimie, par Edgar Stansfield; Laboratoire métallurgique, par Geo. C. Mackenzie.—RAPPORTS PRELIMINAIRES DES TRAVAUX SUR LE TERRAIN: Pierre à bâtir des provinces maritimes, par W. A. Parks; L'industrie du nickel avec indications spéciales sur la région de Sudbury, par A. P. Coleman; Cuivre et pyrites, par A. W. G. Wilson; Les dépôts de fer le long du "Central Ontario Railway"; Gisements de fer du district de Calabogie; Relevé magnétométrique de la pyrrhotite nickelfère du district de Sudbury, par E. Lindeman; Étude des débouchés canadiens pour les produits minéraux bruts et en partie manufacturés, par Howells Fréchette; Les industries du gypse et du sel dans le Canada central et méridional, par L. H. S. Code; Les dépôts de phosphate et de feldspath de l'Ontario et de la province de Québec, par Hugh S. de Schmid; Détermination de l'humidité des combustibles, par Edgar Stansfield; Description d'un four électrique pour faire les analyses organiques élémentaires, par Edgar Stansfield; Rapport sur l'explosion d'un explosif à Sand Point, Ont., à Belœil, Qué., à Rigaud, Qué., par J. G. S. Hudson.—Appendices: Rapport préliminaire sur la production minérale du Canada, 1911, par John McLeish; Explosifs. See report No. 142 for English edition.
Édition épuisée. N° de cat. M32-142F

- 143.—Annual report on the mineral production of Canada during the calendar year 1910, by John McLeish. 1912. 328p. Tables.
See separates No. 114, 115, 116, and 117.
Out of print. Cat. No. M32-143

- 144.—Not published.

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Reports and maps—Rapports.—Continued—Suite.

- 145.—Magnetic iron sands of Natashkwan, Saguenay county, Quebec, by Geo. C. Mackenzie. 1912. 49p. 22 pls., 9 figs., 3 maps.
Voir le rapport n^o 149 pour l'édition française. See maps No. 146, 147, and 148.
Out of print. Cat. No. M32-145
- 146.—Distribution of iron ore sands deposits on the north shore of the river and gulf of St. Lawrence, Canada; map, by Geo. C. Mackenzie. 1912. 100m : 1".
Accompanying report No. 145.
Out of print. Cat. No. M32-146
- 147.—Magnetic iron sand deposits in relation to Natashkwan Harbour and Great Natashkwan river, Que.; index map, by Geo. C. Mackenzie. 1912. ½m : 1".
Accompanying report No. 145.
Out of print. Cat. No. M32-147
- 148.—Natashkwan magnetic iron sand deposits, Saguenay county, Que.; map, by Geo. C. Mackenzie. 1912. 1,000' : 1".
Accompanying report No. 145.
Out of print. Cat. No. M32-148
- 149.—Sables ferrugineux magnétiques de Natashkwan, comté de Saguenay, province de Québec, par Geo. C. Mackenzie. 1913. 49p. 22 gravures, 9 figures, tableaux, 3 cartes.
See report No. 145 for English edition.
Édition épuisée. N^o de cat. M32-149F
- 150.—Preliminary report on the mineral production of Canada during the calendar year 1911, by John McLeish. 1912. 24p. Tables.
Part of report No. 142.
Out of print. Cat. No. M32-150
- 151.—Investigation of the peat bogs and peat industry of Canada, 1910-11, by A. Anrep. 1912. 61p. 19 pls., 1 fig., 12 maps. (Bulletin No. 8.)
Voir le n^o 180 pour l'édition française. See maps No. 113, 152, 153, 157 to 165 inclusive.
Out of print. Cat. No. M32-151
- 152.—Location of peat bogs investigated in Ontario; index map, by A. Anrep. 1912. 35m : 1".
Accompanying report No. 151. See map No. 447.
Out of print. Cat. No. M32-152
- 153.—Location of peat bogs, as investigated in Manitoba; index map, by A. Anrep. 1912. 12m : 1".
Accompanying report No. 151.
Out of print. Cat. No. M32-153
- 154.—Report on the utilization of peat fuel for the production of power, being a record of experiments conducted at the Fuel Testing Station, Ottawa, 1910-1911, by B. F. Haanel. 1912. 145p. 10 pls., 17 figs., 17 charts, tables.
Voir le n^o 155 pour l'édition française.
Out of print. Cat. No. M32-154

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Reports and maps—Rapports—Continued—Suite.

- 155.—Rapport sur l'utilisation de la tourbe pour la production de la force motrice; résultats des expériences faites à la Station d'essai des combustibles à Ottawa, 1910-1911, par B. F. Haanel. 1913. 141p. 10 planches, 17 figures, 17 diagrammes, tableaux.
See report No. 154 for English edition.
Édition épuisée. *No de cat. M32-155F*
- 156.—Rapport sur les minerais de tungstène du Canada, par T. L. Walker. 1913. 56p. 10 planches, 6 figures, tableaux.
See report No. 25 for English edition.
Édition épuisée. *No de cat. M32-156F*
- 157.—Lac-du-Bonnet peat bog, Manitoba; map, by A. Anrep. 1912. 800' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-157*
- 158.—Transmission peat-bog, Manitoba; map, by A. Anrep. 1912. 1500' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-158*
- 159.—Corduroy peat bog, Manitoba; map, by A. Anrep. 1912. 780' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-159*
- 160.—Boggy Creek peat bog, Manitoba; map, by A. Anrep. 1912. 1300' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-160*
- 161.—Rice Lake peat bog, Manitoba; map, by A. Anrep. 1912. 820' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-161*
- 162.—Mud Lake peat bog, Manitoba; map, by A. Anrep. 1912. 750' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-162*
- 163.—Litter peat bog, Manitoba; map, by A. Anrep. 1912. 800' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-163*
- 164.—Julius peat litter bog, Manitoba; map, by A. Anrep. 1912. 2350' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-164*
- 165.—Fort Francis peat bog, Ontario; map, by A. Anrep. 1912. 1900' : 1".
Accompanying report No. 151.
Out of print. *Cat. No. M32-165*

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Reports and maps—Rapports.—Continued—Suite.

- 166.—**McKim township, Sudbury district, Ont.; magnetometric map of No. 3 mine, lot 7, concessions V and VI, by E. Lindeman. 1912. 200' : 1".**
Accompanying report No. 142.
Out of print. *Cat. No. M32-166*
- 167.—**Pyrites in Canada: its occurrence, exploitation, dressing, and uses, by Alfred W. G. Wilson. 1912. 202p. 27 pls., 29 figs., tables, 1 map.**
Voir le rapport n° 169 pour l'édition française. See map No. 168.
Out of print. *Cat. No. M32-167*
- 168.—**Pyrites mines and prospects in eastern Canada and their relation to the United States market; general map, by A. W. G. Wilson. 1912. 125m : 1".**
Accompanying report No. 167.
Out of print. *Cat. No. M32-168*
- 169.—**Pyrites au Canada: gisements, exploitation, préparation, usages, par Alfred W. G. Wilson. 1914. 204p. 27 planches, 29 figures, tableaux, 1 carte.**
See report No. 167 for English edition.
Édition épuisée. *N° de cat. M32-169F*
- 170.—**The nickel industry; with special reference to the Sudbury region, Ontario, by A. P. Coleman. 1913. 206p. 63 pls., 14 figs., 8 maps.**
Voir le rapport n° 179 pour l'édition française. See maps No. 171, 172, 173, 174, 175, 176, 177, and 178.
Out of print. *Cat. No. M32-170*
- 171.—**Sudbury nickel region, Ont.; geological map, by A. P. Coleman. 1912. 1m : 1".**
Accompanying report No. 170.
Out of print. *Cat. No. M32-171*
- 172.—**Victoria mine; geological map, by A. P. Coleman. 1912. 300' : 1".**
Accompanying report No. 170.
Out of print. *Cat. No. M32-172*
- 173.—**Crean Hill mine; geological map, by A. P. Coleman. 1912. 225' : 1".**
Accompanying report No. 170.
Out of print. *Cat. No. M32-173*
- 174.—**Creighton mine; geological map, by A. P. Coleman. 1912. 300' : 1".**
Accompanying report No. 170.
Out of print. *Cat. No. M32-174*
- 175.—**Contact of Norite and Laurentian in vicinity of Creighton mine; geological map, by A. P. Coleman. 1913. 700' : 1".**
Accompanying report No. 170.
Out of print. *Cat. No. M32-175*

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Reports and maps—Rapports.—Continued—Suite.

- 176.—Copper Cliff offset; geological map, by A. P. Coleman. 1913. 2800' : 1".
 Accompanying report No. 170.
 Out of print. Cat. No. M32-176
- 177.—No. 3 Mine (Frood mine), Sudbury district; geological map, by A. P. Coleman. 1912. 550' : 1".
 Accompanying report No. 170.
 Out of print. Cat. No. M32-177
- 178.—Vicinity of Stobie and No. 3 mines; geological map, by A. P. Coleman. 1912. 1400' : 1".
 Accompanying report No. 170.
 Out of print. Cat. No. M32-178
- 179.—L'industrie du nickel particulièrement dans la région de Sudbury, Ontario, par A. P. Coleman. 1915. 212p., 64 planches, 14 figures, 8 cartes.
 See report No. 170 for English edition.
 Édition épuisée. N^o de cat. M32-179F
- 180.—Recherches sur les fourbières et l'industrie de la tourbe au Canada, 1910-11, par A. Anrep. 1914. 50p. 19 planches, 1 figure, 12 cartes. (Bulletin n^o 8.)
 See report No. 151 for English edition.
 Édition épuisée. N^o de cat. M32-180F
- 181.—The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1911, by John McLeish. 1912. 55p. Tables.
 Advance chapter of report No. 201.
 Out of print. Cat. No. M32-181
- 182.—The production of iron and steel in Canada during the calendar year 1911, by John McLeish. 1912. 32p. Tables.
 Advance chapter of report No. 201.
 Out of print. Cat. No. M32-182
- 183.—General summary of the mineral production of Canada during the calendar year 1911, by John McLeish. 1912. 38p. Tables.
 Part of report No. 201.
 Out of print. Cat. No. M32-183
- 184.—Magnetite occurrences along the Central Ontario Railway, by E. Lindeman. 1913. 23p. 9 pls., 19 maps.
 Voir le rapport n^o 195 pour l'édition française. See maps No. 185 to 194, inclusive, and 204.
 Out of print. Cat. No. M32-184
- 185.—Blairton iron mine, Belmont township, Peterborough county, Ontario; magnetometric survey map, vertical intensity, by E. Lindeman. 1911. 200' : 1".
 Accompanying reports No. 184 and 217, Vol. I.
 Out of print. Cat. No. M32-185

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Reports and maps—Rapports.—Continued—Suite.

- 185A.—**Blairton iron mine**, Belmont township, Peterborough county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
Out of print. *Cat. No. M32-185A*
- 186.—**Belmont iron mine**, Belmont township, Peterborough county, Ontario; **magnetometric survey map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
Out of print. *Cat. No. M32-186*
- 186A.—**Belmont iron mine**, Belmont township, Peterborough county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
Out of print. *Cat. No. M32-186A*
- 187.—**St. Charles mine**, Tudor township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
Out of print. *Cat. No. M32-187*
- 187A.—**St. Charles mine**, Tudor township, Hastings county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
Out of print. *Cat. No. M32-187A*
- 188.—**Baker mine**, Tudor township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
Out of print. *Cat. No. M32-188*
- 188A.—**Baker mine**, Tudor township, Hastings county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
Out of print. *Cat. No. M32-188A*
- 189.—**Ridge iron ore deposits**, Wollaston township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. II.
Out of print. *Cat. No. M32-189*
- 190.—**Coehill and Jenkins mines**, Wollaston township, Hastings county, Ontario; **magnetometric survey map**, vertical intensity, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
Out of print. *Cat. No. M32-190*
- 190A.—**Coehill and Jenkins mines**, Wollaston township, Hastings county, Ontario; **geological map**, by E. Lindeman. 1911. 200' : 1".
Accompanying reports No. 184 and 217, Vol. I.
Out of print. *Cat. No. M32-190A*

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- 191.—**Bessemer iron ore deposits, Mayo township, Hastings county, Ontario; magnetometric survey map, vertical intensity, by E. Lindeman.** 1911. 200' : 1".
 Accompanying reports No. 184 and 217, Vol. I.
 Out of print. *Cat. No. M32-191*
- 191A.—**Bessemer iron ore deposits, Mayo township, Hastings county, Ontario; geological map, by E. Lindeman.** 1911. 200' : 1".
 Accompanying reports No. 184 and 217, Vol. I.
 Out of print. *Cat. No. M32-191A*
- 192.—**Rankin, Childs, and Stevens mines, Mayo township, Hastings county, Ontario; magnetometric survey map, vertical intensity, by E. Lindeman.** 1911. 200' : 1".
 Accompanying reports No. 184 and 217, Vol. I.
 Out of print. *Cat. No. M32-192*
- 192A.—**Rankin, Childs, and Stevens mines, Mayo township, Hastings county, Ontario; geological map, by E. Lindeman.** 1911. 200' : 1".
 Accompanying reports No. 184 and 217, Vol. I.
 Out of print. *Cat. No. M32-192A*
- 193.—**Kennedy property, Carlow township, Hastings county, Ontario; magnetometric survey map, vertical intensity, by E. Lindeman.** 1911. 200' : 1".
 Accompanying reports No. 184 and 217, Vol. II.
 Out of print. *Cat. No. M32-193*
- 193A.—**Kennedy property, Carlow township, Hastings county, Ontario; geological map, by E. Lindeman.** 1911. 200' : 1".
 Accompanying reports No. 184 and 217, Vol. II.
 Out of print. *Cat. No. M32-193A*
- 194.—**Bow Lake iron ore occurrences, Faraday township, Hastings county, Ontario; magnetometric survey map, vertical intensity, by E. Lindeman.** 1911. 200' : 1".
 Accompanying reports No. 184 and 217, Vol. II.
 Out of print. *Cat. No. M32-194*
- 195.—**Gisements de magnétite le long de la ligne du Central Ontario Railway, par E. Lindeman.** 1914. 24p. 9 planches, tableaux, 19 cartes.
 See report No. 184 for English edition.
 Édition épuisée. *N° de cat. M32-195F*
- 196.—**Enquête sur les tourbières et l'industrie de la tourbe au Canada, durant la saison 1909-10, par A. Anrep.** 1913. 48p. 17 planches, 6 figures, 6 cartes. (Bulletin n° 4.)
 See report No. 71 for English edition.
 Édition épuisée. *N° de cat. M32-196F*
- 197.—**Rapport sur les minerais de molybdène du Canada, par T. L. Walker.** 1912. 71p. 14 planches, 10 figures.
 See report No. 93 for English edition.
 Édition épuisée. *N° de cat. M32-197F*

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Reports and maps—Rapports.—Continued—Suite.

- 198.—**Tourbe et lignite: leur fabrication et leurs emplois en Europe**, par E. Nystrom. 1913. 265p. 34 planches, 228 figures.
See report No. 19 for English edition.
Édition épuisée. N° de cat. M32-198F
- 199.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1911**, by Cosmo T. Cartwright. 1913. 85p. Tables.
Advance chapter of report No. 201.
Out of print. Cat. No. M32-199
- 200.—**The production of coal and coke in Canada during the calendar year 1911**, by John McLeish. 1912. 35p. Tables.
Advance chapter of report No. 201.
Out of print. Cat. No. M32-200
- 201.—**Annual report on the mineral production of Canada during the calendar year 1911**, by John McLeish. 1913. 316p. Tables.
Voir le rapport n° 265 pour l'édition française. See separates No. 181, 182, 183, 199, and 200.
Out of print. Cat. No. M32-201
- 202.—**Graphite: propriétés, gisements, traitements et usages**, par Fritz Cirkel. 1912. 263p. 20 planches, 52 figures, tableaux, 10 cartes.
See report No. 18 for English edition.
Édition épuisée. N° de cat. M32-202F
- 203.—**Report on the building and ornamental stones of Canada; Vol. II: Maritime Provinces**, by Wm. A. Parks. 1914. 264p. 45 pls., 9 figs.
Voir le rapport n° 280 pour l'édition française. See also reports No. 100, 279, 388, and 452.
Out of print. Cat. No. M32-203
- 204.—**Magnetite occurrences along the Central Ontario Railway; index map**, by E. Lindeman. 1911. 4m : 1".
Accompanying report No. 184.
Out of print. Cat. No. M32-204
- 205.—**Moose Mountain iron-bearing district, deposits No. 1 to 7 incl., Sudbury district, Ontario; magnetometric map**, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
Out of print. Cat. No. M32-205
- 205A.—**Moose Mountain iron-bearing district, deposits No. 1 to 7 incl., Sudbury district, Ontario; geological map**, by E. Lindeman. 1912. 800' : 1".
Accompanying report No. 303.
Out of print. Cat. No. M32-205A
- 206.—**Moose Mountain iron-bearing district, Northern portion deposit No. 2, Sudbury district, Ontario; magnetometric survey map**, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
Out of print. Cat. No. M32-206

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- 207.—Moose Mountain iron-bearing district, deposits No. 8, 9, and 9a, Sudbury district, Ontario; magnetometric survey map, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
Out of print. Cat. No. M32-207
- 208.—Moose Mountain iron-bearing district, deposit No. 10, Sudbury district, Ontario; magnetometric survey map, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
Out of print. Cat. No. M32-208
- 208A.—Moose Mountain iron-bearing district, Eastern portion deposit No. 10, Sudbury district, Ontario; magnetometric survey map, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
Out of print. Cat. No. M32-208A
- 208B.—Moose Mountain iron-bearing district, Western portion deposit No. 11, Sudbury district, Ontario; magnetometric survey map, by E. Lindeman. 1912. 200' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
Out of print. Cat. No. M32-208B
- 208C.—Moose Mountain iron-bearing district, Sudbury district, Ontario; general geological map, by E. Lindeman. 1912. 800' : 1".
Accompanying report No. 217, Vol. I, and report No. 303.
Out of print. Cat. No. M32-208C
- 209.—The copper smelting industries of Canada, by Alfred W. G. Wilson. 1913. 184p. 43 pls., 39 figs., 4 maps.
Voir le rapport n° 214 pour l'édition française. See maps No. 210, 211, 212, and 213.
Out of print. Cat. No. M32-209
- 210.—Location of copper smelters in Canada; map, by Alfred W. G. Wilson. 1913. 200m : 1".
Accompanying report No. 209.
Out of print. Cat. No. M32-210
- 211.—Relative position of copper smelters and mines in southern British Columbia; map, by Alfred W. G. Wilson. 1913. 35 m : 1".
Accompanying report No. 209.
Out of print. Cat. No. M32-211
- 212.—The Eastern Townships of Quebec as a possible smelting centre; map, by Alfred W. G. Wilson. 1913. 35m : 1".
Accompanying report No. 209.
Out of print. Cat. No. M32-212
- 213.—Eastern Cape Breton as a possible smelting centre; map, by Alfred W. G. Wilson. 1913. 35m : 1".
Accompanying report No. 209.
Out of print. Cat. No. M32-213

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Reports and maps—Rapports.—Continued—Suite.

- 214.—**Industries métallurgiques du cuivre au Canada**, par Alfred W. G. Wilson. 1917. 193p. 43 planches, 39 figures, 42 tableaux, 4 cartes.
See report No. 209 for English edition.
Édition épuisée. N^o de cat. M32-214F
- 215.—**Province of Alberta: properties from which samples of coal were taken for gas producer tests, Fuel Testing Division, Ottawa; index map**, by J. G. S. Hudson. 1913. 35m : 1".
Accompanying report No. 224.
Out of print. Cat. No. M32-215
- 216.—**Preliminary report on the mineral production of Canada during the calendar year 1912**, by John McLeish. 1913. 21p. Tables.
Part of report No. 224.
Out of print. Cat. No. M32-216
- 217.—**Iron ore occurrences in Canada**, compiled by E. Lindeman and L. L. Bolton, with introductory by A. H. A. Robinson. 1917. 2 volumes.
- Vol. I.—**Description of principal iron ore mines**. 71p. 23 pls., 1 map in pocket and 22 maps enclosed in special case.
See maps No. 106, 107, 185, 185A, 186, 186A, 190, 190A, 191, 191A, 192, 192A, 205, 206, 207, 208, 208A, 208B, 208C, 340, 340A, 443, 445.
Out of print. Cat. No. M32-217/1
- Vol. II.—**Description of iron ore occurrences**. 222p. 33 maps enclosed in special case.
See maps No. 187, 187A, 188, 188A, 189, 193, 193A, 194, 249 to 253, 261, 311, 312, 313, 341, 341A, 342, 342A, 343, 343A, 405, 409, 410, 416, 438, 439, 441, 442, 444, 446.
Out of print. Cat. No. M32-217/2
- 218.—Not published.
- 219.—**Les gisements de fer d'Austin Brook au Nouveau-Brunswick**, par Einar Lindeman. 1914. 14p. 3 planches, 5 figures, 2 cartes.
See report No. 105 for English edition.
Édition épuisée. N^o de cat. M32-219F
- 220.—**Mining districts, Yukon; index map**, by T. A. MacLean. 1914. 35m : 1".
Accompanying reports No. 222 and 224.
Out of print. Cat. No. M32-220
- 221.—**Dawson mining district, Yukon; index map**, by T. A. MacLean. 1914. 2m : 1".
Accompanying reports No. 222 and 224.
Out of print. Cat. No. M32-221
- 222.—**Lode mining in Yukon: an investigation of quartz deposits in the Klondike division**, by T. A. MacLean. 1914. 215p. 40 pls., 35 figs., tables, 6 maps.
Voir le rapport n^o 223 pour l'édition française. See maps No. 230, 221, 234 to 237.
Out of print. Cat. No. M32-222

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Reports and maps—Rapports.—Continued—Suite.

223.—L'exploitation filonienne au Yukon; une investigation des gisements de quartz dans la division Klondike, par T. A. MacLean. 1915. 197p. 40 planches, 35 figures, tableaux, 6 cartes.

See report No. 222 for English edition.

Édition épuisée.

N^o de cat. M32-223F

224.—Summary report of the Mines Branch of the Department of Mines for the calendar year 1912. 1913. 174p. 16 pls., 1 fig., tables, 3 maps. (Sess. Paper No. 26a-1913.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—REPORTS: Chemical Laboratory, by F. G. Wait; Division of Mineral Resources and Statistics, by John McLeish; Assay Office, by G. Middleton; Fuel and Fuel Testing Division; (1) Test of lignite coal from Consumer's Coal Co., Moosejaw, Sask., by B. F. Haanel; (2) Sampling of lignitic and semi-bituminous coals of Alberta for gas producer tests, by J. G. S. Hudson; (3) Chemical laboratory of Fuel Testing Station, by E. Stansfield; (4) Investigation of peat bogs, by A. Anrep; (5) Petroleum and natural gas resources of Canada, by F. G. Clapp and L. G. Huntley; Ore Dressing and Metallurgical Division: (1) Investigation of magnetic iron sands at Natashkwan, Que.; (2) Equipment of new Ore Dressing Laboratories; and, (3) Report on Parker-Lanius process of extracting gold from free-milling and refractory ores, by G. C. Mackenzie.—PRELIMINARY REPORTS ON FIELD WORK: Building and ornamental stones of Quebec, by W. A. Parks; Pyrites and copper, by A. W. G. Wilson; Mineral deposits in vicinity of St. Mary Bay, Nova Scotia, by W. A. G. Wilson; Moose Mountain iron-bearing district, Ont., by E. Lindeman; Canadian market for various mineral products in a crude or partially prepared state, by Howells Fréchette; Continued examination of the phosphate and feldspar deposits of Ontario and Quebec, by H. S. de Schmid; Gypsum and salt industries of Canada, by L. H. Cole; Metal cobalt and its alloys, by H. T. Kalmus; Recent developments in electrothermic production of iron and steel, 1911-12, by H. T. Kalmus; Quartz deposits in Klondike division, by T. A. MacLean.—Appendices: Mineral production of Canada, 1912 (See report No. 216); Legislative administration of mineral lands in Canada.

Voir le rapport n^o 224F pour l'édition française. See maps No. 215, 220 and 221. Out of print. Cat. No. M32-224

224F.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile 1912. 1914. 179p. 16 planches, 1 figure, tableaux, 3 cartes. (Doc. parl. n^o 26a-1913.)

Sommaire.—RAPPORT DU DIRECTEUR GENERAL, par Eugene Haanel.—RAPPORTS: Laboratoire de chimie, par F. G. Wait; Division des Ressources minérales et des Statistiques, par J. McLeish; Essayerie du Canada à Vancouver, par G. Middleton; Division d'essai du combustible: (1) Essai de lignite de la "Consumer's Coal Company" Moosejaw, Sask., par B. F. Haanel; (2) Échantillon de houilles ligniteuses et semi-bitumineuses de l'Alberta, pour des épreuves de gazogènes, par J. G. S. Hudson; (3) Laboratoire chimique de la station d'essai du combustible par E. Stansfield; (4) Recherches sur les tourbières, par A. Anrep; (5) Le pétrole et les ressources du gaz naturel du Canada, par F. G. Clapp et L. G. Huntley; Préparation des minerais et division métallurgique: (1) Sables de fer magnétique à Natashkwan, Québec; (2) Les nouveaux laboratoires de métallurgie et de préparation des minerais; et, (3) Rapport sur le procédé de MM. Parker et Lanius pour l'extraction de l'or des minerais faciles à traiter et des minerais réfractaires, par G. C. Mackenzie.—RAPPORTS PRELIMINAIRES DES TRAVAUX SUR LE TERRAIN: Pierres de construction et d'ornement de la province de Québec, par W. A. Parks; Pyrites et cuivre; et Gisements de minerais dans le voisinage de la Baie Ste-Marie, N.-E., par A. W. G. Wilson; District ferrifère de la montagne l'Orignal (Moose Mountain), Ont., par E. Lindeman; Recherches sur le marché existant au Canada pour divers produits minéraux à l'état brut, ou partiellement préparés, par Howells Fréchette; Examen des gisements de phosphate et de feldspath dans l'Ontario et le Québec, par

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Reports and maps—Rapports.—Continued—Suite.

H. S. de Schmid; Industries du gypse et du sel au Canada, par L. H. Cole; Cobalt métallique et ses alliages; et, Progrès récents de la production électrothermique du fer et de l'acier, 1911-12, par H. T. Kalmus; Dépôts de quartz dans la division du Klondike, par T. A. MacLean.—APPENDICES: Rapport préliminaire au sujet de la production minérale au Canada, en 1912, par John McLeish; Législation administrative des terrains miniers au Canada.

See report No. 224 for English edition.

Édition épuisée.

N^o de cat. M32-224F

225.—Not published.

226.—**Rapport sur les dépôts de fer chromé des Cantons de l'Est de la province de Québec, par Fritz Cirkel.** 1912. 145p. 9 planches, 15 figures, 1 carte.

See report No. 29 for English edition.

Édition épuisée.

N^o de cat. M32-226F

227.—**Sections of the Sydney coal fields, Cape Breton, by Joseph G. S. Hudson.** 1913. 6 p. 15 pls., tables, 1 map.

See map No. 228.

Out of print.

Cat. No. M32-227

228.—**Sydney coal fields, Cape Breton, N.S.; index map, by J. G. S. Hudson.** 1913. 1¾m : 1".

Accompanying report No. 227.

Out of print.

Cat. No. M32-228

229.—**Summary report on the petroleum and natural gas resources of Canada, by F. G. Clapp and L. G. Huntley.** 1913. 14p.

Reprint from report No. 224.

Out of print.

Cat. No. M32-229

230.—**Economic minerals and mining industries of Canada.** 1913. 77p. 19pls., 1 map.

Voir le rapport n^o 231 pour l'édition française. See also reports No. 611 and 738, and map No. 232.

Out of print.

Cat. No. M32-230

231.—**Minéraux industriels et industries minières du Canada.** 1913. 85p. 19 planches, 1 carte.

See report No. 230 for English edition.

Édition épuisée.

N^o de cat. M32-231F

232.—**Mineral map of Canada.** 1913. 100m : 1".

Accompanying reports No. 230 and 322.

Out of print.

Cat. No. M32-232

233.—**Rapport sur les gisements de gypse des Provinces Maritimes, par Williams F. Jennison.** 1913. 181p. 36 planches, 17 figures, 3 cartes.

See report No. 84 for English edition.

Édition épuisée.

N^o de cat. M32-233F

234.—**Portion of Whitehorse copper belt; index map, by T. A. MacLean.** 1914. 8000' : 1".

Accompanying report No. 222.

Out of print.

Cat. No. M32-234

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Reports and maps—Rapports.—Continued—Suite.

- 235.—Portion of Windy Arm mining district; index map, by T.A. MacLean. 1914. 2m : 1".
Accompanying report No. 222.
Out of print. Cat. No. M32-235
- 236.—Vicinity of Wheaton river; map, by T. A. MacLean. 1914.
2m : 1".
Accompanying report No. 222.
Out of print. Cat. No. M32-236
- 237.—Dublin gulch, mining property; geological sketch map, by T. A. McLean. 1914. 2400' : 1".
Accompanying report No. 222.
Out of print. Cat. No. M32-237
- 238.—General summary of the mineral production of Canada during the calendar year 1912, by John McLeish. 1913. 46p. Tables.
Part of report No. 262.
Out of print. Cat. No. M32-238
- 239.—Index map of Canada showing gypsum occurrences, by L. H. Cole. 1913. 600m : 1".
Accompanying report No. 245.
Out of print. Cat. No. M32-239
- 240.—Map showing lower carboniferous formation in which gypsum occurs in the Maritime Provinces, by L. H. Cole. 1913. 100m : 1".
Accompanying report No. 245.
Out of print. Cat. No. M32-240
- 241.—Map showing relation of gypsum deposits in Northern Ontario to railway lines, by L. H. Cole. 1913. 100m : 1".
Accompanying report No. 245.
Out of print. Cat. No. M32-241
- 242.—Grand River gypsum deposits, Ontario; index map, by L. H. Cole. 1913. 4m : 1".
Accompanying report No. 245.
Out of print. Cat. No. M32-242
- 243.—Plan of Manitoba Gypsum Company's properties, by L. H. Cole. 1913. 6700' : 1".
Accompanying report No. 245.
Out of print. Cat. No. M32-243
- 244.—Map showing relation of gypsum deposits in British Columbia to railway lines and market, by L. H. Cole. 1914. 35m : 1".
Accompanying report No. 245.
Out of print. Cat. No. M32-244
- 245.—Gypsum in Canada: its occurrence, exploitation, and technology, by L. H. Cole. 1913. 256p. 30 pls., 27 figs., tables, 6 maps.
Appendices.—Gypsum operators in Canada.—Bibliography.—Gypsum deposits of the Maritime Provinces, by W. F. Jennison. (Reprinted from report No. 84.)
Voir le rapport n° 246 pour l'édition française. See maps No. 239, 240, 241, 242, 243, and 244.
Out of print. Cat. No. M32-245

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Reports and maps—Rapports.—Continued—Suite.

- 246.—**Le gypse du Canada: ses gisements, son exploitation, et sa technologie**, par L. H. Cole. 1916. 252p. 30 planches, 27 figures, tableaux, 6 cartes.
Appendices.—Liste des exploitants de gypse.—Bibliographie.—Gisements de gypse des Provinces Maritimes, par W. F. Jennison. (Ré-imprimé du rapport n° 233.)
 See report No. 245 for English edition.
 Édition épuisée. N° de cat. M32-246F
- 247.—**The production of iron and steel in Canada during the calendar year 1912**, by John McLeish. 1913. 39p. Tables.
 Voir le rapport n° 287 pour l'édition française. Advance chapter of report No. 262.
 Out of print. Cat. No. M32-247
- 248.—Not published.
- 249.—**Caldwell and Campbell mines, Calabogie district, Renfrew county, Ontario; magnetometric survey map**, by E. Lindeman. 1911. 200' : 1".
 Accompanying reports No. 217, Vol. II and 254.
 Out of print. Cat. No. M32-249
- 250.—**Black Bay or Williams mine, Calabogie district, Renfrew county, Ontario; magnetometric survey map**, by E. Lindeman. 1911. 200' : 1".
 Accompanying reports No. 217, Vol. II and 254.
 Out of print. Cat. No. M32-250
- 251.—**Bluff Point iron mine, Calabogie district, Renfrew county, Ontario; magnetometric survey map**, by E. Lindeman. 1911. 200' : 1".
 Accompanying reports No. 217, Vol. II and 254.
 Out of print. Cat. No. M32-251
- 252.—**Culhane mine, Calabogie district, Renfrew county, Ontario; magnetometric survey map**, by E. Lindeman. 1911. 200' : 1".
 Accompanying reports No. 254, and 217, Vol. II.
 Out of print. Cat. No. M32-252
- 253.—**Martel or Wilson iron mine, Calabogie district, Renfrew county, Ontario; magnetometric survey map**, by E. Lindeman. 1911. 200' : 1".
 Accompanying reports No. 254, and 217, Vol. II.
 Out of print. Cat. No. M32-253
- 254.—**Magnetite occurrences near Calabogie, Renfrew county, Ontario**, by E. Lindeman. 1914. 16p. 1 fig., 5 maps.
 Voir le rapport n° 255 pour l'édition française. See maps No. 249, 250, 251, 252, and 253.
 Out of print. Cat. No. M32-254
- 255.—**Les gisements de magnétite près de Calabogie, comté de Renfrew, Ontario**, par E. Lindeman. 1917. 20p. 1 figure, 5 cartes.
 See report No. 254 for English edition.
 Out of print. N° de cat. M32-255F

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Reports and maps—Rapports.—Continued—Suite.

- 256.—The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1912, by C. T. Cartwright. 1913. 86p. Tables.
Advance chapter of report No. 262. Voir le rapport n° 290 pour l'édition française.
Out of print. *Cat. No. M32-256*
- 257.—The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1912, by John McLeish. 1913. 64p. Tables.
Advance chapter of report No. 262. Voir le rapport n° 289 pour l'édition française.
Out of print. *Cat. No. M32-257*
- 258.—The production of coal and coke in Canada during the calendar year 1912, by John McLeish. 1913. 42p. Tables.
Advance chapter of report No. 262. Voir le rapport n° 288 pour l'édition française.
Out of print. *Cat. No. M32-258*
- 259.—Preparation of metallic cobalt by reduction of the oxide, by H. T. Kalmus, and others. 1913. 36p. 8 pls., 4 figs., tables. (Researches on cobalt and cobalt alloys conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part I.)
Voir le rapport n° 260 pour l'édition française. See also reports No. 309, 334, 411, and 413.
Out of print. *Cat. No. M32-259*
- 260.—Préparation du cobalt métallique par la réduction de l'oxyde, par H. T. Kalmus et autres. 1916. 36p. 8 planches, 4 figures. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens, de Kingston, Ontario, pour la Division des mines du Ministère des mines, partie I.)
See report No. 259 for English edition. Voir aussi les rapports n° 310, 335, 412, 414.
Édition épuisée. *N° de cat. M32-260F*
- 261.—Northeast Arm iron range, Lake Timagami, Nipissing district, Ontario; magnetometric survey map, by E. Nystrom 1903. 200': 1".
Accompanying report No. 217, Vol. II.
Out of print. *Cat. No. M32-261*
- 262.—Annual report on the mineral production of Canada during the calendar year 1912, by John McLeish. 1914. 339p. Tables.
See separates No. 238, 247, 256, 257, 258 and 287.
Out of print. *Cat. No. M32-262*
- 263.—Progrès récents dans la construction des fours électriques pour la production de la fonte, de l'acier, et du zinc, par Eugene Haanel. 1914. 86p. 1 planche, 17 figures, tableaux. (Bulletin n° 3.)
See report No. 68 for English edition.
Édition épuisée. *N° de cat. M32-263F*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 264.—**Mica: gisements, exploitation et emplois**, par Hugh S. de Schmid. Deuxième édition. 1914. 430p. 38 planches, 67 figures, 22 cartes.
See report No. 118 for English edition.
Édition épuisée. N^o de cat. M32-264F
- 265.—**Rapport annuel sur la production minérale du Canada durant l'année civile 1911**, par J. McLeish. 1914. 316p. Tableaux.
See report No. 201 for English edition.
Édition épuisée. N^o de cat. M32-265F
- 266.—**Investigation of the peat bogs and peat industry of Canada, 1911-12**, by A. Anrep. 1914. 47p. 29 pls., 6 figs., tables, 11 maps. (Bulletin No. 9.)
Voir le rapport n^o 267 pour l'édition française. See maps No. 268 to 278 inclusive.
Out of print. Cat. No. M32-266
- 267.—**Recherches sur les tourbières et l'industrie de la tourbe au Canada, 1911-12**, par A. Anrep. 1917. 47p. 29 planches, 6 figures, tableaux, 11 cartes.
See report No. 266 for English edition.
Édition épuisée. N^o de cat. M32-267F
- 268.—**Peat bogs investigated in Quebec; index map**, by A. Anrep. 1914. 35m : 1".
Accompanying report No. 266. See also map No. 484.
Out of print. Cat. No. M32-268
- 269.—**Large Tea Field peat bog, Quebec; map**, by A. Anrep. 1914. 2750' : 1".
Accompanying report No. 266.
Out of print. Cat. No. M32-269
- 270.—**Small Tea Field peat bog, Quebec; map**, by A. Anrep. 1914. 2750' : 1".
Accompanying report No. 266.
Out of print. Cat. No. M32-270
- 271.—**Lanoraie peat bog, Quebec; map**, by A. Anrep. 1914. 3000' : 1".
Accompanying report No. 266.
Out of print. Cat. No. M32-271
- 272.—**St. Hyacinthe peat bog, Quebec; map**, by A. Anrep. 1914. 2500' : 1".
Accompanying report No. 266.
Out of print. Cat. No. M32-272
- 273.—**Rivière du Loup peat bog, Quebec; map**, by A. Anrep. 1914. 2800' : 1".
Accompanying report No. 266.
Out of print. Cat. No. M32-273
- 274.—**Cacouna peat bog, Quebec; map**, by A. Anrep. 1914. 1350' : 1".
Accompanying report No. 266.
Out of print. Cat. No. M32-274

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- 275.—Le Parc peat bog, Quebec; map, by A. Anrep. 1914. 1300' : 1".
 Accompanying report No. 266.
 Out of print. Cat. No. M32-275
- 276.—St. Denis peat bog, Quebec; map, by A. Anrep. 1914. 1100' : 1".
 Accompanying report No. 266.
 Out of print. Cat. No. M32-276
- 277.—Rivière Ouelle peat bog, Quebec; map, by A. Anrep. 1914.
 2500' : 1".
 Accompanying report No. 266.
 Out of print. Cat. No. M32-277
- 278.—Moose Mountain peat bog, Ontario; map, by A. Anrep. 1914.
 300' : 1".
 Accompanying report No. 266.
 Out of print. Cat. No. M32-278
- 279.—Report on the building and ornamental stones of Canada; Vol.
 III: Province of Quebec, by Wm. A. Parks. 1914. 304p. 52 pls.,
 12 figs., tables.
 Voir le rapport n° 389 pour l'édition française. See also reports No. 100, 203,
 388, and 452.
 Out of print. Cat. No. M32-279
- 280.—Rapport sur les pierres de construction et d'ornement du Canada;
 Vol. II: Provinces Maritimes, par Wm. A. Parks. 1916. 266p.
 45 planches, 9 figures, tableaux.
 See report No. 203 for English edition. Voir aussi rapports n° 100A et 389.
 Édition épuisée. N° de cat. M32-280F
- 281.—Preliminary report on the bituminous sands of Northern Alberta,
 by S. C. Ells. 1914. 92p. 55 pls., 5 figs., tables, 1 map in pocket.
 Voir le rapport n° 282 pour l'édition française. See map No. 284. See also report
 No. 632.
 Out of print. Cat. No. M32-281
- 282.—Rapport préliminaire sur les sables bitumineux de l'Alberta Nord,
 par S. C. Ells. 1916. 96p. 55 planches, 5 figures, tableaux, 1 carte
 hors-texte.
 See report No. 281 for English edition.
 Édition épuisée. N° de cat. M32-282F
- 283.—Preliminary report on the mineral production of Canada during
 the calendar year 1913, by John McLeish. 1914. 21p. Tables.
 Part of report No. 285.
 Out of print. Cat. No. M32-283
- 284.—Portion of Northern Alberta showing position of outcrops of
 bituminous sand; index map, by S. C. Ells. 1914. 12½m : 1".
 Accompanying reports No. 281 and 285.
 Out of print. Cat. No. M32-284

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Reports and maps—Rapports.—Continued—Suite.

- 285.—Summary report of the Mines Branch of the Department of Mines for the calendar year 1913. 1914. 214p. 51 pls., 24 figs., table, 1 map. (Sess. Paper No. 26a-1914).

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL REPORTS:—*Metalliferous Division*: (1) Copper mines and copper mining in Canada; (2) Platinum discoveries in the vicinity of Nelson, B.C.; (3) Hall process for desulphurizing ores, by Alfred W. G. Wilson; (4) Iron ore occurrences in Cape Breton, by E. Lindeman, (5) Lode mining in Yukon, by T. A. MacLean:—*Non-metalliferous Division*: (1) Canadian markets for mineral products, by Howells Fréchette; (2) White mica occurrence in the Tête Jaune Cache and Big Bend, B.C., by Hugh S. de Schmid; (3) Saline springs of Manitoba, by L. H. Cole; (4) Bituminous sands of Northern Alberta, by S. C. Ellis; (5) Building and ornamental stones of Quebec, by W. A. Parks:—*Ore dressing and metallurgical Division*: (1) Progress report, by G. C. Mackenzie; (2) Work of the Laboratories, by W. B. Timm; (3) Magnetic iron sands at Natashkwan, Que., by C. S. Parsons; (4) Processes for smelting zinc ores, by W. R. Ingalls; (5) Cobalt and its alloys, by Herbert T. Kalmus:—*Fuel Testing Division*: (1) Work at Fuel Testing Station, by B. F. Haanel; (2) Investigation of five lignite samples from Alberta, by B. F. Haanel and John Blizard; (3) Chemical Laboratory, by Edgar Stansfield; (4) Investigation of peat bogs, by Aleph von Anrep.—*Appendices*: Mineral production 1913 (see Report No. 283); Description of the Mines Branch Laboratories.

Voir le rapport n° 286 pour l'édition française. See map No. 284.

Out of print.

Cat. No. M32-285

- 286.—Rapport sommaire de la Division des mines du ministère des Mines, pour l'année civile 1913. 1915. 219p. 51 planches, 24 figures, tableaux, 1 carte. (Doc. parl. n° 26a-1914.)

Sommaire.—RAPPORT GENERAL DE DIRECTEUR, par Eugene Haanel.—RAPPORTS INDIVIDUELS: *Division métallifère*: (1) Mines de cuivre et exploitation du cuivre du Canada; (2) Découvertes de platine dans le voisinage de Nelson, B.C.; (3) Le procédé Hall pour le dessoufrage des minerais, par A. G. W. Wilson; (4) Les gisements de minéral de fer au Cap Breton, par E. Lindeman; (5) Exploitation des filons au Yukon, par T. A. MacLean:—*Division non-métallifère*: (1) Le marché canadien à la recherche de divers produits minéraux, par Howells Fréchette; (2) Gisements de mica blanc dans les districts de la cache de la Tête Jaune et de Big Bend, C.-B., par Hugh S. de Schmid; (3) Le sel du Canada, par L. H. Cole; (4) Sables bitumineux de l'Alberta Nord, par S. C. Ellis; (5) Les pierres de construction et d'ornement de Québec, par W. A. Parks:—*Division de la métallurgie et de la Préparation du minéral*: (1) Rapport des opérations, par G. S. Mackenzie; (2) Travaux aux laboratoires, par W. B. Timm; (3) Recherches sur les sables magnétiques de Natashkwan, Qué., par C. S. Parsons; (4) Recherches sur le zinc, par R. W. Ingalls; (5) Recherches sur le cobalt et les alliages du cobalt, par Herbert T. Kalmus:—*Division des combustibles et d'essai de combustibles*: (1) Travaux à la station des essais, par B. F. Haanel; (2) Résultat de l'examen de cinq échantillons de lignite d'Alberta, par B. F. Haanel et John Blizard; (3) Laboratoires de chimie, par Edgar Stansfield; (4) Recherches sur les tourbières, par Aleph von Anrep.—*Appendices*: Rapport préliminaire sur la production minérale du Canada en 1913, par John McLeish; Description des laboratoires de la division des Mines.

See report No. 285 for English edition.

Édition épuisée.

N° de cat. M32-286F

- 287.—La production du fer et de l'acier au Canada pendant l'année civile 1912, par J. McLeish. 1915. 40p. Tableaux.

See report No. 247 for English edition.

Édition épuisée.

N° de cat. M32-287F

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- 288.—**La production de charbon et de coke au Canada pendant l'année civile 1912**, par John McLeish. 1914. 40p. Tableaux.
See report No. 258 for English edition.
Édition épuisée. N° de cat. M32-288F
- 289.—**La production du ciment, de la chaux, des produits d'argile, de la pierre et d'autres matériaux de construction au Canada pendant l'année civile 1912**, par John McLeish. 1914. 64p. Tableaux.
See report No. 257 for English edition.
Édition épuisée. N° de cat. M32-289F
- 290.—**La production de cuivre, or, plomb, nickel, argent, zinc et autres métaux au Canada pendant l'année civile 1912**, par Cosmo T. Cartwright. 1914. 86p. Tableaux.
See report No. 256 for English edition.
Édition épuisée. N° de cat. M32-290F
- 291.—**Petroleum and natural gas resources of Canada**, by F. G. Clapp and others. 1914-1915. 2 v.
Vol. 1—Technology and exploitation. 378p. 21 pls., 25 figs., tables, 1 map.
See map No. 293. Voir le rapport n° 292 pour l'édition française.
Out of print. Cat. No. M32-291/1
Vol. 2.—Description of occurrences. 1915. 404p. Illus., tables, maps.
Out of print. Cat. No. M32-291/2
- Separate parts of volume 2**
- Vol. 2, part 1.—Eastern Canada.** 245p. 12 pls., 23 figs., 3 maps.
See maps No. 294, 295, and 296.
75c. Cat. No. M32-291/21
- Vol. 2, part 2.—Western Canada.** 159p. 19 pls., 17 figs., 3 maps.
See maps No. 297, 298, and 302.
35c. Cat. No. M32-291/22
- 292.—**Ressources du Canada en pétrole et en gaz naturel. Volume 1: Technologie et exploitation**, par Frederick G. Clapp. 1917. 398p. 21 planches, 25 figures, tableaux, 1 carte.
See report No. 291, Vol. I, for English edition.
Édition épuisée. N° de cat. M32-292F
- 293.—**Dominion of Canada; map showing the occurrences of oil, gas, and tar sands.** 1915. 197.3m : 1".
Accompanying report No. 291, Vol. I.
Out of print. Cat. No. M32-293
- 294.—**Reconnaissance map of part of Albert and Westmorland counties, New Brunswick**, by R. W. Ells and S. C. Ells. 1915. 1m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. Cat. No. M32-294
- 295.—**Gaspe oil fields, Quebec; sketch plan showing location of wells.** 1915. 2m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. Cat. No. M32-295

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- 296.—**Southwestern Ontario; map showing gas and oil fields and pipelines.** 1915. 4m : 1".
Accompanying report No. 291, Vol. 2. See also map No. 523.
Out of print. *Cat. No. M32-296*
- 297.—**Alberta, Saskatchewan, and Manitoba; geological map, by W. Malcolm.** 1914. 35m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. *Cat. No. M32-297*
- 298.—**Forty-ninth parallel, B.C. and Alberta; geological map, by R. A. Daly.** 1913. 1m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. *Cat. No. M32-298*
- 299.—**Peat, lignite, and coal: their value as fuels for the production of gas and power in the by-product recovery producer, by B. F. Haanel.** 1914. 261 p. 29 pls., 39 figs., tables.
Voir le rapport n^o 300 pour l'édition française.
Out of print. *Cat. No. M32-299*
- 300.—**Tourbe, lignite, et houille: leur valeur respective comme source de gaz de moteur et d'énergie, dans les gazogènes à sous-produits, par B. F. Haanel.** 1917. 206p. 29 planches, 39 figures, 20 tableaux.
See report No. 299 for English edition.
Édition épuisée. *N^o de cat. M32-300F*
- 301.—Not published.
- 302.—**Bow Island—Calgary; map showing location of main gas line.** 1915. 12½m : 1".
Accompanying report No. 291, Vol. 2.
Out of print. *Cat. No. M32-302*
- 303.—**Moose Mountain iron-bearing district, Ontario, by E. Lindeman.** 1914. 14p. 2 figs., 8 maps in envelope.
Voir le rapport n^o 304 pour l'édition française. See maps No. 205, 205A, 206, 207, 208, 208A, 208B, 208C.
Out of print. *Cat. No. M32-303*
- 304.—**Le district ferrifère de Moose-Mountain, Ontario, par E. Lindeman.** 1917. 12p. 2 figures, 8 cartes dans une enveloppe.
See report No. 303 for English edition.
Édition épuisée. *N^o de cat. M32-304F*
- 305.—**Report on the non-metallic minerals used in the Canadian manufacturing industries, by Howells Fréchette.** 1914. 199p. 37 tables.
Voir le rapport n^o 306 pour l'édition française.
Out of print. *Cat. No. M32-305*
- 306.—**Rapport sur les minéraux non-métalliques employés dans les industries manufacturières du Canada, par Howells Fréchette.** 1917. 204p. 37 tableaux.
See report No. 305 for English edition.
Édition épuisée. *N^o de cat. M32-306F*

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307.—Catalogue des publications françaises du ministère des Mines (Division des mines et Commission géologique), jusqu'au 1^{er} juillet 1914.

Édition épuisée.

N^o de cat. M32-307F

308.—Recherches sur les charbons du Canada, au point de vue de leurs qualités économiques, faites à l'Université McGill de Montréal sous le patronage du Gouvernement du Dominion, par J. B. Porter, R. J. Durlley et autres. 1914-1917. Volume 1-4 et 6.

See report No. 83 for English edition.

Édition épuisée.

SOMMAIRE

Vol. 1.—Rapport, parties 1-6. 1914. 275p. 46 planches, 31 figures, tableaux, 5 cartes.

Édition épuisée.

N^o de cat. M32-308/1F

Vol. 2.—Rapport, parties 7-9. 1915. 210p. 17 planches, 25 figures, tableaux.

Édition épuisée.

N^o de cat. M32-308/2F

Vol. 3.—Appendice 1: Résultats détaillés des essais de lavage de charbons, par J. B. Porter. 1915. 172p. Tableaux, graphiques.

Édition épuisée.

N^o de cat. M32-308/3F

Vol. 4.—Appendice 2: Résultats détaillés des essais aux chaudières, par R. J. Durlley. 1915. 424p. Tableaux, graphiques.

Édition épuisée.

N^o de cat. M32-308/4F

Vol. 5.—Appendice 3: (paru en anglais seulement).

Vol. 6.—Appendice 4: Fabrication et essai du coke, par Edgar Stansfield et J. B. Porter; appendice 5: Travaux de laboratoire, par Edgar Stansfield. 1917. 127p. 3 planches, 6 figures, 25 tableaux.

Édition épuisée.

N^o de cat. M32-308/6F

309.—The Physical properties of the metal cobalt, by H. T. Kalmus and C. Harper. 1914. 48p. 14 pls., 8 figs., tables. (Researches on cobalt and cobalt alloys, conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part 2.)

Voir le rapport n^o 310 pour l'édition française. See also reports No. 259, 334 411, and 413.

Out of print.

Cat. No. M32-309

310.—Propriétés physiques du cobalt métallique, par H. T. Kalmus. 1916. 51p. 14 planches, 8 figures, tableaux. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens, de Kingston, Ontario, pour la Division des mines, du ministère des Mines, partie 2.)

See report No. 309 for English edition. Voir aussi rapports n^{os} 260, 335, 412 et 414.

Édition épuisée.

N^o de cat. M32-310F

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Reports and maps—Rapports.—Continued—Suite.

- 311.—McPherson mine, Barachois, Cape Breton county, Nova Scotia; magnetometric map, by A. H. A. Robinson. 1913. 200' : 1".
Accompanying report No. 217, Vol. II.
Out of print. Cat. No. M32-311
- 312.—Iron ore deposits at Upper Glencoe, Inverness county, Nova Scotia; magnetometric map, by E. Lindeman. 1913. 200' : 1".
Accompanying report No. 217, Vol. II.
Out of print. Cat. No. M32-312
- 313.—Iron ore deposits at Grand Mira, Cape Breton county, Nova Scotia; magnetometric map, by A. H. A. Robinson. 1913. 200' : 1".
Accompanying report No. 217, Vol. II.
Out of print. Cat. No. M32-313
- 314.—Gisements de minerais de fer de la mine Bristol, comté de Pontiac, Québec: Levé magnétométrique, etc., par E. Lindeman; Concentration magnétique de minerais, par Geo. S. Mackenzie. 1915. 15p. 2 planches, 2 tableaux et deux cartes hors-texte. (Bulletin n° 2.)
See report No. 67 for English edition.
Édition épuisée. N° de cat. M32-314F
- 315.—The production of iron and steel in Canada during the calendar year 1913, by John McLeish. 1914. 44p. Tables.
Advance chapter of report No. 320.
Out of print. Cat. No. M32-315
- 316.—The production of coal and coke in Canada during the calendar year 1913, by John McLeish. 1914. 40p. Tables.
Advance chapter of report No. 320.
Out of print. Cat. No. M32-316
- 317.—The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1913, by Cosmo T. Cartwright. 1914. 77p. Tables.
Advance chapter of report No. 320.
Out of print. Cat. No. M32-317
- 318.—The production of cement, lime, clay products, stone and other structural materials in Canada during the calendar year 1913, by John McLeish. 1914. 62p. Tables.
Advance chapter of report No. 320.
Out of print. Cat. No. M32-318
- 319.—General summary of the mineral production of Canada during the calendar year 1913, by John McLeish. 1914. 50p. Diagrams, tables.
Advance chapter of report No. 320.
Out of print. Cat. No. M32-319
- 320.—Annual report on the mineral production of Canada during the calendar year 1913, by John McLeish. 1914. 363p. Diagrams, tables.
Voir le rapport n° 321 pour l'édition française. See separates No. 315, 316, 317, 318, and 319.
Out of print. Cat. No. M32-320

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- 321.—**Rapport annuel de la production minérale du Canada durant l'année civile 1913**, par John McLeish. 1915. 364p. Diagrammes, tableaux.
See report No. 320 for English edition.
Édition épuisée. N^o de cat. M32-321F
- 322.—**Economic minerals and mining industries of Canada**. Second edition. 1914. 78p. 19 pls., 1 map in pocket.
Special edition prepared for the Panama-Pacific Exposition, San Francisco, 1915.
Out of print. Cat. No. M32-322
- 323.—**Products and by-products of coal**, by E. Stansfield and F. E. Carter. 1915. 51p. Tables.
Voir le rapport n^o 324 pour l'édition française.
Out of print. Cat. No. M32-323
- 324.—**Produits et sous-produits de la houille**, par E. Stansfield et F. E. Carter. 1917. 60p. Tableaux.
See report No. 323 for English edition.
Édition épuisée. N^o de cat. M32-324F
- 325.—**Report on the salt deposits of Canada and the salt industry**, by L. Heber Cole. 1915. 152p. 26 pls., 25 figs., 4 maps.
Voir le rapport n^o 326 pour l'édition française. See maps No. 327, 328, 329, and 330. See also reports No. 716.
Out of print. Cat. No. M32-325
- 326.—**Rapport sur les dépôts salifères du Canada et l'industrie du sel**, par L. Heber Cole. 1917. 172p. 27 planches, 25 figures, 4 cartes.
See report No. 325 for English edition.
Édition épuisée. N^o de cat. M32-326F
- 327.—**Dominion of Canada; map showing location of saline springs and salt areas**, by L. Heber Cole. 1915. 600m : 1".
Accompanying report No. 325.
Out of print. Cat. No. M32-327
- 328.—**Maritime Provinces; map showing location of saline springs**, by L. Heber Cole. 1915. 100m : 1".
Accompanying report No. 325.
Out of print. Cat. No. M32-328
- 329.—**Ontario-Michigan salt basin; map showing probable limit of productive area**, by L. Heber Cole. 1915. 25m : 1".
Accompanying report No. 325.
Out of print. Cat. No. M32-329
- 330.—**Northern Manitoba; map showing location of saline springs**, by L. H. Cole. 1915. 12½m : 1".
Accompanying report No. 325.
Out of print. Cat. No. M32-330
- 331.—**Results of the investigation of six lignite samples obtained from the province of Alberta**, by B. F. Haanel and John Blizard. 1915. 110p. 5 pls., 29 figs., tables.
Out of print. Cat. No. M32-331

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Reports and maps—Rapports.—Continued—Suite.

332.—Not published.

333.—Preliminary report on the mineral production of Canada during the calendar year 1914, by John McLeish. 1915. 24p. Tables.

Part of report No. 346.

Out of print.

Cat. No. M32-333

334.—Electro-plating with cobalt, by H. T. Kalmus, assisted by C. H. Harper and W. L. Savell. 1915. 69p. 4 figs., tables. (Researches on cobalt and cobalt alloys, conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part 3.)

Voir le rapport n° 335 pour l'édition française. See also reports No. 259, 309, 411, and 413.

Out of print.

Cat. No. M32-334

335.—Galvanoplastie au cobalt, par H. T. Kalmus, en collaboration avec C. H. Harper et W. L. Savell. 1917. 76p. 4 figures, tableaux. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens de Kingston, Ontario, pour la Division des mines du ministère des Mines, 3^e partie.)

See report No. 334 for English edition. Voir aussi rapports n° 260, 310, 412 et 414.

Édition épuisée.

N° de cat. M32-335F

336.—Notes on clay deposits near McMurray, Alberta, by Sydney C. Ells. 1915. 15p. (Bulletin No. 10.)

Out of print.

Cat. No. M32-336

337.—Catalogue of Mines Branch publications (8th to 11th editions).

Out of print.

Cat. No. M32-337

338.—An investigation of the coal of Canada with reference to their economic qualities as conducted at McGill University, Montreal, under the authority of the Dominion Government. Extra volume supplementing report No. 83: Weathering of coal, by J. B. Porter and others. 1915. 194p. 6 pls., 65 figs., tables.

Out of print.

Cat. No. M32-338

339.—Not published.

340.—Atikokan iron-bearing district, Atikokan mine and vicinity, Rainy River district, Ontario; magnetometric map of claims No. 10E, 11E, 12E, 24E, 25E, and 26E, by A. H. A. Robinson. 1914. 400' : 1''.

Accompanying report No. 217, Vol. 1.

Out of print.

Cat. No. M32-340

340A.—Atikokan iron-bearing district, Atikokan mine and vicinity, Rainy River district, Ontario; geological map of claims No. 10E, 11E, 12E, 24E, 25E, and 26E, by A. H. A. Robinson. 1914. 400' : 1''.

Accompanying report No. 217, Vol. I.

Out of print.

Cat. No. M32-340A

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- 341.—Atikokan iron-bearing district, Rainy River district, Ontario; **magnetometric map**, sheet No. 1, claims No. 400R, 401R, 402R, 212X, and 403R, by E. Lindeman. 1914. 400' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. Cat. No. M32-341
- 341A.—Atikokan iron-bearing district, Rainy River district, Ontario; **geological map**, sheet No. 1, claims No. 400R, 401R, 402R, 212X, and 403R, by E. Lindeman. 1914. 400' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. Cat. No. M32-341A
- 342.—Atikokan iron-bearing district, Rainy River district, Ontario; **magnetometric map**, sheet No. 2, claims No. 403R, 404R, 138X, 139X, and 140X, by E. Lindeman. 1914. 400' : 1".
Out of print. Cat. No. M32-342
- 342A.—Atikokan iron-bearing district, Rainy River district, Ontario; **geological map**, sheet No. 2, claims No. 403R, 404R, 138X, 139X, and 140X, by E. Lindeman. 1914. 400' : 1".
Out of print. Cat. No. M32-342A
- 343.—Atikokan iron-bearing district, Mile Post No. 140, Canadian Northern railway, Rainy River district, Ontario; **magnetometric map**, by E. Lindeman. 1914. 400' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. Cat. No. M32-343
- 343A.—Atikokan iron-bearing district, Mile Post No. 140, Canadian Northern Railway, Rainy River district, Ontario; **geological map**, by E. Lindeman. 1914. 400' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. Cat. No. M32-343A
- 344.—**Electrothermic smelting of iron ores in Sweden**, by A. Stansfield. 1915. 65p. 7 pls., 5 figs., tables.
Voir le rapport n° 345 pour l'édition française.
Out of print. Cat. No. M32-344
- 345.—**Réduction électrothermique des minerais de fer en Suède**, par Alfred Stansfield. 1917. 67p. 7 planches, 5 figures, tableaux.
See report No. 344 for English edition.
Édition épuisée. N° de cat. M32-345F
- 346.—**Summary report of the Mines Branch of the Department of Mines, for the calendar year ending December 31, 1914.** 1915. 232p. 12 pls., 15 figs., tables. (Sess. Paper No. 26a-1915.)
Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL REPORTS:—*Metalliferous Division*: (1) *Examination of certain copper deposits in Quebec*, by A. W. G. Wilson; (2) *The Atikokan and Matawin iron ranges*, by E. Lindeman; (3) *The Atikokan iron range*, by A. H. A. Robinson:—*Non-Metalliferous Division*: (1) *Limestones of the province of Quebec*, by Howells Fréchette; (2) *Investigation of miscellaneous non-metallic minerals*, by H. S. de Schmid; (3) *Sand areas of Quebec*, by L. H. Cole; (4) *Bituminous sands of northern Alberta*,

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- by S. C. Ells; (5) *Building and ornamental stones of Prairie Provinces*, by W. A. Parks.—*Ore Dressing and Metallurgical Division*: (1) *Progress report*, by G. C. Mackenzie; (2) *Electro-plating with cobalt*, by H. T. Kalmus.—*Fuels and Fuel Testing Division*: (1) *Chemical laboratories*, by E. Stansfield; (2) *Investigation of peat bogs*, by A. Anrep; (3) *Mechanical work done at Fuel Testing Station*, by A. W. Mantle.—*Chemical Laboratory, Sussex St.*, by F. G. Wait.—*Division of Mineral Resources and Statistics* by John McLeish.—*Hillcrest Mine disaster*, by J. G. S. Hudson.—**Appendices**: *Preliminary report on mineral production* (see report No. 333).—*Explosives Act, 4-5 George V.*
Voir le rapport n° 347 pour l'édition française.
Out of print. Cat. No. M32-346
- 347.—**Rapport sommaire de la Division des mines du ministère des Mines pour l'année terminée le 31 décembre 1914.** 1916. 238p. 12 planches, 15 figures, tableaux. (Doc. de la session n° 26a-1915.)
Sommaire.—**RAPPORT DU DIRECTEUR GÉNÉRAL**, par Eugène Haanel.—**RAPPORTS INDIVIDUELS**:—*Division de métallurgie*: (1) *Examen de certains dépôts de cuivre dans Québec*, par A. W. G. Wilson; (2) *Les régimes de fer Atikokan et Matawin*, par E. Lindeman; (3) *Champ ferrugineux d'Atikokan*, par A. H. A. Robinson.—*Division non-métallifère*: (1) *Pierres calcaires de la province de Québec*, par Howells Fréchette; (2) *Enquete sur divers minerais non métalliques*, par H. S. de Schmidt; (3) *Sables de la province de Québec*, par L. H. Cole; (4) *Les sables bitumineux de l'Alberta septentrional*, par S. C. Ells; (5) *Pierres de construction et d'ornementation*, par W. A. Parks.—**Traitement du mineral et Division de la métallurgie**: (1) *Rapport*, par G. C. Mackenzie; (2) *Électro-placage au cobalt*, par H. T. Kalmus.—*Division des combustibles et d'essai de combustibles*: (1) *Laboratoires chimiques*, par E. Stansfield; (2) *Recherches sur les tourbières*, par A. Anrep; (3) *Travaux mécaniques effectués à la Station de l'épreuve des combustibles*, par A. W. Mantle.—*Laboratoire de chimie, rue Sussex*, par F. G. Wait.—*Rapport des ressources minérales et des statistiques*, par J. McLeish.—*Désastre de la mine Hillcrest*, par J. G. S. Hudson.—**Appendices**: *Rapport préliminaire concernant la production minérale du Canada, 1914*, par J. McLeish.—*Lot des explosifs, 4-5 George V.*
See report No. 346 for English edition.
Édition épuisée. N° de cat. M32-347F
- 348.—**The production of coal and coke in Canada during the calendar year 1914**, by John McLeish. 1915. 39p. Tables.
Advance chapter of report No. 384.
Out of print. Cat. No. M32-348
- 349.—**The production of iron and steel in Canada during the calendar year 1914**, by John McLeish. 1915. 35p. Tables.
Advance chapter of report No. 384.
Out of print. Cat. No. M32-349
- 350.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1914.** 1915. 75p.
Advance chapter of report No. 384.
Out of print. Cat. No. M32-350
- 351.—**Investigation of the peat bogs and peat industry of Canada, 1913-14**, by A. Anrep. 1915. 185p. 92 pls., 66 figs., tables, 30 maps. (Bulletin No. 11.)
Voir le rapport n° 352 pour l'édition française. See maps No. 354 to 383 inclusive.
Out of print. Cat. No. M32-351

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- 352.—**Recherches sur les tourbières et l'industrie de la tourbe au Canada, 1913-1914**, par Aleph Anrep. 1917. 191p. 92 planches, 66 figures, tableaux, 30 cartes. (Bulletin n° 11.)
See report No. 351 for English edition.
Édition épuisée. N° de cat. M32-352F
- 353.—Not published.
- 354.—**Index map, showing location of peat bogs investigated in Ontario**, by A. Anrep. 1915. 35m : 1".
Accompanying report No. 351. See also map No. 477.
Out of print. Cat. No. M32-354
- 355.—**Richmond peat bog, Carleton county, Ontario; map**, by A. Anrep. 1915. 3400' : 1".
Accompanying report No. 351.
Out of print. Cat. No. M32-355
- 356.—**Luther peat bog, Wellington and Dufferin counties, Ontario; map**, by A. Anrep. 1915. 3000' : 1".
Accompanying report No. 351.
Out of print. Cat. No. M32-356
- 357.—**Amaranth peat bog, Dufferin county, Ontario; map**, by A. Anrep. 1915. 2200' : 1".
Accompanying report No. 351.
Out of print. Cat. No. M32-357
- 358.—**Cargill peat bog, Bruce county, Ontario; map**, by Al Anrep. 1915. 6800' : 1".
Accompanying report No. 351.
Out of print. Cat. No. M32-358
- 359.—**Westover peat bog, Wentworth county, Ontario; map**, by A. Anrep. 1915. 4000' : 1".
Accompanying report No. 351.
Out of print. Cat. No. M32-359
- 360.—**Mash Hill peat bog, Ontario county, Ontario; map**, by A. Anrep. 1915. 4000' : 1".
Accompanying report No. 351.
Out of print. Cat. No. M32-360
- 361.—**Sunderland peat bog, Ontario county, Ontario; map**, by A. Anrep. 1915. 2400' : 1".
Accompanying report No. 351.
Out of print. Cat. No. M32-361
- 362.—**Manila peat bog, Victoria county, Ontario; map**, by A. Anrep. 1915. 2400' : 1".
Accompanying report No. 351.
Out of print. Cat. No. M32-362
- 363.—**Stoco peat bog, Hastings county, Ontario; map**, by A. Anrep. 1915. 1900' : 1".
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- 364.—**Clareview peat bog**, Lennox and Addington counties, Ontario; **map**, by A. Anrep. 1915. 2000' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-364*
- 365.—**Index map**, showing location of peat bogs investigated in Quebec, by A. Anrep. 1915. 35m : 1".
Accompanying report No. 351. See also map No. 484.
Out of print. *Cat. No. M32-365*
- 366.—**L'Assomption peat bog**, L'Assomption county, Quebec; **map**, by A. Anrep. 1915. 3800' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-366*
- 367.—**St. Isidore peat bog**, La Prairie county, Quebec; **map**, by A. Anrep. 1915. 2400' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-367*
- 368.—**Holton peat bog**, Chateauguay county, Quebec; **map**, by A. Anrep. 1915. 3800' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-368*
- 369.—**Index map**, showing location of peat bogs investigated in Nova Scotia and Prince Edward Island, by A. Anrep. 1915. 35m : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-369*
- 370.—**Black Marsh bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 1900' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-370*
- 371.—**Portage peat bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 2600' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-371*
- 372.—**Miscouche peat bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 3400' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-372*
- 373.—**Muddy Creek peat bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 1220' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-373*
- 374.—**The Black Banks peat bog**, Prince county, Prince Edward Island; **map**, by A. Anrep. 1915. 2000' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-374*

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- 375.—**Mermaid peat bog**, Queens county, Prince Edward Island; **map**, by A. Anrep. 1915. 1050' : 1".
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Out of print. *Cat. No. M32-375*
- 376.—**Caribou peat bog**, Kings county, Prince Edward Island; **map**, by A. Anrep. 1915. 2500' : 1".
Accompanying report No. 351.
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- 377.—**Cherryfield peat bog**, Lunenburg county, Nova Scotia; **map**, by A. Anrep. 1915. 1100' : 1".
Accompanying report No. 351.
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- 378.—**Tusket peat bog**, Yarmouth county, Nova Scotia; **map**, by A. Anrep. 1915. 1250' : 1".
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- 379.—**Makoke peat bog**, Yarmouth county, Nova Scotia; **map**, by A. Anrep. 1915. 1900' : 1".
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- 380.—**Heath peat bog**, Yarmouth county, Nova Scotia; **map**, by A. Anrep. 1915. 2700' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-380*
- 381.—**Port Clyde peat bog**, Shelburne county, Nova Scotia; **map**, by A. Anrep. 1915. 2200' : 1".
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- 382.—**Latour peat bog**, Shelburne county, Nova Scotia; **map**, by A. Anrep. 1915. 2400' : 1".
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- 383.—**Clyde peat bog**, Shelburne county, Nova Scotia; **map**, by A. Anrep. 1915. 4500' : 1".
Accompanying report No. 351.
Out of print. *Cat. No. M32-383*
- 383A.—**The production of cement, lime, clay products, stone and other structural materials in Canada during the calendar year 1914**, by John McLeish. 1915. 60p. Tables.
Advance chapter of report No. 384.
Out of print. *Cat. No. M32-383A*
- 384.—**Annual report on the mineral production of Canada during the calendar year 1914**, by John McLeish. 1915. 362p. Tables.
Voir le rapport n° 415 pour l'édition française. See separates No. 348, 349, 350 and 383A.
Out of print. *Cat. No. M32-384*

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- 385.—Investigation of a reported discovery of phosphate in Alberta, by H. S. de Schmid. 1916. 38p. 12 pls., 1 fig., 1 map. (Bulletin No. 12.)
Voir le rapport n^o 386 pour l'édition française. See map No. 387.
Out of print. *Cat. No. M32-385*
- 386.—Recherches sur un gisement de phosphate signalé dans l'Alberta, par H. S. de Schmid. 1917. 41p. 12 planches, 1 figure, 1 carte. (Bulletin n^o 12.)
See report No. 385 for English edition.
Out of print. *N^o de cat. M32-386F*
- 387.—Banff district, Alberta; geological map showing location of phosphate beds, by J. A. Allan. 1916. 1½m : 1".
Accompanying report No. 385.
Out of print. *Cat. No. M32-387*
- 388.—Report on the building and ornamental stones of Canada; Vol. IV: Provinces of Manitoba, Saskatchewan and Alberta, by W. A. Parks. 1916. 333p. 56 pls., 7 figs., 1 map.
See also reports No. 100, 203, 279, 452.
Out of print. *Cat. No. M32-388*
- 389.—Rapport sur les pierres de construction et d'ornement du Canada; Volume 3: Province de Québec, par W. A. Parks. 1916. 330p. 52 planches, 12 figures, tableaux.
See report No. 279 for English edition. Voir aussi rapports n^o 100A et 280.
Édition épuisée. *N^o de cat. M32-389F*
- 390.—Christina river map, showing outcrops of bituminous sand along Christina valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".
See also map No. 633.
Out of print. *Cat. No. M32-390*
- 391.—Clearwater river map, showing outcrops of bituminous sand along Clearwater valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".
See also maps No. 633, 634.
Out of print. *Cat. No. M32-391*
- 392.—Hanginstone-Horse rivers map, showing outcrops of bituminous sand along Hanginstone and Horse River valleys; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".
See also map No. 635.
Out of print. *Cat. No. M32-392*
- 393.—Steepbank river map, showing outcrops of bituminous sand along Steepbank valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".
See also map No. 636.
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- 394.—**McKay river map** (3 sheets), showing outcrops of bituminous sand along McKay valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".
See map No. 637.
Out of print. *Cat. No. M32-394*
- 395.—**Moose river map**, showing outcrops of bituminous sand along Moose valley; contour intervals of 20 feet, by S. C. Ells. 1915. 1000' : 1".
See also map No. 638.
Out of print. *Cat. No. M32-395*
- 396.—**Phosphate in Canada**, by Hugh S. Spence. 1920. 156p. 32 pls., 12 figs., 13 maps.
Voir le rapport n^o 397 pour l'édition française. See maps No. 398, 399.
Out of print. *Cat. No. M32-396*
- 397.—**Le phosphate au Canada**, par Hugh S. Spence. 1921. 169p. 31 planches, 12 figures, 13 cartes.
See report No. 396 for English edition.
Édition épuisée. *N^o de cat. M32-397F*
- 398.—**Ontario phosphate area; index map**, showing location of the principal mines and occurrences, by H. S. de Schmid. 1916. 3.95m : 1".
Accompanying report No. 396.
Out of print. *Cat. No. M32-398*
- 399.—**Quebec phosphate area; index map**, showing location of the principal mines and occurrences, by H. S. de Schmid. 1916. 3.95m : 1".
Accompanying report No. 396.
Out of print. *Cat. No. M32-399*
- 400.—Not published.
- 401.—**Feldspar in Canada**, by Hugh S. de Schmid. 1916. 125p. 22 pls., 12 figs., tables, 2 maps.
Voir le rapport n^o 402 pour l'édition française. See maps No. 403 and 404.
Out of print. *Cat. No. M32-401*
- 402.—**Feldspath au Canada**, par Hugh S. de Schmid. 1918. 132p. 22 planches, 12 figures, tableaux, 2 cartes.
See report No. 401 for English edition.
Édition épuisée. *N^o de cat. M32-402F*
- 403.—**Ontario feldspar area; map** showing location of the principal feldspar quarries, by H. S. de Schmid. 1916. 3.95m : 1".
Accompanying report No. 401.
Out of print. *Cat. No. M32-403*
- 404.—**Quebec feldspar area; map** showing location of the principal feldspar quarries, by H. S. de Schmid. 1916. 3.95m : 1".
Accompanying report No. 401.
Out of print. *Cat. No. M32-404*

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- 405.—Orton mine and vicinity, Hastings county, Ontario; magnetometric map, by A. H. A. Robinson. 1915. 200' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. Cat. No. M32-405
- 406.—Description of the laboratories of the Mines Branch of the Department of Mines, Ottawa. 1916. 51p. 60 pls., 12 figs. (Bulletin No. 13.)
Out of print. Cat. No. M32-406
- 407.—Not published.
- 408.—Preliminary report on the mineral production of Canada during the calendar year 1915, by J. McLeish. 1916. 28p. Tables.
Part of report No. 421.
Out of print. Cat. No. M32-408
- 409.—Kaministikwia, Thunder Bay district, Ontario; magnetometric map, by A. H. A. Robinson. 1916. 400' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. Cat. No. M32-409
- 410.—Kaministikwia, Thunder Bay district, Ontario; geological map, by A. H. A. Robinson. 1916. 400' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. Cat. No. M32-410
- 411.—Cobalt alloys with non-corrosive properties, by Herbert T. Kalmus and K. B. Blake. 1916. 37p. 31 pls., 50 figs., tables. (Researches on cobalt and cobalt alloys, conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part 4.)
Voir le rapport n° 412 pour l'édition française. See also reports No. 259, 309, 334 and 413.
Out of print. Cat. No. M32-411
- 412.—Les alliages de cobalt à propriétés non-corrosives, par Herbert T. Kalmus et K. B. Blake. 1917. 37p. 31 planches, 50 figures, tableaux. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens, Kingston, Ontario, pour la Division des mines du ministère des Mines, 4^e partie.)
See report No. 411 for English edition. Voir aussi rapports No. 260, 310, 335 et 414.
Édition épuisée. N° de cat. M32-412F
- 413.—Magnetic properties of cobalt and of Fe₂Co, by Herbert T. Kalmus and K. B. Blake. 1916. 18p. 1 pl., 13 figs., tables. (Researches on cobalt and cobalt alloys, conducted at Queen's University, Kingston, Ontario, for the Mines Branch of the Department of Mines, Part 5.)
Voir le rapport n° 414, pour l'édition française. See also reports No. 259, 309, 334 and 411.
Out of print. Cat. No. M32-413

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Reports and maps—Rapports.—Continued—Suite.

- 414.—Les propriétés magnétiques du cobalt et du Fe_2Co , par Herbert T. Kalmus et K. B. Blake. 1917. 19p. 1 planche, 13 figures, tableaux. (Recherches sur le cobalt et ses alliages, faites à l'Université Queens, de Kingston, Ontario, pour la Division des mines, du ministère des Mines, 5^e partie.)

See report No. 413 for English edition. Voir aussi rapports n^o 260, 310, 335 et 412.
Édition épuisée. N^o de cat. M32-414F

- 415.—Rapport annuel de la production minérale au Canada durant l'année civile 1914, par John McLeish. 1916. 360p. Tableaux.

See report No. 384 for English edition.

Édition épuisée.

N^o de cat. M32-415F

- 416.—Matawin iron range, Thunder Bay district, Ontario; magneto-metric map, claims Nos. 215W to 223W inclusive, by A. H. A. Robinson. 1916. 400' : 1".

Accompanying report No. 217, Vol. 2.

Out of print.

Cat. No. M32-416

- 417.—Not published.

- 418.—Not published.

- 419.—The production of iron and steel in Canada during the calendar year 1915, by John McLeish. 1916. 48p. Tables.

Advance chapter of report No. 426.

Out of print.

Cat. No. M32-419

- 420.—The production of coal and coke in Canada during the calendar year 1915, by John McLeish. 1916. 42p. Tables.

Advance chapter of report No. 426.

Out of print.

Cat. No. M32-420

- 421.—Summary report of the Mines Branch of the Department of Mines for the calendar year ending December 31, 1915. 1916. 213p. 13 pls., 3 figs., tables. (Sess. paper No. 26a-1916.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL REPORTS:—*Metalliferous Division*: (1) Possibility of producing refined copper in Canada; (2) Antimony ores in Canada, by A. W. G. Wilson; (3) Investigation of iron ores, by A. H. A. Robinson:—*Non-metalliferous Division*: (1) Limestones of the province of Quebec, by Howells Fréchette; (2) Investigation of miscellaneous non-metallic minerals, by H. S. de Schmid; (3) Building and ornamental stones of Saskatchewan and Alberta, by W. A. Parks:—*Ore Dressing and Metallurgical Division*: (1) Progress report; and, (2) List of ores tested, by G. C. Mackenzie; (3) Descriptions of several mining properties and tests, by G. C. Mackenzie, W. B. Timm and C. S. Parsons:—*Fuels and Fuel Testing Division*: (1) Work at Fuel Testing Station, by B. F. Haanel; (2) Chemical laboratories of Fuel Testing Station, by E. Stansfield; (3) Investigation of peat bogs, by A. Anrep:—*Ceramic Division*: (1) Clay and shale resources; (2) Laboratory and equipment; (3) Testing of clays and shales, by J. Keele; (4) Clays of southern Saskatchewan, by N. B. Davis:—*Work done by the chemical laboratory, Division of Chemistry*, by F. G. Wait:—*Report of Division of Mineral Resources and Statistics*, by J. McLeish:—*Explosives Division*: (1) Mine accident at South Wellington, B.C.; (2) Explosion at the Reserve mine, Nanaimo, B.C., by J. G. S. Hudson.—*Appendix*: Preliminary report on the mineral production (see report No. 408).

Voir le rapport n^o 422 pour l'édition française.

Out of print.

Cat. No. M32-421

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 422.—**Rapport sommaire de la Division des mines du ministère des Mines pour l'année terminée le 31 décembre 1915.** 1917. 225p. 13 planches, 3 diagrammes, tableaux. (Doc. parl. n° 26a-1916.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par Eugène Haanel.—RAPPORTS SOMMAIRES INDIVIDUELS:—*Division métallifère:* (1) Possibilité de produire du cuivre affiné au Canada; (2) Extraction des minerais d'antimoine, par A. H. A. Robinson;—*Division non-métallifère:* (1) Calcaires de la province de Québec, par Howells Fréchette; (2) Recherches sur les divers minéraux non métallifères, par H. S. de Schmidt; (3) Régions sablonneuses, Québec et Ontario, par L. H. Cole; (4) Sables bitumineux de l'Alberta septentrional; par S. C. Ellis; (5) Pierres de construction et d'ornementation, Saskatchewan et Alberta, par W. A. Parks:—*Division de la métallurgie et de la préparation mécanique:* (1) Rapport des opérations; (2) Liste des minerais dont on a fait l'essai, par G. C. Mackenzie; (3) Description de plusieurs propriétés minières et essais de minerais, par G. C. Mackenzie, W. B. Timm et C. S. Parsons:—*Services des combustibles:* (1) Travaux de la station d'essai, par B. F. Haanel; (2) Laboratoires chimiques de la station d'essai, par E. Stansfield; (3) Recherches sur les tourbières, par A. Anrep:—*Division de la céramique:* (1) Ressources en argile et en schistes; (2) Laboratoire et outillage; (3) Essais des argiles et des schistes, par Joseph Keele; (4) Gisements d'argile dans la Saskatchewan sud, par N. B. Davis:—*Travaux du laboratoire de chimie, par G. F. Wait:*—*Division des recherches minérales et des statistiques, par John McLeish:*—*Division des explosifs:* (1) Accident de mine à South Wellington, C.-B.; (2) Explosion à la mine de Réserve, C.-B., par J. G. S. Hudson.—**Annexe: Rapport préliminaire sur la production des minéraux du Canada, durant l'année civile 1915, par John McLeish.** See report No. 421 for English edition.
Édition épuisée.

N° de cat. M32-422F

- 423.—**The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1915,** by John McLeish. 1916. 60p. Tables.

Advance chapter of report No. 426.
Out of print.

Cat. No. M32-423

- 424.—**A general summary of the mineral production of Canada during the calendar year 1915,** by John McLeish. 1916. 45p. Tables.

Advance chapter of report No. 426.
Out of print.

Cat. No. M32-424

- 425.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1915, 1916.** 82p. Tables.

Advance chapter of report No. 426.
Out of print.

Cat. No. M32-425

- 426.—**Annual report on the mineral production of Canada during the calendar year 1915,** by John McLeish. 1917. 364p. Tables.

Voir le rapport n° 427 pour l'édition française. See separates No. 419, 420, 423, 424 and 425.
Out of print.

Cat. No. M32-426

- 427.—**Rapport annuel de la production minérale au Canada durant l'année civile 1915,** par John McLeish. 1917. 352p. Tableaux.

See report No. 426 for English edition.
Édition épuisée.

N° de cat. M32-427F

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Reports and maps—Rapports.—Continued—Suite.

- 428.—Report on the production of spelter in Canada, 1916, by Alfred W. G. Wilson. 1916. 60p. Tables.
Out of print. Cat. No. M32-428
- 429.—Not published.
- 430.—The coal-fields and coal industry of Eastern Canada; a general survey and description, by Francis W. Gray. 1917. 67p. 27 pls., 1 fig., 1 map in pocket. (Bulletin No. 14.)
See map No. 434.
Out of print. Cat. No. M32-430
- 431.—Not published.
- 432.—The mining of thin-coal seams as applied to the eastern coal-fields of Canada, by J. F. Kellock Brown. 1917. 132p. 1 pl., 61 figs., 1 map in pocket. (Bulletin No. 15.)
See map No. 434.
Out of print. Cat. No. M32-432
- 433.—Not published.
- 434.—Coal-fields of Nova Scotia and New Brunswick; index map, by D. B. Browning. 1916. 35m : 1".
Accompanying reports No. 430 and 432.
Out of print. Cat. No. M32-434
- 435.—Mineral springs of Canada. Part 1: The radioactivity of some Canadian mineral springs, by J. Satterly and R. T. Elworthy. 1917. 60p. 23 pls., 5 figs., 1 map. (Bulletin No. 16.)
See map No. 437.
Out of print. Cat. No. M32-435
- 436.—Not published.
- 437.—Mineral springs of Ontario and Quebec; index map. 1917. 40m : 1".
Accompanying report No. 435.
Out of print. Cat. No. M32-437
- 438.—Western Steel Iron claim at Sechart, Vancouver Island, B.C.; magnetometric map, by E. Lindeman. 1917. 60' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. Cat. No. M32-438
- 439.—Baldwin mine, Hull township, Quebec; magnetometric map, by E. Nystrom. 1917. 100' : 1".
Accompanying report No. 217, Vol. 2.
Out of print. Cat. No. M32-439
- 440.—Standard specifications for the printing of Mines Branch reports, monographs, bulletins, etc. Part I: Specifications. Part II: Models. 1916. 2 vol.
Out of print. Cat. No. M32-440

MINES BRANCH PUBLICATIONS

Reports and maps—Rappports.—Continued—Suite.

- 441.—**Wilbur mine**, Lavant township, Lanark county, Ontario; **magnetometric map**, by B. F. Haanel. 1917. 100' : 1".
Accompanying report No. 217, vol. 2.
Out of print. *Cat. No. M32-441*
- 442.—**Iron Crown claim**, Nimpkish river, Vancouver Island, B.C.; **magnetometric map**, by E. Lindeman. 1917. 100' : 1".
Accompanying report No. 217, vol. 2.
Out of print. *Cat. No. M32-442*
- 443.—**Bristol mine**, Pontiac county, Quebec; **magnetometric map**, by E. Lindeman. 1917. 200' : 1".
Accompanying report No. 217, Vol. 1.
Out of print. *Cat. No. M32-443*
- 444.—**Northeast Arm Iron range**, lots Nos. E.T.W. 340, W.D. 341, W.D. 342, W.D. 343, and W.D. 351, Lake Timagami, Nipissing district, Ontario; **magnetometric map**, by E. Lindeman. 1917. 200' : 1".
Accompanying report No. 217, vol. 2.
Out of print. *Cat. No. M32-444*
- 445.—**Dominion of Canada and Newfoundland; map showing iron ore occurrences and blast furnaces**, by E. Lindeman and L. L. Bolton, 1917. 100m : 1".
Accompanying report No. 217, Vol. 1 and 217, Vol. 2.
Out of print. *Cat. No. M32-445*
- 446.—**Radenhurst and Caldwell mines**, Lanark county, Ont.; **magnetometric map**, by A. H. A. Robinson. 1917. 200' : 1".
Accompanying report No. 217, vol. 2.
Out of print. *Cat. No. M32-446*
- 447.—**The value of peat fuel for the generation of steam**, by John Blizard. 1917. 42p. 1 pl., 5 figs., 6 charts, tables. (Bulletin No. 17.)
Out of print. *Cat. No. M32-447*
- 448.—Not published.
- 449.—**Preliminary report of the mineral production of Canada during the calendar year 1916**, by John McLeish. 1917. 25p. Tables.
Part of report No. 454.
Out of print. *Cat. No. M32-449*
- 450.—Not published.
- 451.—Not published.
- 452.—**Report on the building and ornamental stones of Canada; Vol. V: British Columbia**, by W. A. Parks. 1917. 236p. 47 pls., 3 figs. tables.
See also reports No. 100, 203, 279 and 388.
Out of print. *Cat. No. M32-452*
- 453.—Not published.

Reports and maps—Rapports.—Continued—Suite.

454.—Summary report of the Mines Branch of the Department of Mines for the calendar year ending December 31, 1916. 1917. 183p. 14 pls., 10 figs., tables. (Sess. paper No. 26a-1917.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL REPORTS:—*Metalliferous Division*: (1) Iron ores, by A. H. A. Robinson:—*Non-metalliferous Division*: (1) Separation of lime from Grenville magnesite, by Howells Fréchette; (2) Phosphate in the Rocky Mountains, and graphite near Cranbrook, B.C., by H. S. de Schmid; (3) Sands and sandstones of Canada; and (4) Occurrence and testing foundry moulding sands (see report No. 476), by L. H. Cole; (5) Bituminous sands of northern Alberta, by S. C. Ells; (6) Building and ornamental stones of British Columbia, by W. A. Parks:—*Fuels and Fuel Testing Division*: (1) Work at the Fuel Testing Station, by B. F. Haanel; (2) Chemical laboratories, by E. Stansfield; (3) Specifications for the purchase of oil, by E. Stansfield and Victor F. Murray; (4) The Hoffman potash test, by J. H. H. Nicolls; (5) Errors caused by the erosion of an iron ball mill, by R. C. Cantelo; (6) Oil-burette for fractional distillation and specific gravity determination; (7) Nitrogen distillation apparatus, by Victor F. Murray; (8) Investigation of peat bogs, by A. Anrep; *Mechanical work done at Fuel Testing Station*, by A. W. Mantle:—*Ore Dressing and Metallurgical Division*: (1) Progress report, by G. C. Mackenzie; (2) Chemical laboratory, by H. C. Mabee:—*Ceramic Division*: (1) Clay and clay resources; (2) Apatite: a substitute for bone ash in the manufacture of bone china; (3) Refractory materials in Canada; (4) Tests on clays and shales from Pembina mountains in southern Manitoba, by Joseph Keele; (5) Clay investigation in southern Saskatchewan, by N. B. Davis:—*Chemical laboratory of the Division of Chemistry*, by F. G. Wait:—*Division of Mineral Resources and Statistics*: (1) Mineral resources and statistics, by John McLeish; (2) Field work, by A. Buisson.—Appendix: Preliminary report on the mineral production (see report No. 449).

Voir le rapport n^o 455 pour l'édition française.

Out of print.

Cat. No. M32-454

455.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile terminée le 31 décembre 1916. 1918. 188p. 14 planches, 10 figures, tableaux. (Doc. parl. n^o 26a-1917.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par Eugène Haanel.—RAPPORTS INDIVIDUELS:—*Section des mines métalliques*: (1) Les minerais de fer, par A. H. A. Robinson:—*Section des mines non-métallifères*: (1) Séparation de la chaux d'avec la magnésite de Grenville, par Howells Fréchette; (2) Phosphate dans les montagnes Rocheuses, et graphite près de Cranbrook, C.-B., par H. S. de Schmid; (3) Sables et grès du Canada; (4) Gisements et essais des sables de moulage pour fonderles, par L. H. Cole; (5) Sables bitumineux du nord de l'Alberta, par S. C. Ells; (6) Pierres de construction et d'ornement du Canada, par W. A. Parks:—*Section des combustibles*: (1) Travaux à la station des combustibles, par B. F. Haanel; (2) Laboratoire de chimie, par E. Stansfield; (3) Cahier des charges pour l'achat des huiles, par E. Stansfield et V. Murray; (4) L'essai à la potasse, de Hoffman, par J. H. H. Nicolls; (5) Erreurs causées par l'érosion d'un broyeur à boulets de fer, par R. C. Cantelo; (6) Burette à l'huile pour la distillation fractionnée et la détermination du poids spécifique; (7) Appareil pour la distillation de l'azote, par Victor F. Murray; (8) Enquêtes sur les tourbières, par A. Anrep:—*Section de la préparation mécanique et de la métallurgie*: (1) Rapport des opérations, par G. C. Mackenzie; (2) Laboratoire de chimie, par H. G. Mabee:—*Section de la céramique*: (1) Enquête sur l'argile et les ressources en argile; (2) Apatite comme succédané de la cendre d'os dans la fabrication de la porcelaine; (3) Matières réfractaires au Canada; (4) Essais d'argiles et de schistes des monts Pembina dans le Manitoba méridional, par Joseph Keele; (5) Argile dans le Saskatchewan méridional, par N. B. Davis:—*Rapport sur les travaux du laboratoire de chimie*, par F. G. Wait:—*Section des ressources minières et de la statistique*: (1) Ressources minières et

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Reports and maps—Rapports.—Continued—Suite.

455.—Rapport sommaire, 1916.—Suite.

statistiques, par John McLeish; (2) Travail sur le terrain, par A. Buisson.—Appendices: Rapport préliminaire sur la production minière du Canada, 1916, par John McLeish.

See report No. 454 for English edition.

Édition épuisée.

N^o de cat. M32-455F

456.—Not published.

457.—Not published.

458.—The production of iron and steel in Canada during the calendar year 1916, by John McLeish. 1917. 50p. Tables.

Advance chapter of report No. 474.

Out of print.

Cat. No. M32-458

459.—Moose Creek peat bog, Prescott, Russell and Stormont counties, Ontario; map, by A. Anrep. 1918. 3800' : 1''.

Out of print.

Cat. No. M32-459

460.—Westmeath peat bog, Renfrew county, Ont.; map, by A. Anrep. 1917. 3100' : 1''.

Out of print.

Cat. No. M32-460

461.—Meath peat bog, Renfrew county, Ont.; map, by A. Anrep. 1918. 2700' : 1''.

Out of print.

Cat. No. M32-461

462.—Farnham peat bog, Missisquoi and Iberville counties, Que.; map, by A. Anrep. 1917. 5000' : 1''.

Out of print.

Cat. No. M32-462

463.—Canrobert peat bog, Rouville county, Que.; map, by A. Anrep. 1921. 3500' : 1''.

Out of print.

Cat. No. M32-463

464.—Napierville peat bog, Napierville county, Que.; map, by A. Anrep. 1918. 4000' : 1''.

Out of print.

Cat. No. M32-464

465.—The production of coal and coke in Canada during the calendar year 1916, by John McLeish. 1917. 46p. Tables.

Advance chapter of report No. 474.

Out of print.

Cat. No. M32-465

466.—Test of some Canadian sandstones to determine their suitability as pulpstones, by L. Heber Cole. 1917. 17p. 6 pls., 4 figs., tables. (Bulletin No. 19.)

Out of print.

Cat. No. M32-466

467.—Not published.

468.—Report on the clay resources of southern Saskatchewan, by N. B. Davis. 1918. 93p. 21 pls., 1 fig., 2 maps.

See maps No. 468A and 469.

Out of print.

Cat. No. M32-468

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Reports and maps—Rapports.—Continued—Suite.

- 468A.—Southern Saskatchewan; geological map, by N. B. Davis. 1917. 35m : 1".
Accompanying report No. 468.
Out of print. Cat. No. M32-468 A
- 469.—Cypress Hills, Southern Saskatchewan; map, showing outcrops of the Whitemud clays, near Eastend, by N. B. Davis. 1917. 1½m : 1".
Accompanying report No. 468.
Out of print. Cat. No. M32-469
- 470.—The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1916. 1917. 61p. Tables.
Advance chapter of report No. 474.
Out of print. Cat. No. M32-470
- 471.—The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1916. 1917. 76p. Tables.
Advance chapter of report No. 474.
Out of print. Cat. No. M32-471
- 472.—Mineral springs of Canada; Part II: The chemical character of some Canadian mineral springs, by R. T. Elworthy. 1918. 173p. 10 pls., 2 figs. (Bulletin No. 20.)
See also report No. 435.
Out of print. Cat. No. M32-472
- 473.—Not published.
- 474.—Annual report on the mineral production of Canada during the calendar year 1916, by John McLeish. 1918. 343p. Tables.
Voir le rapport n° 475 pour l'édition française. See separates No. 458, 465, 470, and 471.
Out of print. Cat. No. M32-474
- 475.—Rapport annuel de la production minérale au Canada durant l'année 1916, par John McLeish. 1918. 335p. Tableaux.
See report No. 474 for English edition.
Édition épuisée. N° de cat. M32-475 F
- 476.—Occurrence and testing of foundry moulding sands, by L. Heber Cole. 1917. 17p. 3 pls., 2 figs., tables. (Bulletin No. 21.)
Reprinted from report No. 454.
Out of print. Cat. No. M32-476
- 477.—Peat bogs investigated in Ontario; index map, by A. Anrep. 1918. 35m : 1".
Out of print. Cat. No. M32-477
- 478.—Preliminary report on the mineral production of Canada during the calendar year 1917, by John McLeish. 1918. 20p. Tables.
Out of print. Cat. No. M32-478

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Reports and maps—Rapports.—*Continued—Suite.*

- 479.—**Analyses of Canadian fuels. Part I: Maritime Provinces**, by Edgar Stansfield and J. H. H. Nicolls. 1918. 28p. Tables. (Bulletin No. 22.)
Out of print. *Cat. No. M32-479*
- 480.—**Analyses of Canadian fuels. Part II: Quebec and Ontario**, by Edgar Stansfield and J. H. H. Nicolls. 1918. 25p. Tables. (Bulletin No. 23.)
Out of print. *Cat. No. M32-480*
- 481.—**Analyses of Canadian fuels. Part III: Manitoba and Saskatchewan**, by Edgar Stansfield and J. H. H. Nicolls. 1918. 15p. Tables. (Bulletin No. 24.)
Out of print. *Cat. No. M32-481*
- 482.—**Analyses of Canadian fuels. Part IV: Alberta and Northwest Territories**, by Edgar Stansfield and J. H. H. Nicolls. 2nd edition. 1922. 77p. Tables. (Bulletin No. 25. First edition, 1918, Second edition, 1921.)
Out of print. *Cat. No. M32-482*
- 483.—**Analyses of Canadian fuels. Part V: British Columbia and Yukon Territory**, by Edgar Stansfield and J. H. H. Nicolls. 1918. 24p. Tables. (Bulletin No. 26.)
Out of print. *Cat. No. M32-483*
- 484.—**Peat bogs investigated in Quebec; index map**, by A. Anrep. 1918. 35m : 1".
Out of print. *Cat. No. M32-484*
- 485.—**Girard peat bog, St. Johns and Napierville counties, Quebec; map**, by A. Anrep. 1918. 3700' : 1".
Out of print. *Cat. No. M32-485*
- 486.—**Pont Rouge peat bog, Portneuf county, Quebec; map**, by A. Anrep. 1918. 500' : 1".
Out of print. *Cat. No. M32-486*
- 487.—**Peat bogs investigated in New Brunswick; index map**, by A. Anrep. 1918. 35m : 1".
Out of print. *Cat. No. M32-487*
- 488.—**St. Stephen peat bog, Charlotte county, N.B.; map**, by A. Anrep. 1918. 800' : 1".
Out of print. *Cat. No. M32-488*
- 489.—**Hyman peat bog, New Brunswick; map**, by A. Anrep. 1918. 500' : 1".
Out of print. *Cat. No. M32-489*
- 490.—**Seely Cove peat bog, Charlotte county, N.B.; map**, by A. Anrep. 1918. 1000' : 1".
Out of print. *Cat. No. M32-490*

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Reports and maps—Rapports.—Continued—Suite.

491.—Pocologan peat bog, Charlotte county, N.B.; map, by A. Anrep. 1918. 1180' : 1''.

Out of print.

Cat. No. M32-491

492.—Musquash peag bog, St. John county, N.B.; map, by A. Anrep. 1918. 1780' : 1''.

Out of print.

Cat. No. M32-492

493.—Summary report of the Mines Branch of the Department of Mines for the calendar year ending December 31, 1917. 1918. 153p. 4 figs., tables. (Sess. paper No. 26a-1918.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL SUMMARY REPORTS:—*Metalliferous Mines Division*: (1) Iron ores in Rainy River district by A. H. A. Robinson:—*Non-metalliferous Mines Division*: (1) Limestones of Ontario by Howells Fréchette; (2) The Canadian graphite industry, by H. S. Spence; (3) Investigation of certain sand and sandstone deposits, by L. H. Cole:—*Fuels and Fuel Testing Division*: (1) Work at the Fuel Testing Station, by B. F. Haanel; (2) Chemical laboratories, by E. Stansfield; (3) Investigation of peat bogs, by A. Anrep:—*Ore Dressing and Metallurgical Division*: (1) Progress report, by G. C. Mackenzie; (2) Ores tested and reports thereon, by W. B. Timm and C. S. Parsons; (3) Chemical laboratory, by H. C. Mabee:—*Ceramic Division*: (1) Investigation of clay and shale resources; (2) Pottery clays; (3) Magnesite; (4) Silica, by J. Keele:—*Road Materials Division*: (1) Tests of samples of bedrock; (2) Road Materials Laboratories; (3) Investigational work on the sampling and testing of bedrock; (4) Sampling and testing of fieldstone; (5) Special tests of bedrock collected from the quarries in Montreal, by K. A. Clark:—*Work of Division of Chemistry*, by F. G. Wait:—*Report of Division of Mineral Resources and Statistics*, by John McLeish.

Voir le rapport n° 494 pour l'édition française.

Out of print.

Cat. No. M32-493

494.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile terminée le 31 décembre 1917. 1919. 157p. 4 figures, tableaux. (Doc. parl. n° 26a-1918.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par E. Haanel.—RAPPORTS SOMMAIRES INDIVIDUELS.—*Section des mines métallifères*: (1) Minerais de fer du district de Rainy River, par A. H. A. Robinson:—*Section des mines non-métallifères*: (1) Calcaires de l'Ontario, par Howells Fréchette; (2) L'industrie du graphite au Canada, par H. S. Spence; (3) Recherches sur certains gisements de sables et grès, par L. H. Cole:—*Section des combustibles*: (1) Travaux à la station d'essai des combustibles, par B. F. Haanel; (2) Laboratoire de chimie, par E. Stansfield; (3) Recherches sur les tourbières, par A. Anrep:—*Section de préparation du minerai et de métallurgie*: (1) Rapport des opérations, par G. C. Mackenzie; (2) Minerais essayés et rapports sur les essais, par W. B. Timm, et C. S. Parsons; (3) Laboratoire de chimie, par H. C. Mabee:—*Section de la céramique*: (1) Ressources en argiles et schistes; (2) Argiles à poterie; (3) Magnesite; (4) Silice, par J. Keele:—*Section des matériaux de voirie*: (1) Essais d'échantillons de roche massive; (2) Laboratoires de matériaux de voirie; (3) Travaux de recherches sur l'échantillonnage et l'essai de roche massive; (4) Échantillonnage et essai de pierre des champs; (5) Essais de roche massive provenant des carrières de la ville de Montréal, par K. A. Clark:—*Travaux de laboratoire de la Section de la chimie*, par F. G. Wait:—*Rapport sur les travaux de la Section des ressources minérales et des statistiques*, par J. McLeish.

See report No. 493 for English edition.

Édition épuisée.

N° de cat. M32-494F

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—*Continued—Suite.*

- 495.—Not published.
- 496.—Results of forty-one steaming tests conducted at the Fuel Testing Station, Ottawa, by John Blizard and E. S. Malloch. 1920. 83p. 11 figs., 41 charts, tables. (Bulletin No. 27.)
Out of print. *Cat. No. M32-496*
- 497.—The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1917. 1919. 71p. Tables.
Advance chapter of report No. 504.
Out of print. *Cat. No. M32-497*
- 498.—The production of iron and steel in Canada during the calendar year 1917, by John McLeish. 1919. 32p. Tables.
Advance chapter of report No. 504.
Out of print. *Cat. No. M32-498*
- 499.—General summary of the mineral production of Canada during the calendar year 1917, by John McLeish. 1919. 27p. Tables.
Advance chapter of report No. 504.
Out of print. *Cat. No. M32-499*
- 500.—The production of cement, lime, clay products, stone, and other structural materials in Canada during the calendar year 1917. 1919. 44p. Tables.
Advance chapter of report No. 504.
Out of print. *Cat. No. M32-500*
- 501.—The production of coal and coke in Canada during the calendar year 1917, by John McLeish. 1919. 39p. Tables.
Advance chapter of report No. 504.
Out of print. *Cat. No. M32-501*
- 502.—The economic use of coal for steam-raising and house heating, by John Blizard. 1919. 21p. (Bulletin No. 28.)
Out of print. *Cat. No. M32-502*
- 503.—Not published.
- 504.—Annual report on the mineral production of Canada during the calendar year 1917, by John McLeish. 1919. 258p. Tables.
Voir le rapport n° 505 pour l'édition française. See separates No. 497, 498, 499, 500 and 501.
Out of print. *Cat. No. M32-504*
- 505.—Rapport annuel de la production minérale du Canada durant l'année civile 1917, par John McLeish. 1919. 260p. Tableaux.
See report No. 504 for English edition.
Édition épuisée. *N° de cat. M32-505 F*
- 506.—Preliminary report on the mineral production of Canada during the calendar year 1918, by John McLeish. 1919. 24p. Tables.
Out of print. *Cat. No. M32-506*

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

507.—Potash recovery of cement plants, by Alfred W. G. Wilson.
1919. 34p. 10 pls., tables. (Bulletin No. 29.)
Out of print. Cat. No. M32-507

508.—Not published.

509.—Summary report of the Mining Branch of the Department of Mines for the calendar year ending December 31, 1918. 1920. 225p. 6 figs., 9 diagrams, tables. (Sess. paper No. 26a-1919.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL SUMMARY REPORTS:—*Metalliferous Mines Division*: (1) Investigation of pyrites resources, by A. H. A. Robinson:—*Non-Metalliferous Mines Division*: (1) Limestones of Ontario and Quebec, by Howells Fréchette; (2) Graphite and the graphite industry; (3) Mica for condenser plates, by H. S. Spence; (4) Silica and moulding sand deposits of eastern Canada; (5) Building stones of Wolfe River district; (6) Discovery of rock salt at Malagash, Nova Scotia, by L. H. Cole:—*Fuels and Fuel Testing Division*: (1) Work at the Fuel Testing Station; (2) Test of New Brunswick oil shales in the Wallace retort, by B. F. Haanel; (3) Chemical laboratories, by E. Stansfield; (4) Lignite carbonization, by E. Stansfield and R. E. Gilmore; (5) Mechanical work, by A. W. Mantle:—*Ore Dressing and Metallurgical Division*: (1) Progress report, by G. C. Mackenzie; (2) List of ores tested and reports thereon, by W. B. Timm and C. S. Parsons; (3) Work of chemical laboratory, by H. C. Mabee:—*Ceramic Division*: (1) Clay and shale resources of British Columbia, and of eastern and northern Ontario, by J. Keele:—*Road Materials Division*: (1) Tests on bedrock, gravel, soil samples, and weathered rock, by K. A. Clark; (2) Alberta bituminous sands for rural roads, by G. C. Parker:—*Work of Division of Chemistry*, by F. G. Wait:—*Report of Division of Mineral Resources and Statistics*, by John McLeish.

Voir le rapport n° 510 pour l'édition française.

Out of print.

Cat. No. M32-509

510.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile terminée le 31 décembre 1918. 1920. 235p. 6 figures, 9 diagrammes, tableaux. (Doc. parl. n° 26a-1919.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par Eugene Haanel.—RAPPORTS SOMMAIRES INDIVIDUELS:—*Section des mines métallifères*: (1) Recherches sur les ressources de pyrites, par A. H. A. Robinson:—*Section des mines non-métallifères*: (1) Calcaires des provinces d'Ontario et de Québec, par Howells Fréchette; (2) Graphite et l'industrie du graphite; (3) Mica pour plaques de condensateurs, par H. S. Spence; (4) Gisements de silice et de sable de moulage de l'est du Canada; (5) Pierre de construction dans le district de Wolfe River; (6) Découverte de sel gemme à Malagash, Nouvelle-Écosse, par L. H. Cole:—*Section des combustibles*: (1) Travaux de la section; (2) Essai exécuté sur les schistes bitumineux du Nouveau-Brunswick au moyen de la cornue Wallace, par B. F. Haanel; (3) Laboratoires de chimie de la station d'essai, par E. Stansfield; (4) Carbonisation du lignite, par E. Stansfield et R. E. Gilmore; (5) Rapport des travaux mécaniques, par A. W. Mantle:—*Section de préparation mécanique et de métallurgie*: (1) Rapport des opérations, par G. C. Mackenzie; (2) Minerais essayés et rapports à leur sujet, par W. B. Timm and C. S. Parsons; (3) Rapport du laboratoire de chimie, par H. C. Mabee:—*Section de la céramique*: (1) Ressources en argile et schistes de la Colombie-Britannique, de l'est et du nord de l'Ontario, par J. Keele:—*Section des matériaux de voirie*: (1) Essais de roches de fond de gravières, d'échantillons de sols et de roche altérées, par K. A. Clark; (2) Sables bitumineux de l'Alberta pour les routes rurales, par G. C. Parker:—*Rapport sur les travaux de laboratoire de la Section de la chimie*, par F. G. Wait:—*Rapport sur les travaux de la Section des ressources minérales et des statistiques*, par J. McLeish.

See report No. 509 for English edition.

Édition épuisée.

N° de cat. M32-510F

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 511.—**Graphite**, by Hugh S. Spence. 1920. 202p. 56 pls., 43 figs., tables, 6 maps.
 Voir le rapport n° 512 pour l'édition française. See maps No. 513, 514, 515, 516, 517, and 518.
 Out of print. Cat. No. M32-511
- 512.—**Le graphite**, par Hugh S. Spence. 1912. 212p. 56 planches, 43 figures, tableaux, 6 cartes.
 See report No. 511 for English edition.
 Édition épuisée. N° de cat. M32-512F
- 513.—**Graphite occurrences in Bedford, Loughborough, Burgess, and Elmsley townships, Ontario; index map**, by H. S. Spence. 1919. 3.95m : 1".
 Accompanying report No. 511.
 Out of print. Cat. No. M32-513
- 514.—**Graphite occurrences in Monmouth, Cardiff, Monteagle, and Dungannon townships, Ontario; index map**, by H. S. Spence. 1919. 3.95m : 1".
 Accompanying report No. 511.
 Out of print. Cat. No. M32-514
- 515.—**Graphite occurrences in Brougham and Blithfield townships, Ontario; index map**, by H. S. Spence. 1919. 3.95m : 1".
 Accompanying report No. 511.
 Out of print. Cat. No. M32-515
- 516.—**Graphite occurrences in Grenville and Wentworth townships, Quebec; index map**, by H. S. Spence. 1919. 3.95m : 1".
 Accompanying report No. 511.
 Out of print. Cat. No. M32-516
- 517.—**Graphite occurrences in Amherst township, Quebec; index map**, by H. S. Spence. 1919. 3.95m : 1".
 Accompanying report No. 511.
 Out of print. Cat. No. M32-517
- 518.—**Graphite occurrences in Buckingham, and Lockaber townships, Quebec; index map**, by H. S. Spence. 1919. 3.95m : 1".
 Accompanying report No. 511.
 Out of print. Cat. No. M32-518
- 519.—**Smelter treatment rates**. Report of the Committee of Investigation in the matter of tolls charged by the Consolidated Mining & Smelting Company of Canada, Limited, at Trail, British Columbia, June, 1919, by Samuel S. Fowler, Chairman. 1919. 45p. 8 figs., tables. (Bulletin No. 30.)
 Appendix: Schedule "C": Lead ores, 1919.
 Out of print. Cat. No. M32-519
- 520.—**Annual report on the mineral production of Canada during the calendar year 1918**, by John McLeish. 1919. 80p. Tables.
 Voir le rapport n° 521 pour l'édition française.
 Out of print. Cat. No. M32-520

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 521.—**Rapport annuel de la production minérale du Canada durant l'année civile 1918**, par John McLeish. 1920. 80p. Tableaux.
See report 520 for English edition.
Édition épuisée. N^o de cat. M32-521F
- 522.—**Report on some sources of helium in the British Empire**, by J. C. McLennan and others. 1920. 72p. 1 pl., 20 figs., tables, 4 maps. (Bulletin No. 31.)
Appendix: *Gas density balance*.
See maps No. 523, 524, 525, 526.
Out of print. Cat. No. M32-522
- 523.—**Gas and oil fields and pipe lines in southwestern Ontario; map**, by J. C. McLennan. 1919. 19m : 1".
Accompanying report No. 522.
Out of print. Cat. No. M32-523
- 524.—**Petroleum, natural gas and bituminous sands in Western Canada (occurrences); map**, by J. C. McLennan. 1919. 200m : 1".
Accompanying report No. 522.
Out of print. Cat. No. M32-524
- 525.—**Main gas line, Bow island—Calgary, Alberta; map**, by J. C. McLennan. 1919. 12½m : 1".
Accompanying report No. 522.
Out of print. Cat. No. M32-525
- 526.—**Natural gas wells in British Columbia; index map**, by J. C. McLennan. 35m : 1".
Accompanying report No. 522.
Out of print. Cat. No. M32-526
- 527.—**The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1918**, by John McLeish. 1919. 74p. Tables.
Out of print. Cat. No. M32-527
- 528.—**The production of coal and coke in Canada during the calendar year 1918**, by John McLeish. 1919. 40p. Tables.
Out of print. Cat. No. M32-528
- 529.—**The production of iron and steel in Canada during the calendar year 1918**, by John McLeish. 1920. 36p. Tables.
Out of print. Cat. No. M32-529
- 530.—**Report on road materials along the St. Lawrence river, from the Quebec boundary line to Cardinal, Ontario**, by R. H. Picher. 1920. 65p. 6 pls., tables, 1 map. (Bulletin No. 32.)
Appendices: (1) *Rock outcrops*.—(2) *Character of boulder deposits of field stone*.—(3) *Character of gravel deposits*.—(4) *Commercial development of gravel deposits*.
See map No. 532.
Out of print. Cat. No. M32-530
- 531.—Not published.

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 532.—Deposits of stone and gravel available for highway construction between Cardinal, Ontario, and the Quebec boundary; index map, by R. H. Picher. 1920. 2m : 1".
Accompanying report No. 530.
Out of print. Cat. No. M32-532
- 533.—Preliminary report of the mineral production of Canada during the calendar year 1919, by John McLeish. 1920. 24p. Tables.
Out of print. Cat. No. M32-533
- 534.—Not published.
- 535.—Not published.
- 536.—Not published.
- 537.—Not published.
- 538.—Not published.
- 539.—Not published.
- 540.—Not published.
- 541.—Not published.

- 542.—Summary report of the Mines Branch of the Department of Mines for the calendar year ending December 31, 1919. 1920. 182p. 2 figs., 5 diagrams, tables. (Sess. Paper No. 26a-1920.)

Contents.—DIRECTOR'S GENERAL REPORT, by Eugene Haanel.—INDIVIDUAL SUMMARY REPORTS:—*Metalliferous Mines Division:* (1) Progress report, by A. W. G. Wilson; (2) Iron ore deposits in northern Ontario, by A. H. A. Robinson:—*Non-metalliferous Division:* (1) Iron oxide pigments in the province of Quebec, by Howells Fréchette; (2) Investigations of miscellaneous non-metallic minerals by H. S. Spence:—*Fuels and Fuel Testing Division:* (1) Fuel Testing Station, by B. F. Haanel; (2) Chemical laboratories, by E. Stansfield; (3) Lignite carbonization, by E. Stansfield and others; (4) Peat Committee for year ending December 31, 1919, by B. F. Haanel:—*Ore Dressing and Metallurgical Division:* (1) Progress report, by W. B. Timm; (2) List of ores tested, and detailed particulars of concentration and separation tests, by W. B. Timm and R. K. Carnochan; (3) Chemical laboratory, by H. C. Mabee:—*Ceramic Division:* (1) Residual clays in B.C.; (2) Clays and shales in vicinity of Fort William and Port Arthur; (3) Kaolin in Gatineau valley, by J. Keele; (4) Aluminum and its sources, by R. T. Elworthy; (5) Structural materials in Dundas, Stormont, and Glengarry counties, by J. Keele and L. H. Cole; (6) Pottery clays, by M. E. Young:—*Road Materials Division:* (1) Road materials and soil conditions in the area between Winnipeg and Brandon, Manitoba; (2) Road materials in Rocky Mountains Park, Alberta, by K. A. Clark; (3) Road materials investigation in Chateaugay and Beauharnois counties, Quebec, by H. Gauthier.

Voir le rapport n° 543 pour l'édition française.

Out of print.

Cat. No. M32-542

- 543.—Rapport sommaire de la Division des mines du ministère des Mines pour l'année civile terminée le 31 décembre 1919. 1921. 194p. 2 figures, 5 diagrammes, tableaux. (Doc. parl. n° 26a-1920.)

Sommaire.—RAPPORT DU DIRECTEUR GÉNÉRAL, par Eugène Haanel.—RAPPORTS SOMMAIRES INDIVIDUELS:—*Section des mines métallifères:* (1) Exposé général des travaux, par A. W. G. Wilson; (2) Gisements de minerai de fer dans le nord de l'Ontario, par A. H. A. Robinson:—*Section des mines non-métalliques:* (1) Cou-

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Reports and maps—Rapports.—Continued—Suite.

543.—Rapport sommaire, 1913.—Suite.

leurs d'oxyde de fer dans la province de Québec, par Howells Fréchette; (2) Recherches sur divers minéraux non-métalliques, par H. S. Spence.—Section des combustibles: (1) Travaux de la station d'essai des combustibles, par B. F. Haanel; (2) Laboratoires de chimie, par E. Stansfield; (3) Carbonisation du lignite, par E. Stansfield et R. E. Gilmore; (4) Commission de la tourbe pour l'année 1919, par B. F. Haanel.—Section de préparation mécanique et de métallurgie: (1) Rapport des opérations, par W. B. Timm; (2) Minerais essayés et rapports s'y rapportant, par W. B. Timm and R. K. Carnochan; (3) Laboratoire de chimie, par H. C. Mabee.—Section de la céramique: (1) Argiles détritiques en Colombie-Britannique; (2) Argiles et schistes au voisinage de Fort William et de Port Arthur; (3) Le kaolin dans la vallée de la Gatineau, Québec, par J. Keele; (4) L'aluminium et les sources de ce métal, par R. T. Elworthy; (5) Matériaux de construction dans les comtés de Dundas, Stormont, et Glengarry, Ontario, par J. Keele et L. H. Cole; (6) Argiles à poterie, par M. E. Young.—Section des matériaux de voirie: (1) Matériaux de voirie et état des terrains dans la région entre Winnipeg et Brandon, Manitoba; (2) Matériaux de voirie dans le Rocky Mountains Park, Alberta, par K. A. Clark; (3) Matériaux de voirie dans les comtés de Chateauguay et de Beauharnois, Québec, par H. Gauthier.

See report No. 542 for English edition.

Édition épuisée.

N^o de cat. M32-543F

544.—The production of iron and steel in Canada during the calendar year 1919, by John McLeish. 1920. 45p. Tables.

Out of print.

Cat. No. M32-544

545.—Annual report on the mineral production of Canada during the calendar year 1919, by John McLeish. 1920. 82p. Tables.

Voir le rapport n^o 546 pour l'édition française.

Out of print.

Cat. No. M32-545

546.—Rapport annuel de la production minérale du Canada durant l'année civile 1919, par John McLeish. 1921. 82p. Tableaux.

See report No. 545 for English edition.

Édition épuisée.

N^o de cat. M32-546F

547.—The production of copper, gold, lead, nickel, silver, zinc, and other metals in Canada during the calendar year 1919, by John McLeish. 1921. 76p. Tables.

Out of print.

Cat. No. M32-547

548.—The production of coal and coke in Canada during the calendar year 1919, by John McLeish. 1921. 39p. Tables.

Out of print.

Cat. No. M32-548

549.—Report on structural materials along the St. Lawrence river between Prescott, Ontario, and Lachine, Quebec, by Joseph Keele and L. Heber Cole. 1922. 119p. 30 pls., 5 figs., 3 maps.

Appendices.—"A" Pleistocene and recent fossils of the St. Lawrence valley, from Prescott to Beauharnois, by E. J. Whittaker.—"B" Ordovician fossils from St. Lawrence canal system localities, Ontario and Quebec, collected by L. H. Cole and J. Keele, identified by Alice E. Wilson.

Voir le rapport n^o 550 pour l'édition française. See maps No. 551, 552, and 553.

Out of print.

Cat. No. M32-549

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 550.—**Rapport sur les matériaux de construction le long du fleuve St-Laurent, entre Prescott, Ont. et Lachine, Qué., par Joseph Keele et L. Heber Cole.** 1924. 135p. 30 planches, 5 figures, 3 cartes.
 Appendices.—“A” *Fossiles pleistocènes et récents de la vallée du Saint-Laurent, de Prescott à Beauharnois, par E. J. Whittaker.*—“B” *Fossiles ordoviciens provenant des localités du système de canalisation du St-Laurent, Ontario et Québec, recueillis par L. H. Cole et J. Keele, identifiés par A. E. Wilson.*
 See report No. 549 for English edition.
 Édition épuisée. N^o de cat. M32-550F
- 551.—**Morrisburg sheet, St. Lawrence River section, Ontario; geological map, by J. Keele and L. H. Cole.** 1922. 1m : 1".
 Accompanying report No. 549.
 Out of print. Cat. No. M32-551
- 552.—**Cornwall sheet, St. Lawrence River section, Ontario and Quebec; geological map, by J. Keele and L. H. Cole.** 1922. 1m : 1".
 Accompanying report No. 549.
 Out of print. Cat. No. M32-552
- 553.—**Valleyfield sheet, St. Lawrence River section, Quebec, geological map, by J. Keele and L. H. Cole.** 1922. 1m : 1".
 Accompanying report No. 549.
 Out of print. Cat. No. M32-553
- 554.—**Preliminary report on the mineral production of Canada during the calendar year 1920, by John McLeish.** 1921. 24p. Tables.
 Out of print. Cat. No. M32-554
- 555.—**Silica in Canada: Its occurrence, exploitation, and uses: Part I: Eastern Canada, by L. Heber Cole.** 1923. 126p. 15 pls., 16 figs., 7 maps.
 See maps No. 557, 558, 559, 560, 561, 562, and 563. See also report No. 686.
 Out of print. Cat. No. M32-555
- 556.—Not published.
- 557.—**Distribution of sandstone in the district of Nelles Corners, Haldimand county, Ontario; map, by L. H. Cole.** 1923. 1m : 1".
 Accompanying report No. 555.
 Out of print. Cat. No. M32-557
- 558.—**Distribution of sandstone in the district north of the St. Lawrence river, between Kingston and Brockville, Ontario; map, by L. H. Cole.** 1923. 3.95m : 1".
 Accompanying report No. 555.
 Out of print. Cat. No. M32-558
- 559.—**Distribution of sandstone in the vicinity of Ottawa, Ontario; map, by L. H. Cole.** 1923. 3.95m : 1".
 Accompanying report No. 555.
 Out of print. Cat. No. M32-559
- 560.—**Distribution of sandstone in the vicinity of Montreal, Quebec; map, by L. H. Cole.** 1923. 3.95m : 1".
 Accompanying report No. 555.
 Out of print. Cat. No. M32-560

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 561.—Chavigny and Montauban townships, Quebec; sketch map of quartzite deposits, by L. H. Cole. 1923. $\frac{1}{2}$ m : 1".
Accompanying report No. 555.
Out of print. Cat. No. M32-561
- 562.—Distribution of quartzite in the Kamouraska district, Quebec; map, by L. H. Cole. 1923. 7.89m : 1".
Accompanying report No. 555.
Out of print. Cat. No. M32-562
- 563.—Pilgrim islands, River St. Lawrence, near St. André, Kamouraska county, Quebec; sketch map, by L. H. Cole. 1923. 2000' : 1".
Accompanying report No. 555.
Out of print. Cat. No. M32-563
- 564.—The preparation, transportation, and combustion of powdered coal, by John Blizard. 1921. 131p. 3 pls., 39 figs., tables.
Appendix.—Boiler tests with pulverized coal, by Henry Kreisinger and John Blizard.
Out of print. Cat. No. M32-564
- 565.—Gas producer trials with Alberta coals, by John Blizard and E. S. Malloch. 1921. 40p. 1 fig., 18 charts, tables. (Bulletin No. 33.)
No further Mines Branch reports were numbered as bulletins. Supplementing report No. 331.
Out of print. Cat. No. M32-565
- 566.—The production of copper, gold, nickel, silver, zinc, and other metals during the calendar year 1920, by Arthur Buisson. 1921. 76p. Tables.
Out of print. Cat. No. M32-566
- 567.—The production of coal and coke in Canada during the calendar year 1920, by John Casey. 1921. 36p. Tables.
Out of print. Cat. No. M32-567
- 568.—Annual report on the mineral production during the calendar year 1920, by John McLeish. 1921. 80p. Tables.
Since 1920, reports on the mineral production in Canada have been published by the Mining, Metallurgical and Chemical Branch, Dominion Bureau of Statistics, and applications for these reports should be addressed to the Dominion Statistician, Ottawa, Ont.
Voir le rapport n^o 569 pour l'édition française.
Out of print. Cat. No. M32-568
- 569.—Rapport annuel sur la production minérale du Canada durant l'année civile 1920, par John McLeish. 1922. 82p. Tableaux.
See report No. 568 for English edition.
Édition épuisée. N^o de cat. M32-569F
- 570.—Barium and strontium in Canada, by Hugh S. Spence. 1922. 100p. 15 pls., 18 figs.
Out of print. Cat. No. M32-570
- 571.—Not published.

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

572.—Not published.

573.—Rapport sommaire des investigations de la Division des mines durant l'année civile se terminant le 31 décembre 1920. 1923. 92p. 7 figures, tableaux.

See report No. 574 for English edition.

Édition épuisée.

N^o de cat. M32-573F

574.—Summary report of investigations made by the Mines Branch during the calendar year ending December 31, 1920. 1922. 87p. 7 figs.

Voir le rapport n^o 573 pour l'édition française. See separates No. 575, 576, 577, and 578.

Out of print.

Cat. No. M32-574

575.—Investigations in 1920: Mineral resources and technology. 1922. Pp. 5-22. Tables, fig.

Contents.—*The development of chemical and metallurgical industries in Canada, by Dr. A. W. G. Wilson.—Titaniferous iron ore deposits in Quebec, Ontario, and Alberta, by A. H. A. Robinson.—Mineral pigments in eastern Canada, by Howells Fréchette.—Barytes, celestite, talc, and benzonite, by H. S. Spence.—Alkali deposits of western Canada, by L. H. Cole.—Bituminous sands of Alberta, by S. C. Ellis.*

Separate part of report No. 574.

Out of print.

Cat. No. M32-575

576.—Investigations in 1920: Ore dressing and metallurgy. 1922. Pp. 23-38. Tables.

Contents.—*Ores tested, and reports thereon, by W. B. Timm and R. K. Carnochan.*

Separate part of report No. 574.

Out of print.

Cat. No. M32-576

577.—Investigations in 1920: Fuels and fuel testing. 1922. Pp. 39-54, Appendix, pp. 76-81.

Contents.—*General review of investigations, by B. F. Haanel.—Carbonization of peat, by E. Stansfield and J. H. H. Nicolls.—Notes on the Hoffman potash test, by J. H. H. Nicolls.—Trent process for purifying coal high in ash; and, Preliminary report on the investigation of the manufacture of peat fuel, by B. F. Haanel.*

Separate part of report No. 574.

Out of print.

Cat. No. M32-577

578.—Investigations in 1920: Ceramics and road materials. 1922. Pp. 55-75.

Contents.—*Testing of brick and fireclays from various Provinces: Pottery clays; Clay-working industry—structural materials and clay wares; Field examination and clay testing; Practical instructions as to sampling; Laboratory tests; Testing under working conditions, by Joseph Keele.—Road material survey along the Gananoque—Napane section of the Toronto-Montreal highway, Ontario; Road materials in Nova Scotia, by H. Gauthier.*

Separate part of report No. 574.

Out of print.

Cat. No. M32-578

579.—Titanium, by A. H. A. Robinson. 1922. 127p. 5 figs., tables, 2 maps.

See maps No. 581 and 582.

Out of print.

Cat. No. M32-579

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Reports and maps—Rapports.—Continued—Suite.

- 580.—Not published.
- 581.—Orton mine and vicinity, Hastings county, Ontario; magneto-metric map, by A. H. A. Robinson. 1923. 200' : 1".
Accompanying report No. 579.
Out of print. Cat. No. M32-581
- 582.—Seine Bay titaniferous magnetite deposits, Rainy River District, Ontario; magnetometric map, by A. H. A. Robinson. 1923. 400' : 1".
Accompanying report No. 579.
Out of print. Cat. No. M32-582
- 583.—Talc and soapstone in Canada, by Hugh S. Spence. 1922. 85p. 2 pls., 15 figs., tables, 1 map.
See map No. 585.
Out of print. Cat. No. M32-583
- 584.—Not published.
- 585.—Principal talc and soapstone occurrences in the Eastern townships, Quebec; map, by H. S. Spence. 1922. 8m : 1".
Accompanying report No. 583.
Out of print. Cat. No. M32-585
- 586.—Summary report of investigations made by the Mines Branch during the calendar year ending December 31, 1921. 1923. 346p. 20 pls., 15 figs., 21 diagrams, tables.
See separates No. 588, 589, 590, and 591.
Out of print. Cat. No. M32-586
- 587.—Not published.
- 588.—Investigations in 1921: Mineral resources and technology and Chemical Laboratory Research. 1923. Pp. 7-77. Tables.
Contents.—Coalmont amber, by Dr. A. W. G. Wilson.—The iron industry, by A. H. A. Robinson.—Iron oxide pigments in Ontario, by Howells Fréchette.—Talc and soapstone, calcite, feldspar, by H. S. Spence.—Alkali deposits of western Canada, by L. H. Cole and F. M. MacNiver.—Cretaceous shales of Manitoba and Saskatchewan; their economic value as a possible source of petroleum.—Oil shales of Canada, by S. C. Ells.—Chemical products from natural gas.—The possibility of producing methanol (methyl alcohol) and formaldehyde from natural gas, by R. T. Elworthy.—Chemical and physical characters of bentonite, by E. A. Thompson and A. Sadler.
Separate part of report No. 586.
Out of print. Cat. No. M32-588
- 589.—Investigations in 1921: Ore dressing and metallurgy. 1923. Pp. 78-204. 12 pls., 11 figs., tables.
Contents.—General review of investigations:—List of ores and metallurgical products on which experimental test and research work was conducted, by W. B. Timm.—Reports of the investigations conducted, R. K. Carnochan, C. S. Parsons, R. J. Traill, and others.—Other test work of the Division:—Additional equipment for the laboratories, by W. B. Timm.—Work and investigations of the Chemical Laboratory, by H. C. Mabee.
Separate part of report No. 586.
Out of print. Cat. No. M32-589

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590.—**Investigations in 1921: Fuels and fuel testing.** 1923. Pp. 205-252 and 319-338. 8 pls., diagrams, figs., tables.

Contents.—Lignite carbonization, by J. H. H. Nicolls and Harold Kohl.—Notes on the burning quality of kerosene oils for illuminating purposes:—The lubricating value of cod liver oil, by P. V. Rosewarne.—Preliminary report on the investigation of oil shales, by A. A. Swinnerton.—Preliminary report on the investigation of peat fuel, by B. F. Haanel.

Separate part of report No. 586.

Out of print.

Cat. No. M32-590

591.—**Investigations in 1921: Ceramics and road materials.** 1923. Pp. 253-318. Tables.

Contents.—CERAMICS.—Outline of work done; Tests of clay from various provinces; Pottery clays; Removing scum from brick; Working stony clays for brick and tile; Method for sampling clay and shale deposits; Clayworking industry; Ball clay in Saskatchewan, by J. Keele.—ROAD-MATERIALS.—Laboratory tests on road building stone and gravel; Investigations of road materials in Prescott and Russell counties, Ont.; Road material surveys in Rocky Mountains Park; Experimental abrasion test on concrete; Results of physical tests upon samples of stone and gravel from Nova Scotia, by H. Gauthier.

Separate part of report No. 586.

Out of print.

Cat. No. M32-591

592.—**Molybdenum: Metallurgy and uses and the occurrence, mining and concentration of its ores,** by V. L. Eardley-Wilmot. 1925. 292p. 11 pls., 55 figs., 41 tables, 3 maps.

See maps No. 594, 595, and 596.

Out of print.

Cat. No. M32-592

593.—Not published.

594.—**Molybdenite occurrences in British Columbia; index map,** by V. L. Eardley-Wilmot. 1925. 35m : 1".

Accompanying report No. 592.

Out of print.

Cat. No. M32-594

595.—**Molybdenite occurrences in Ontario; index map,** by V. L. Eardley-Wilmot. 1925. 35m : 1".

Accompanying report No. 592.

Out of print.

Cat. No. M32-595

596.—**Molybdenite occurrences in Quebec and Maritime Provinces; index map,** by V. L. Eardley-Wilmot. 1925. 35m : 1".

Accompanying report No. 592.

Out of print.

Cat. No. M32-596

597.—**Development of chemical, metallurgical, and allied industries in Canada in relation to the mineral industry,** by A. W. G. Wilson. 1924. 329p. 39 tables, 12 diagrams.

This report was also published in two volumes. See reports No. 598 and 599.

Out of print.

Cat. No. M32-597

598.—**Development of chemical, metallurgical, and allied industries in Canada in relation to the mineral industry. Volume 1: Chemical industries,** by A. W. G. Wilson. Pp. 1-175. Tables, diagrams.

Separate part of report No. 597.

Out of print.

Cat. No. M32-598

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Reports and maps—Rapports.—Continued—Suite.

- 599.—Development of chemical, metallurgical, and allied industries in Canada in relation to the mineral industry. Volume 2: Metallurgical and allied industries, by A. W. G. Wilson. Pp. 177-311. Tables, diagrams.
 Separate part of report No. 597.
 Out of print. Cat. No. M32-599
- 600.—Not published.
- 601.—Not published.
- 602.—Not published.
- 603.—Not published.
- 604.—Not published.
- 605.—Summary report on Mines Branch investigations during the calendar year ending December 31, 1922. 1924. 273p. 5 pls., 17 figs., 11 diagrams, tables.
 See separates No. 607, 608, 609, and 610.
 Out of print. Cat. No. M32-605
- 606.—Not published.
- 607.—Investigations in 1922: Mineral resources and technology, and Chemical Laboratory Research. 1924. Pp. 7-70. Tables, figs., diagrams.
 Contents.—MINERAL RESOURCES DIVISION:—Mineral pigments, by Howells Fréchetie:—Alkali deposits, western Canada; Volcanic ash near Waldeck, Sask., by L. H. Cole:—Canadian feldspar in 1922; Fluorspar in 1922; Graphite in Canada, 1922; Talc and soapstone in Canada, 1922; Molybdenum situation in Canada, 1922, by V. L. Eardley-Wilmot:—Bituminous sands of northern Alberta, by S. C. Ellis.—CHEMICAL DIVISION:—Some Canadian fossil resins; Character of waters leaking into oil and gas wells, by R. T. Elworthy.
 Separate part of report No. 605.
 Out of print. Cat. No. M32-607
- 608.—Investigations in 1922: Ore dressing and metallurgy. 1924. Pp. 71-193. Tables, pls., figs., diagrams.
 Contents.—General review of investigations; List of ores and metallurgical products on which experimental test and research work was conducted, by W. B. Timm.—Reports on the investigations conducted, by R. K. Carnochan and others.—Other test work of the Division; Additional equipment for the laboratories, by W. B. Timm.
 Separate part of report No. 605.
 Out of print. Cat. No. M32-608
- 609.—Investigations in 1922: Fuels and fuel testing. 1924. Pp. 194-225 and 262-266. Tables, figs., diagrams.
 Contents.—Carbonization of peat in commercial hardwood distillation ovens, by R. E. Gilmore and Harold Kohl.—Report on the treatment of oil shale from New Brunswick by the Ryan Oil Digestion process, by A. A. Swinerton.—Preliminary gasoline survey, by P. V. Rosewarne.—Interim report of the Joint Peat Committee, by B. F. Haanel.
 Separate part of report No. 605.
 Out of print. Cat. No. M32-609

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- 610.—Investigations in 1922: Ceramics and road materials. 1924. Pp. 226-261. Tables.
 Contents.—*Ceramic materials, by Howells Fréchette.—Investigation of road materials along Hawk Creek-McLeod Meadows section of the Banff-Windermere highway, Rocky Mountains Park; Prospecting for road materials between Massive and Johnson Canyon; Experiments for investigating the test for the crushing strength of rock, by H. Gauthier.—Road materials in Nova Scotia, by R. H. Picher.*
 Separate part of report No. 605. Cat. No. M32-610
 Out of print.
- 611.—The mineral industries of Canada, compiled by A. H. A. Robinson. British Empire Exhibition editions: First edition. 138p. 35 pls., 1 map.—Second edition. 1925. 140p. 35 pls., 1 map. Voir le rapport n° 612 pour l'édition française. See map No. 613.
 Out of print. Cat. No. M32-611
- 612.—Les industries minérales du Canada, par A. H. A. Robinson. 1924. 152p. 35 planches, tableaux, carte.
 See report No. 611 for English edition. N° de cat. M32-612F
 Édition épuisée.
- 613.—Mineral map of the Dominion of Canada. British Empire Exhibition editions. (1st) 1924 and (2nd) 1925. 100m : 1".
 Accompanying report No. 611. Cat. No. M32-613
 Out of print.
- 614.—Facts about peat, by B. F. Haanel. 1924. 48p. Tables.
 Voir le rapport n° 615 pour l'édition française. Cat. No. M32-614
 Out of print.
- 615.—Renseignements sur la tourbe, par B. F. Haanel. 1924. 48p. Tableaux.
 See report No. 614 for English edition. N° de cat. M32-615F
 Out of print.
- 616.—Investigations of mineral resources and the mining industry, 1923. 1924. 74p. Tables.
 Contents.—*Bentonite; and Feldspar, by H. S. Spence.—Bituminous sands of northern Alberta, by S. C. Ells.—Natural abrasive materials in Canada, by V. L. Eardley-Wilmot.—Natural gas in Alberta, by R. T. Elworthy (see report No. 616A).—Sodium and magnesium salts of western Canada, by L. H. Cole.—Zinc-lead mining in British Columbia, by A. H. A. Robinson.—Canadian exposition train in France and Belgium, 1923, by A. Buisson.*
 Out of print. Cat. No. M32-616
- 616A.—Natural gas in Alberta, by R. T. Elworthy. 1924. 35p. Tables.
 Advance section of report No. 616. Cat. No. M32-616A
 Out of print.
- 617.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1923. 1925. 150p. 3 pls., 11 figs., tables.
 Contents.—(1) *General review of investigations and list of ores and metallurgical products on which experimental test and research work was conducted, by W. B. Timm.—(2) Reports on investigations conducted, by C. S. Parsons, R. K. Carnochan, and J. S. Godard.—(3) Reports on the work and investigations of the*

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617.—Investigations—Continued.

Chemical Laboratories of the Division, by H. C. Mabee, R. J. Traill, and B. P. Coyne.—(4) Selective flotation as applied to Canadian ores, by C. S. Parsons.—(5) Summary of experimental tests on the beneficiation of Canadian iron ores; (6) Selective flotation of the nickeliferous pyrrhoite ores of Ontario, by W. B. Timm.—(7) Description of ore concentration plants in Canada.

75c.

Cat. No. M32-617

618.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1923. 1924. 86p. 2 pls., 5 figs., 7 diagrams, tables.

Contents.—(1) The carbonization of lignite and sub-bituminous coals, by Harold Khol.—(2) Survey of Maritime Provinces coals; (3) A study of the nature of sulphur in coal and coke from the Maritime Provinces, by J. H. H. Nicolls.—(4) Gasoline survey for 1923, by P. V. Rosewarne.—(5) The Hartman oil shale retort, by A. A. Swinnerton.—(6) Report on the Ramage process for oil refining, by R. E. Gilmore and P. V. Rosewarne.

Out of print.

Cat. No. M32-618

619.—Investigations in ceramics and road materials (Testing and Research Laboratories), 1923. 1925. 75p. 1 pl., tables.

Contents.—Introductory.—CERAMICS: (1) Investigation of ceramic industry, by Howells Fréchette; (2) Exhibit for the British Empire Exhibition; (3) Laboratory investigations; (4) Tunnel kilns, by L. P. Collin.—ROAD MATERIALS: (5) Road materials in Ontario and Quebec, with particular reference to their relative merits, based on a study of their use, by Henri Gauthier; (6) Road materials in Nova Scotia and New Brunswick, by R. H. Picher.

Out of print.

Cat. No. M32-619

620.—Not published.

621.—Not published.

622.—Not published.

623.—Not published.

624.—Catalogue of Mines Branch publications. 14th edition, revised December 1926. 1927. 47p.

Contents.—Alphabetical guide to catalogue.—Reports.—Memorandum series.—Traductions françaises.—Maps.

Out of print.

Cat. No. M32-624

625.—Bituminous sands of Northern Alberta, by Sidney C. Ells. 1924. 35p. 6 pls., tables.

See also reports No. 632 and 684.

Out of print.

Cat. No. M32-625

626.—Bentonite, by Hugh S. Spence. 1924. 36p. 14 pls., 2 figs.

Out of print.

Cat. No. M32-626

627.—The mining laws of Canada—a digest of Dominion and Provincial laws. 1924. 43p. (British Empire Exhibition edition).

Out of print.

Cat. No. M32-627

628.—Central and district heating: possibilities of application in Canada, by F. A. Combe. 1924. 79p. 26 figs., 4 tables. (Dominion Fuel Board No. 3.)

Voir le rapport n° 629 pour l'édition française.

Out of print.

Cat. No. M32-628

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Reports and maps—Rapports.—Continued—Suite.

- 629.—**Chauffage central et régional: possibilité de sa mise en pratique au Canada**, par F. A. Combe. 1925. 82p. 28 figures, 4 tableaux. (Commission fédérale du combustible n° 4.)
See report No. 628 for English edition.
Édition épuisée. *No de cat. M32-629F*
- 630.—**Coke as a household fuel in central Canada**, by J. L. Landt. 1925. 140p. 51 pls., 18 figs., 24 tables. (Dominion Fuel Board No. 5.)
Voir le rapport n° 631 pour l'édition française.
Out of print. *Cat. No. M32-630*
- 631.—**Le coke comme combustible de ménage dans le Canada central**, par J. L. Landt. 1926. 149p. 51 planches, 18 figures, 24 tableaux. (Commission fédérale du combustible n° 6.)
See report No. 630 for English edition.
Édition épuisée. *No de cat. M32-631F*
- 632.—**Bituminous sands of northern Alberta: occurrence and economic possibilities**, report on investigations to the end of 1924, by S. C. Ells. 1926. 244p. 43 pls., 47 figs., 6 tables. In portfolio: 8 maps and 4 sheets showing projected position of bituminous sand.
See maps No. 633, 634, 635, 636, 637, 638, 639, and 640. See also reports No. 625 and 684.
Out of print. *Cat. No. M32-632*
- 633.—**Bituminous sands of northern Alberta, sheet No. 1: Townships 87, 88, and 89; topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. *Cat. No. M32-633*
- 634.—**Bituminous sands of northern Alberta, sheet No. 2: Townships 88 and 89; topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. *Cat. No. M32-634*
- 635.—**Bituminous sands of northern Alberta, sheet No. 3: Townships 90 and 91; topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. *Cat. No. M32-635*
- 636.—**Bituminous sands of northern Alberta, sheet No. 4: Townships 92 and 93; topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. *Cat. No. M32-636*
- 637.—**Bituminous sands of northern Alberta, sheet No. 5: Townships 94 and 95; topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. *Cat. No. M32-637*
- 638.—**Bituminous sands of northern Alberta, sheet No. 6: Townships 96 and 97; topographical map**, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. *Cat. No. M32-638*

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639.—Bituminous sands of northern Alberta, sheet No. 7: Township 98; topographical map, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. Cat. No. M32-639

640.—Bituminous sands of northern Alberta, sheet No. 8: Townships 99 and 100; topographical map, by S. C. Ells. 1925. $\frac{1}{2}$ m : 1".
Accompanying report No. 632.
Out of print. Cat. No. M32-640

641.—Peat: its manufacture and uses, by B. F. Haanel. (Final report of the Peat Committee appointed jointly by the Governments of the Dominion of Canada and the Province of Ontario). 1926. 298p. 58 pls., 46 figs., 28 tables.
Appendices.—"A" Investigation of drying conditions obtaining during the manufacture of peat fuel at the Alfred peat bog, by H. A. Leverin.—"B" Preliminary report on the relations of the maceration to the drying qualities of peat, by R. E. Gilmore.—"C" Manufacture of carbonized peat at Dumfries, Scotland, report by J. O. Roos of Hjelmsäter.
Out of print. Cat. No. M32-641

642.—Investigations of mineral resources and the mining industry, 1924. 1926. 118p. 5 pls., figs., tables.
Contents.—(1) A review of fifteen years' progress in the production of non-metallic minerals in Canada, by members of the staff of the Mineral Resources Division.—(2) Titaniferous magnetic deposits of Bourget township, Chicoutimi district, Quebec, by A. H. A. Robinson.—(3) The goldfields of western Quebec, by W. B. Timm and A. H. A. Robinson.—(4) Magnesium sulphate in B.C.; (5) Sodium carbonate in B.C., by M. F. Goudge.—(6) Natural gas and petroleum in northern Alberta, by R. T. Elworthy.
Voir le rapport n° 685 pour l'édition française.
Out of print. Cat. No. M32-642

643.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1924. 1926. 115p. 6 figs., 7 tables.
Contents.—(1) General review of investigations, by W. B. Timm.—Reports of investigations; (2) Ore Dressing and Metallurgical Laboratory, by W. B. Timm, C. S. Parsons, R. K. Carnochan, and J. S. Godard; (3) Hydrometallurgical Laboratory, by R. J. Traill and W. R. McClelland; (4) Chemical Laboratory of the Division, by H. C. Mabee.—(5) The concentration of lead-zinc ores of eastern Canada; The concentration of the Lake George antimony ores, by C. S. Parsons.
Out of print. Cat. No. M32-643

644.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1924. 1926. 81p. 4 pls., 5 figs., tables.
Contents.—(1) Coking experiments on coals from the Maritime Provinces, by B. F. Haanel and R. E. Gilmore.—(2) Friability tests on various fuels sold in Canada, by J. H. H. Nicolls.—(3) The effects of exposing Canadian lignite to atmospheres of different humidities, by J. H. H. Nicolls.—(4) The examination of some lubricating oils sold in Canada, by P. V. Rosewarne.—(5) Gasoline survey for 1924, by P. V. Rosewarne and J. McD. Chanlier.—(6) Report of carbonization and washing experiments on sub-bituminous coal from Coal Valley, Alberta, by R. A. Strong.—(7) Distillation of oil shale—comparison of laboratory methods by A. A. Swinnerton.
Out of print. Cat. No. M32-644

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- 645.—**Investigations in ceramics and road materials** (Testing and Research Laboratories), 1924. 1925. 45p. Tables.
Contents.—*Introductory*.—CERAMICS: (1) *Ceramic industry*, by Howells Fréchette; (2) *Laboratory investigations*; (3) *Cost of burning brick and tile*, by L. P. Collin.—ROAD MATERIALS: (4) *New Brunswick and Nova Scotia*, by R. H. Picher.
Out of print. Cat. No. M32-645
- 646.—**Sodium sulphate of Western Canada: occurrence, uses, and technology**, by L. Heber Cole. 1926. 160p. 15 pls., 16 figs., 10 tables, 22 maps.
See maps No. 647 to 668 inclusive.
Out of print. Cat. No. M32-646
- 647.—**Sodium sulphate occurrences in western provinces of Canada; index map**, by L. H. Cole. 1926. 35m : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-647
- 648.—**Deposit No. 1: Muskiki Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 4620' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-648
- 649.—**Deposit No. 2: Frederick Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 2700' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-649
- 650.—**Deposit No. 6: Chain Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 2100' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-650
- 651.—**Deposit No. 7: Snakehole Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 1650' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-651
- 652.—**Deposit No. 8: Corral Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 1950' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-652
- 653.—**Deposit No. 9: Ingebright Lake, Sask., sodium sulphate deposit No. 1; map**, by L. H. Cole. 1926. 1950' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-653
- 654.—**Deposit No. 11: Berry Lake, Sask., sodium sulphate deposit; map**, by L. H. Cole. 1926. 1750' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-654
- 655.—**Deposit No. 42: Sybouts Lake, Sask., sodium sulphate deposit No. 1; map**, by L. H. Cole. 1926. 1650' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-655

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- 656.—Deposit No. 13: Ceylon Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 2900' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-656
- 657.—Deposit No. 15: Whiteshore Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 3250' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-657
- 658.—Deposit No. 19: Vincent Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 1600' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-658
- 659.—Deposit No. 28: Regina Beach, Sask., sodium sulphate deposit No. 1; map, by L. H. Cole. 1926. 600' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-659
- 660.—Deposit No. 29: Regina Beach, Sask., sodium sulphate deposit No. 2; map, by L. H. Cole. 1926. 1050' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-660
- 661.—Deposit No. 30: Horseshoe Lake, Horizon, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 2200' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-661
- 662.—Deposit No. 35: Boot Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 2000' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-662
- 663.—Deposit No. 37: Grandora Lake, Sask., sodium sulphate deposit No. 1; map, by L. H. Cole. 1926. 1000' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-663
- 664.—Deposit No. 37A: Grandora Lake, Sask., sodium sulphate deposit No. 2; map, by L. H. Cole. 1926. 1900' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-664
- 665.—Deposit No. 12: Sybouts Lake, Sask., sodium sulphate deposit No. 2; map, by L. H. Cole. 1926. 2400' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-665
- 666.—Deposit No. 48: Alsask Lake, Sask., sodium sulphate deposit; map, by L. H. Cole. 1926. 1680' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-666

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- 667.—Deposit No. 69: Metiskow Lake, Alberta, sodium sulphate deposit; map, by L. H. Cole. 1926. 2050' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-667
- 668.—Deposit No. 82: Ingebright Lake, Sask., sodium sulphate deposit No. 2; map, by L. H. Cole. 1926. 1400' : 1".
Accompanying report No. 646.
Out of print. Cat. No. M32-668
- 669.—Investigations of mineral resources and the mining industry, 1925. 1926. 84p.
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- 670.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1925. 1926. 123p. 4 pls., 9 figs., table.
Contents.—(1) General review of investigations, by W. B. Timm.—Reports of investigations: (2) Ore Dressing and Metallurgical Laboratory, by C. S. Parsons, R. K. Carnochan, and J. S. Godard.—(3) Electrochemical and Hydrometallurgical Laboratory, by R. J. Traill and W. R. McClelland.—(4) Pyrometallurgical Laboratory, by H. C. Mabee and A. E. Small.—(5) Report on the work of the Chemical Laboratory, by H. C. Mabee.—(6) The concentration of Canadian flake graphite ores, by C. S. Parsons.—The ores of western Quebec—their character and metallurgical treatment, by W. B. Timm.
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- 671.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1925. 1927. 184p. 7 pls., 17 figs., 68 tables.
Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—PART I: (1) Examination of typical cokes (see separate No. 671-1); (2) Tests of various fuels (see separate No. 671-2); (3) Low temperature carbonization of bituminous coals (see separate No. 671-3); (4) Effects of continued weathering upon the friabilities of various fuels, by J. H. H. Nicolls.—(5) Analyses of solid fuels (see separate No. 671-4).—PART II: (1) The examination of lubricating oils after use in automobile engines, by P. V. Rosewarne; (2) Gasoline survey for 1925, by P. V. Rosewarne and H. McD. Chantler; (3) Analyses of oils and liquid fuels, by P. V. Rosewarne.—PART III: (1) Distillation of oil shale with circulation of uncondensed gases, by A. A. Swinerton.
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- 671-1.—Examination of typical cokes sold in Canada as household fuels, by R. E. Gilmore, C. B. Mohr, and others. 1927. 27p.
2 pls., fig., tables.
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- 671-2.—Tests of various fuels made in a domestic hot-water boiler at the Fuel Testing Station in co-operation with the Dominion Fuel Board, by E. S. Malloch and C. E. Baltzer. 1927. 33p. Figs., tables.
Separate part of report No. 671.
Out of print. Cat. No. M32-671/2

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- 671-3.—Low-temperature carbonization of bituminous coals, by R. A. Strong. 1927. 39p. 4 pls., figs., tables.
Separate part of report No. 671.
Out of print. Cat. No. M32-671/3
- 671-4.—Analyses of solid fuels, by J. H. H. Nicolls. 1927. 34p. Tables.
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- 672.—Investigations in ceramics and road materials (Testing and Research Laboratories), 1925. 1926. 35p. Tables.
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- 673.—Abrasives: products of Canada, technology and application.—Part I: Silicious abrasives: sandstones, quartz, tripoli, pumice, and volcanic dust, by V. L. Eardley-Wilmot. 1927. 119p. 14 pls., 8 figs., 16 tables.
Voir le rapport n° 674 pour l'édition française.
Out of print. Cat. No. M32-673
- 674.—Les abrasifs: produits du Canada, technologie et applications.—Partie I: Abrasifs siliceux: grès, quartz, tripoli, ponce et poussière volcanique, par V. L. Eardley-Wilmot. 1930. 128p. 14 planches, 8 figures, 16 tableaux.
See report No. 673 for English edition.
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- 675.—Abrasives: products of Canada, technology and application.—Part II: Corundum and diamond, by V. L. Eardley-Wilmot. 1927. 51p. 5 pls., 6 figs., 4 tables.
Voir le rapport n° 676 pour l'édition française.
Out of print. Cat. No. M32-675
- 676.—Les abrasifs: produits du Canada, technologie et applications.—Partie II: Corindon et diamant, par V. L. Eardley-Wilmot. 1931. 53p. 5 planches, 6 figures, 4 tableaux.
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Voir le rapport n° 678 pour l'édition française. See also report No. 699.
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- 678.—Les abrasifs: produits du Canada, technologie et applications.—Partie III: Le grenat, par V. L. Eardley-Wilmot. 1931. 73p. 4 planches, 19 figures, 6 tableaux.
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See maps No. 680 and 681.
Out of print. Cat. No. M32-679
- 680.—**Alberta; map showing main gas fields and pipe lines**, by R. T. Elworthy. 1926. 35m : 1".
Accompanying report No. 679.
Out of print. Cat. No. M32-680
- 681.—**Gas and oil fields and pipe lines in southwestern Ontario; map**, by R. T. Elworthy. 1926. 12m : 1".
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- 683.—**Rapport préliminaire sur les calcaires des provinces de Québec et d'Ontario**, par M. F. Goudge. 1929. 81p. 16 planches, 3 figures, tableaux.
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See also reports No. 625 and 632.
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- 685.—**Recherches touchant les ressources minérales et l'industrie minière, 1924**. 1927. 72p. Figures, tableaux.
Sommaire.—*Une revue de quinze années de progrès dans la production de minéraux non-métalliques au Canada, par le membres du personnel de la section des Ressources minérales.*—*Gisements de magnétite titanifère du canton de Bourget, district de Chicoutimi (Québec), par A. H. A. Robinson.*—*Les terrains aurifères du Québec occidental, par W. B. Timm et A. H. A. Robinson.*
See report No. 642 for English edition.
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Appendix.—*Recent developments in the silica industry in Eastern Canada.*
See also report No. 555.
Out of print. Cat. No. M32-686
- 687.—**Investigations of mineral resources and the mining industry, 1926**. 1928. 80p. 7 pls., 5 figs., tables.
Contents.—(1) *Flotation reagents*, by C. S. Parsons.—(2) *Anthraxolite near Sudbury, Ont.*; (3) *Asbestos in northern Ontario*; (4) *Feldspar in the Sudbury region, Ont.*; (5) *Graphite in Ontario and Quebec*; (6) *Lithium minerals in south-eastern Manitoba*; (7) *The Canadian soapstone industry*, by H. S. Spence.—(8) *Sodium carbonate at Soap Lake, B.C.*; (9) *Recent developments in the gypsum industry in B.C.*, by L. H. Cole.—(10) *Manitoba as a mining province*, by A. H. A. Robinson.—(11) *The limestones of Nova Scotia and New Brunswick; and, The*

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687.—Investigations of mineral resources, 1926.—Continued.

limestones of Gaspé peninsula; (12) The limestones of Timiskaming district, Ontario, by M. F. Goudge.—(13) Notes on the quicksilver occurrences in Canada; (14) Notes on the occurrences, metallurgy, and uses of quicksilver, by V. L. Eardley-Wilmot.—(15) Granite paving blocks; (16) The asbestos industry in Canada, by C. H. Freeman.

Out of print.

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688.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1926. 1928. 134p. 5 pls., tables.

Contents.—(1) General review of investigations, by W. B. Timm.—Reports of investigations; (2) Ore Dressing and Metallurgical Laboratory, by C. S. Parsons, R. K. Carnochan, and J. S. Godard.—(3) Electrochemical and Hydrometallurgical Laboratory, by R. J. Traill and W. R. McClelland.—(4) Report on the work of the Chemical Laboratory, by H. C. Mabee.—(5) Selective flotation as applied to Canadian ores, by C. S. Parsons.

Out of print.

Cat. No. M32-688

689.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1926. 1928. 132p. 7 pls., 16 figs., 41 tables.

Contents.—PART I: Solid fuels (see report No. 689-1).—PART II: Liquid fuels (see report No. 689-2).

Out of print.

Cat. No. M32-689

689-1.—Investigations of fuels and fuel testing, 1926. Part I: Solid fuels. 1928. 85p. 3 pls., figs., tables.

Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—(1) Instructions for burning coal, coke, and peat, by E. S. Malloch and C. E. Baltzer.—(2) Low-temperature carbonization—Continuation of tests on Canadian bituminous coals, by R. A. Strong.—(3) A study of the nature of sulphur in Canadian coal and coke; (4) Air-drying of Canadian lignite and the reabsorption of moisture by the same; (5) Analyses of solid fuels, by J. H. H. Nicolls.

Separate part of report No. 689.

Out of print.

Cat. No. M32-689/1

689-2.—Investigations of fuels and fuel testing, 1926. Part II: Liquid fuels. 1928. Pp 86-132. 4 pls., figs., tables.

Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—(1) Gasoline survey for 1926, by P. V. Rosewarne and A. F. Gill.—(2) Report of experiments on the dehydration of bitumen emulsion from Alberta bituminous sands, by P. V. Rosewarne and G. P. Connell.—(3) Oil shale from Rosevale, New Brunswick, by A. A. Swinnerton.—(4) Report on the Pritchard process for the distillation of oil shale, by R. E. Gilmore and A. A. Swinnerton.—(5) Canadian shale oil, and bitumen from bituminous sands, as sources of gasoline by pressure cracking, by R. E. Gilmore, P. V. Rosewarne, and A. A. Swinnerton.

Out of print.

Cat. No. M32-689/2

690.—Investigations in ceramics and road materials (Testing and Research Laboratories), 1926. 1928. 70p. 1 fig., tables.

Contents.—Introduction, by Howells Fréchette.—CERAMICS: (1) Brick sizes in Canada, by Howells Fréchette; (2) Methods of using barium for scum-prevention in stiff-mud brick; (3) Manufacture of grey brick, by L. P. Collin; (4) Refractoriness of moulding sand, by J. F. McMahon; (5) Kaolin and associated clays of Punk island, by L. H. Cole and J. F. McMahon.—ROAD MATERIALS: (6) Commercial crushed stone, Ontario and Quebec; (7) Stone and its use in road construction, by R. H. Picher.

Out of print.

Cat. No. M32-690

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- 691.—**Diatomite: its occurrence, preparation, and uses**, by V. L. Eardley-Wilmot. 1928. 182p. 15 pls., 31 figs., 17 tables, 1 map.
See map No. 692.
Out of print. Cat. No. M32-691
- 692.—**Diatomite deposits in Maritime Provinces; index map**, by V. L. Eardley-Wilmot. 1927. 17m : 1".
Accompanying report No. 691.
Out of print. Cat. No. M32-692
- 693.—**Mineral map of Canada**. 1929. Revised in 1933 and renumbered as 702.
See map No. 702.
Out of print. Cat. No. M32-693
- 694.—**Investigations of mineral resources and the mining industry**. 1927. 1928. 60p. 11 pls., 7 figs., 8 tables.
Contents.—Bituminous sands of northern Alberta—experimental drilling and paving operations, by S. C. Ells.
Out of print. Cat. No. M32-694
- 695.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories)**, 1927. 1928. 186p. 6 pls., 1 fig., tables.
Contents.—(1) General review of investigations, by W. B. Timm.—Reports of investigations: (2) Ore Dressing and Metallurgical Laboratories, by C. S. Parsons, A. K. Anderson, and J. S. Godard:—(3) Non-Metallic Laboratory, by R. K. Carnochan and R. A. Rogers:—(4) Hydrometallurgical Laboratory, by R. J. Truill, W. R. McClelland, and J. D. Johnston.—Report on the treatment of mixed (bulk) concentrates from base metal sulphide ores, by W. R. Harris.—(5) Report on the work and investigations of the Chemical Laboratory, by H. C. Mabee.—(6) Concentration of the ores of western Quebec, by J. S. Godard.—Custom concentrators, by C. S. Parsons and A. K. Anderson.
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- 696.—**Investigations of fuels and fuel testing (Testing and Research Laboratories)**, 1927. 1928. 107p. 10 pls., 9 figs., 35 tables.
Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—Part I: Solid fuels (see report No. 696-1).—Part II: Liquid fuels (see report No. 696-2).
Out of print. Cat. No. M32-696
- 696-1.—**Investigations of fuels and fuel testing, 1927. Part I: Solid fuels**. 1929. 70p. 10 pls., figs., tables.
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Separate part of report No. 696.
Out of print. Cat. No. M32-696/1

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- 696-2.—Investigations of fuels and fuel testing, 1927. Part II: Liquid fuels. 1929. Pp. 71-103. Figs., tables.
 Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—(1) Gasoline survey for 1927, by P. V. Rosewarne and R. J. Offord.—(2) The assay of bituminous sands, by R. E. Gilmore, A. A. Swinneron and G. P. Connell.
 Separate part of report No. 696.
 Out of print. Cat. No. M32-696/2
- 697.—Investigations in ceramics and road materials in 1927. 1929. 80p. Tables.
 Contents.—Introduction by Howells Fréchette.—CERAMICS: (1) Treatment of certain western clays to overcome drying defects, by Howells Fréchette and J. G. Phillips; (2) Preliminary report on clay gathering, by J. F. McMahon:—(3) Clays and shales of the Grand Lake area, N.B., by Howells Fréchette and J. F. McMahon.—ROAD MATERIALS: (4) In Prince Edward Island; (5) Stone quarries in Quebec; (6) The testing of non-bituminous road materials (see report No. 697-1), by R. H. Picher.
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- 697-1.—The testing of non-bituminous road materials, by R. H. Picher. 1929. 10p.
 Separate part of report No. 697.
 Out of print. Cat. No. M32-697/1
- 698.—Industrial fuel and power statistics for Ontario, calendar year 1925, by E. S. Malloch and C. E. Baltzer. 1928. 23p. 12 figs., tables.
 Compiled and published with the approval and co-operation of the Dominion Fuel Board and the Dominion Bureau of Statistics.
 Out of print. Cat. No. M32-698
- 699.—Abrasives: products of Canada, technology and application. Part IV: Artificial abrasives and manufactured abrasive products and their uses, by V. L. Eardley-Wilmot. 1929. 144p. 19 pls., 14 figs., 11 tables.
 Voir le rapport n° 700 pour l'édition française. See also reports No. 673, 675, and 677.
 Out of print. Cat. No. M32-699
- 700.—Les abrasifs: produits du Canada, technologie et applications. Partie IV: Abrasifs artificiels, produits abrasifs et usages, par V. L. Eardley-Wilmot. 1934. 153p. 19 planches, 14 figures, 11 tableaux.
 See report No. 699 for English edition. Voir aussi les rapports n° 674, 676 et 678.
 Édition épuisée. N° de cat. M32-700F
- 701.—Mica, by H. S. Spence. 1929. 142p. 21 pls., 1 chart, 10 figs. 16 tables, 2 maps.
 See maps No. 703, and 704.
 Out of print. Cat. No. M32-701
- 702.—Mineral map of the Dominion of Canada. Revised in 1933. 100m : 1".
 Accompanying report No. 738.
 Out of print. Cat. No. M32-702

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- 703.—Principal amber mica mines and occurrences in the province of Quebec; map, by H. S. Spence. 1929. 3.95m : 1".
Accompanying report No. 701.
Out of print. Cat. No. M32-703
- 704.—Principal amber mica mines and occurrences in the province of Ontario; map, by H. S. Spence. 1929. 3.95m : 1".
Accompanying report No. 701.
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- 705.—Comparative tests of various fuels when burned in a domestic hot-water boiler, by E. S. Malloch and C. E. Baltzer. 1929. 92p. 5 pls., 6 charts, 6 figs., 10 tables.
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- 706.—Comparison of the cost and convenience of house heating with various fuels, by E. S. Malloch. 1929. 8p. 1 fig., 1 table. (Dominion Fuel Board No. 14.)
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- 707.—Chrysotile asbestos in Canada, by James Gordon Ross. 1931. 146p. 34 pls., 8 figs., 6 charts, 21 tables.
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Out of print. Cat. No. M32-707
- 708.—Amiante chrysotile au Canada, par James Gordon Ross. 1934. 162p. 34 planches, 8 figures, 6 graphiques, 21 tableaux.
See report No. 707 for English edition.
Édition épuisée. N° de cat. M32-708F
- 709.—Not published.
- 710.—Investigations of mineral resources and the mining industry, 1928. 1930. 57p. 2 pls., tables.
Contents.—*Preliminary report on the limestones of northern and western Ontario and the Prairie Provinces, by M. F. Goudge.—Potash salts in the Maritime Provinces of Canada, by L. H. Cole.—Core drilling bituminous sands of northern Alberta, by S. C. Ells (see report No. 710-1).—Preliminary report on moulding sands in eastern Canada, by C. H. Freeman.*
Out of print. Cat. No. M32-710
- 710-1.—Core drilling bituminous sands of northern Alberta, by S. C. Ells. 1929. 26p. 4 pls., 1 fig., tables.
Advance section of report No. 710.
Out of print. Cat. No. M32-710/1
- 711.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1928. 1930. 166p. 8 figs., 7 tables.
Contents.—(1) *General review of investigations, by W. B. Timm.—Reports of investigations: (2) Ore Dressing and Metallurgical Laboratories, by C. S. Parsons, A. K. Anderson, and J. S. Godard:—(3) Non-metallics Laboratory, by R. K. Carnochan, C. S. Parsons, and R. A. Rogers:—(4) Hydrometallurgical Laboratory, by R. J. Traill, W. R. McClelland, and J. D. Johnston.—Report on the treatment of mixed (bulk) concentrates from base metal sulphide ores, by W. E. Harris.—(5) Report on the work and investigations of the Chemical Laboratories, by H. C. Mabee.—(6) The new Pyrometallurgical Laboratory of the Department of Mines, by W. B. Timm and T. W. Hardy.*
Out of print. Cat. No. M32-711

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- 712.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1928. 1930. 71p. 2 pls., 4 figs., tables.
 Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—(1) Report of preliminary carbonization and briquetting tests on lignite from northern Ontario, by R. A. Strong.—(2) Report on oil-shale from Pictou county, Nova Scotia, by A. A. Swinnerton.—(3) Laboratory notes, by J. H. H. Nicolls.—(4) Analyses of coals and other solid fuels, compiled by J. H. H. Nicolls and C. B. Mohr.—(5) Gasoline survey for 1928, by P. V. Rosewarne and R. J. Offord.
 Out of print. Cat. No. M32-712
- 713.—The Mining Laws of Canada: a digest of Dominion and Provincial laws affecting mining. Revised edition, by A. Buisson. 1931. 98p.
 See also reports No. 627, 795, 828, and 854.
 Out of print. Cat. No. M32-713
- 714.—The gypsum industry of Canada, by L. Heber Cole. 1930. 164p. 20 pls., 23 figs., 5 tables, 1 map.
 See map No. 715.
 Out of print. Cat. No. M32-714
- 715.—Gypsum occurrences in Canada; index map, by L. H. Cole. 1930. 500m : 1".
 Accompanying report No. 714.
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- 716.—The salt industry of Canada, by L. Heber Cole. 1930. 116p. 15 pls., 31 figs., 13 tables, 2 maps.
 See maps No. 717 and 718.
 Out of print. Cat. No. M32-716
- 717.—Saline springs and salt areas in Canada; index map, by L. H. Cole. 1930. 500m : 1".
 Accompanying report No. 716.
 Out of print. Cat. No. M32-717
- 718.—Ontario-Michigan salt basin showing probable limit of productive area; map, by L. H. Cole. 1930. 25m : 1".
 Accompanying report No. 716.
 Out of print. Cat. No. M32-718
- 719.—Investigations of mineral resources and the mining industry, 1929. 1930. 69p. 5 pls., 7 figs., tables.
 Contents.—(1) The Wilberforce radium occurrence, by H. S. Spence and R. K. Carnochan.—(2) Notes on anhydrite, by L. H. Cole and R. A. Rogers.—(3) Bituminous sands of northern Alberta, operations during 1929, by S. C. Ellis.—(4) Limestone in industry, by M. F. Goudge.—(5) Preliminary report on limestone of British Columbia, by M. F. Goudge.
 Out of print. Cat. No. M32-719

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- 720.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1929. 1931. 208p. 1 pl., 3 figs., tables.

Contents.—(1) General review of investigations, by W. B. Timm.—Reports of investigations: (2) Metallic Ores Section, by C. S. Parsons and others; (3) Non-Metallic Minerals Section, by R. K. Carnochan and R. A. Rogers; (4) Hydro-metallurgical and Electrochemical Section, by R. J. Traill and others; (5) Iron and Steel Section, by T. W. Hardy; (6) Chemical Laboratories, by H. C. Mabee.

Out of print.

Cat. No. M32-720

- 721.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1929. 1932. 131p. 8 pls., 8 figs., 14 tables.

Contents.—General review of investigations, by B. F. Haanel and R. E. Gilmore.—(1) Report of tests on Sydney coal (see report No. 721-1).—(2) Notes on methods for the laboratory assay of coals for carbonization and for coking properties, by R. E. Gilmore.—(3) Coking indices of typical Canadian coals, by J. H. H. Nicolls.—(4) Analyses of coals and other solid fuels, compiled by J. H. H. Nicolls and C. B. Mohr.—(5) Gasoline survey for 1929 (see report No. 721-2).—(6) The analysis of natural gas from the Turner Valley field (see report No. 721-3).

Out of print.

Cat. No. M32-721

- 721-1.—Report of tests on Sydney coal in the Illingworth low-temperature carbonization retort, by R. A. Strong, and E. J. Burrough. 1931. 25p. 3 pls., 3 figs., 4 tables.

Advance section of report No. 721.

Out of print.

Cat. No. M32-721/1

- 721-2.—Gasoline survey for 1929, by P. V. Rosewarne and H. McD. Chantler. 1931. 22p. 2 pls., 1 fig., 10 tables.

Advance section of report No. 721.

Out of print.

Cat. No. M32-721/2

- 721-3.—The analysis of natural gas from the Turner Valley field in Alberta, by P. V. Rosewarne and R. J. Offord. 1931. 20p. 3 pls., 4 figs., 14 tables.

Advance section of report No. 721.

Out of print.

Cat. No. M32-721/3

- 722.—Investigations in ceramics and road materials (Testing and Research Laboratories), 1928-1929. 1931. 143p. 3 pls., 18 figs., tables.

Contents.—Introduction by Howells Fréchette.—CERAMICS: (1) Ceramic bodies for electrical heating devices; (2) Transverse strength of ball clay-sand and ball clay-flint mixtures; (3) Production of grey brick, by L. P. Collin;—(4) Clays and shales of Prince Edward Island, by Howells Fréchette and J. F. McMahon;—(5) Progress report on clay gathering, by J. F. McMahon;—(6) The continuation of the investigation of the treatment of clays to overcome drying defects; and (7) Plant trials to overcome drying difficulties, by J. G. Phillips.—ROAD MATERIALS: (8) Road materials in Prince Edward Island; and, (9) Road gravels in Quebec, by R. H. Picher; (10) Lime treatment for gumbo roads, by J. G. Phillips.

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723.—Investigations of mineral resources and the mining industry, 1930. 1931. 82p. 5 pls., 2 figs., 5 tables.

Contents.—(1) *Bituminous sands of northern Alberta* (see report No. 723-1).—(2) *Possible industrial applications for bentonite* (see report No. 723-2).—(3) *Petroleum and natural gas in eastern Canada*, by E. H. Wait.—*Diatomite—a general description of its character and industrial uses*, by V. L. Eardley-Wilmot.—*The possibilities and prospects for the utilization of Canadian-produced copper in home manufacturing industries*, by A. H. A. Robinson and W. H. Losee.
Out of print. Cat. No. M32-723

723-1.—*Bituminous sands of northern Alberta: operations during 1930*, by S. C. Ells. 1931. 11p. 3 pls., 2 figs.

Advance section of report No. 723.
Out of print.

Cat. No. M32-723/1

723-2.—*Possible industrial applications for bentonite*, by H. S. Spence and Margaret Light. 1931. 24p.

Advance section of report No. 723.
Out of print.

Cat. No. M32-723/2

724.—*Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1930. 1932.* 215p. Tables.

Contents.—(1) *General review of investigations*, by W. B. Timm.—*Reports of investigations: (2) Metallic Ores Section*, by C. S. Parsons, and others; (3) *Non-metallic Minerals Section*, by R. K. Carnochan and others; (4) *Section of Ferrous Metallurgy*, by T. W. Hardy, H. H. Bleakney, and W. S. Jenkins.—*Report of the Chemical Laboratories*, by H. C. Mabee.
Out of print. Cat. No. M32-724

725.—*Investigations of fuels and fuel testing (Testing and Research Laboratories), 1930 and 1931.* 1933. 166p. 3 pls., 17 figs., 4 charts, tables.

Contents.—*General review of investigations*, by B. F. Haanel and R. E. Gilmore.—PART I: SOLID FUELS: (1) *Summary of tests on British Columbia coals* (see report No. 725-3); (2) *Results of twenty-eight hand and stoker-fired boiler trials* (see report No. 725-3); (3) *Classification of coals using specific volatile index* (see report No. 725-2); (4) *Analyses of solid fuels* (see report No. 725-4).—PART II: NATURAL GAS AND LIQUID FUELS: (1) *Analysis of natural gas* (see report No. 725-5); (2) *Weathering of crude naphtha in Turner Valley* (see report No. 725-5); (3) *Experiments on the hydrogenation of Alberta bitumen* (see reports 725-1 and 725-5); (4) *Report on oil shales from New Glasgow area* (see report No. 725-5); (5) *Gasoline surveys* (see report No. 725-5).

Out of print.

Cat. No. M32-725

725-1.—*Experiments on the hydrogenation of Alberta bitumen and on the effect of pressure on the pyrolysis of methane*, by T. E. Warren. 1932. 21p. 2 pls., 12 figs., 4 tables.

Advance section of report No. 725.
Out of print.

Cat. No. M32-725/1

725-2.—*Classification of coals using specific volatile index*, by E. J. Burrough, E. Swartzman, and R. A. Strong. 1933. Pp. 36-50. 4 charts, tables.

Advance section of report No. 725.
Out of print.

Cat. No. M32-725/1

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Reports and maps—Rapports.—Continued—Suite.

- 725-3.—**Boiler tests on coals and other solid fuels.** 1933. Pp. 17-35. 1 pl., tables.
Contents.—*Summary of tests on British Columbia coals when used as pulverized fuel, by E. S. Malloch.—Notes on pulverized fuel fired steam generators versus other types, by B. F. Haanel.—Results of twenty-eight hand and stoker fired boiler trials made with various fuels on a patented grate, by E. S. Malloch and C. E. Baltzer.*
Reprint of Sections I and II, (Part I) of report No. 725.
Out of print. Cat. No. M32-725/3
- 725-4.—**Analyses of solid fuels,** compiled by J. H. H. Nicolls and C. B. Mohr. 1933. Pp. 51-91. 3 tables.
Reprint of section IV, (Part I) of report No. 725.
Out of print. Cat. No. M32-725/4
- 725-5.—**Natural gas and liquid fuels.** 1933. Pp. 92-162. 2 pls., figs., tables.
Contents.—*Analyses of natural gas during 1930 and 1931, by P. V. Rosewarne and R. J. Offord.—Weathering of crude naphtha in Turner Valley, by P. V. Rosewarne and W. P. Campbell.—Experiments on the hydrogenation of Alberta bitumen (see report No. 725-1).—Report on oil shales from New Glasgow area, Pictou county, Nova Scotia, and from Port Daniel, Bonaventure county, Quebec, by A. A. Swinnerton.—Gasoline surveys for 1930 and 1931, by H. McD. Chantier.*
Reprint of Part II of report No. 725.
Out of print. Cat. No. M32-725/5
- 726.—**Investigations in ceramics and road materials (Testing and Research Laboratories), 1930 and 1931.** 1933. 175p. 1 pl., 28 figs., 6 tables.
Contents.—*Introduction by Howells Fréchette.—CERAMICS: Ceramic bodies for electrical heating devices; (2) Colour control of brick, by L. P. Collin; (3) Roofing-tile clays and shales of eastern Canada, by J. F. McMahon; (4) The production of shapes from soapstone dust; (5) The continuation of the investigation of the treatment of clays to overcome drying defects, by J. G. Phillips.—ROAD MATERIALS: (6) Road gravels in Quebec, by R. H. Picher.—Bibliography.*
Out of print. Cat. No. M32-726
- 727.—**Investigations of mineral resources and the mining industry, 1931.** 1932. 153p. 36 pls., 7 figs., tables.
Contents.—*(1) The suitability of certain Canadian sands for use in sandblasting (see report No. 727-1).—(2) Helium in Canada from 1926 to 1931 (see report No. 727-2).—(3) The pitchblende and silver discoveries of Great Bear lake (see report No. 727-3).—(4) Raw materials for the manufacture of rock wool in the Niagara peninsula, Ont., by M. F. Goudge.—(5) Exploration of bituminous sand areas in northern Alberta; (6) Recent progress in the commercial separation of bitumen from bituminous sand; (7) Estimated cost of producing solid and liquid hydrocarbons from bituminous sand, by S. C. Ells.—(8) Quartzite from Sunnybrae, Pictou county, Nova Scotia, by L. H. Cole and J. F. McMahon.*
Out of print. Cat. No. M32-727
- 727-1.—**The suitability of certain Canadian sands for use in sandblasting,** by L. H. Cole, R. K. Carnoçhan, and W. E. Brissenden. 1931. 41p. 15 pls., tables.
Advance section of report No. 727.
Out of print. Cat. No. M32-727/1

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Reports and maps—Rapports.—Continued—Suite.

727-2.—Helium in Canada from 1926 to 1931, by P. V. Rosewarne. 1931. 13p. Tables.

Advance section of report No. 727.

Out of print.

Cat. No. M32-727/2

727-3.—The pitchblende and silver discoveries at Great Bear Lake, Northwest Territories, by H. S. Spence. 1932. Pp. 55-92. 11 pls., figs., tables.

Contents.—(a) Radium-bearing minerals from Great Bear Lake, Northwest Territories.—(b) Occurrences of pitchblende and silver ores at Great Bear Lake, N.W.T.—(c) Final report on field investigations during 1931, in Labine Point area, N.W.T.

Reprinted from report No. 727.

Out of print.

Cat. No. M32-727/3

728.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), 1931. 1932. 183p. 2 pls., 4 figs., tables.

Contents.—(1) General review of investigations, by W. B. Timm.—Reports of investigations: (2) Metallic Ores Section, by S. C. Parsons, A. K. Anderson, and J. S. Godard; (3) Non-metallic Minerals Section, by R. K. Carnochan, R. A. Rogers, L. H. Cole; (4) Section of Hydrometallurgy and Electrochemistry, by R. J. Traill, W. R. McClelland; (5) Section of Ferrous Metallurgy, by T. W. Hardy and others; (6) Chemical Laboratory Section, by H. C. Mabee.

Out of print.

Cat. No. M32-728

729.—The clay and shale resources of Turner Valley and nearby districts, by W. G. Worcester. 1932. 126p. 8 pls., 29 figs., tables.

Out of print.

Cat. No. M32-729

730.—Gold in Canada, by A. H. A. Robinson. 1932. 92p. 8 figs., tables.

Out of print.

Cat. No. M32-730

731.—Feldspar, by Hugh S. Spence. 1932. 145p. 13 pls., 16 figs., tables, 7 maps.

Out of print.

Cat. No. M32-731

732.—Anhydrite in Canada: occurrence, properties, and utilization, by L. Heber Cole and R. A. Rogers. 1933. 89p. 5 pls., 9 figs., tables.

Out of print.

Cat. No. M32-732

733.—Canadian limestone for building purposes, by M. F. Goudge. 1933. 196p. 40 pls., 11 figs., 6 tables.

Voir le rapport n° 778 pour l'édition française.

Out of print.

Cat. No. M32-733

734.—Gold in Canada, 1933, by A. H. A. Robinson. Revised edition. 1933. 92p. 8 figs., 39 tables.

See also report No. 730.

Out of print.

Cat. No. M32-734

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 735.—Investigations of mineral resources and the mining industry, 1932. 1934. 31p. 1 pl., 5 figs., 10 tables.
Contents.—(1) *Silica deposit near Gatineau Point, Quebec*, by L. H. Cole and R. K. Carnochan.—(2) *Sandstone at Hawkesbury, Ont.*, by L. H. Cole.—(3) *Some economic aspects of the bituminous sands of northern Alberta*, by S. C. Ellis.
Out of print. Cat. No. M32-735
- 736.—Investigations in ore dressing and metallurgy, (Testing and Research Laboratories), 1932. 1934. 287p. 2 pls., 14 figs., tables.
Contents.—(1) *General review of investigations*, by W. B. Timm.—*Reports of investigations*: (2) *Metallic Ores Section*, by C. S. Parsons, and others; (3) *Non-metallic Minerals Section*, by R. K. Carnochan and R. A. Rogers; (4) *Section of Hydrometallurgy and Electrochemistry*, by R. J. Traill and W. R. McClelland; (5) *Section of Ferrous Metallurgy*, by T. W. Hardy and H. H. Bleakney; (6) *Chemical Laboratory Section*, by H. C. Mabee.
Out of print. Cat. No. M32-736
- 737.—Investigations of fuels and fuel testing (Testing and Research Laboratories), 1932. 1934. 155p. 7 pls., 10 figs., 8 charts, tables.
Contents.—*General review of investigations*, by B. F. Haanel and R. E. Gilmore.—(1) *Anthracite and coke analysis survey* (see report No. 737-5).—(2) *The F. R. L. method for rating the grindability or pulverizability of coal* (see report No. 737-1).—(3) *A laboratory test on coals* (see report No. 737-2).—(4) *Changes in forms of sulphur in coal under various conditions of weathering*, by J. H. H. Nicolls and E. Swartzman.—(5) *Coal free from inorganic mineral matter for the purpose of classification*, by J. H. H. Nicolls and E. Swartzman.—(6) *Batch experiments on the hydrogenation and cracking of low-temperature coal tar* (see report No. 737-3).—(7) *Description of an apparatus for continuous hydrogenation of experiments on coal tar* (see report No. 737-3).—(8) *A study of the natural gas and naphtha products* (see report No. 737-4).—(9) *Gasoline survey for 1932*, by H. McD. Chantler.
Out of print. Cat. No. M32-737
- 737-1.—A method for rating the grindability or pulverizability of coal, developed by the Fuel Research Laboratories (F.R.L.), Department of Mines, Canada, (correlated with the "Cross" and "Hardgrove" methods), by C. E. Baltzer and H. P. Hudson. 1933. 17p. 1 pl., tables.
Advance section of report No. 737. Cat. No. M32-737/1
Out of print.
- 737-2.—A laboratory test on coals for predicting the physical properties of the resultant by-product coke, by E. Swartzman, E. J. Burrough, and R. A. Strong. 1933. 24p. 2 pls., 1 fig., 8 charts, 5 tables.
Advance section of report No. 737. Cat. No. M32-737/2
Out of print.
- 737-3.—Report of experimental work on the hydrogenation of Canadian coal, coal tar, and bitumen for the production of motor fuel. 1933. 31p. 4 pls., 2 figs.
Contents.—(1) *Batch experiments on the hydrogenation and cracking of low-temperature coal tar*, by T. E. Warren and A. R. Williams.—(2) *Description of an apparatus for continuous hydrogenation, and of experiments on coal tar, bitumen, and a suspension of powdered coal in coal tar*, by T. E. Warren and K. W. Bowles.
Advance section of report No. 737. Cat. No. M32-737/3
Out of print.

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Reports and maps—Rapports.—Continued—Suite.

- 737-4.—A study of the natural gas and naphtha products from twenty-four wells in Turner Valley, Alberta, by P. V. Rosewarne, W. P. Campbell, and R. J. Offord. 1933. 22p. 5 figs., 15 tables.
Advance section of report No. 737.
Out of print. Cat. No. M32-737/4
- 737-5.—Anthracite and coke analysis survey conducted at the Fuel Research Laboratories. 1933. 13p. 3 tables.
Advance section of report No. 737.
Out of print. Cat. No. M32-737/5
- 738.—The mineral industries of Canada, 1933, compiled by A. H. A. Robinson with the co-operation of the Staff of the Mines Branch. 1934. 116p. 34 pls., tables, 1 map.
Voir le rapport n° 739 pour l'édition française. See map No. 702.
Out of print. Cat. No. M32-738
- 739.—Les industries minérales du Canada, 1933, compilation par A. H. A. Robinson avec la coopération du personnel de la Division des mines. 1934. 123p. 34 planches, tableaux, 1 carte.
See report No. 738 for English edition.
Édition épuisée. N° de cat. M32-739F
- 740.—Nova Scotia; index map showing limestone resources, by M. F. Goudge. 1934. 12½m : 1".
Accompanying report No. 742.
Out of print. Cat. No. M32-740
- 741.—New Brunswick; index map showing limestone resources, by M. F. Goudge. 1934. 12½m : 1".
Accompanying report No. 742.
Out of print. Cat. No. M32-741
- 742.—Limestones of Canada: their occurrence and characteristics. Part II: Maritime Provinces, by M. F. Goudge. 1934. 186p. 29 pls., 12 figs., 8 tables, 2 maps.
See maps No. 740 and 741. See also reports No. 682, 733, 755, 781, and 811.
Out of print. Cat. No. M32-742
- 743.—Investigations in ore dressing and metallurgy, (Testing and Research Laboratories), January to June, 1933, by W. B. Timm and associates. 1934. 157p. 4 pls., 5 figs., tables.
Contents.—Investigation No. 483-510.
Out of print. Cat. No. M32-743
- 744.—Investigations in ore dressing and metallurgy, (Testing and Research Laboratories), July to December, 1933, by W. B. Timm and associates. 1934. 194p. Tables.
Contents.—General review of investigations, by W. B. Timm.—Investigation No. 511-550.
Out of print. Cat. No. M32-744

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Reports and maps—Rapports.—*Continued—Suite.*

- 745.—**Petroleum fuels in Canada: deliveries for consumption, calendar years 1930-1931-1932**, by J. M. Casey. 1934. 11p. 7 tables.
 Issued in co-operation with the Dominion Fuel Board.
 Out of print. *Cat. No. M32-745*
- 746.—**Gasoline survey for 1933**, by H. McD. Chantler. 1934. 21p.
 1 fig., 12 tables.
 Out of print. *Cat. No. M32-746*
- 747.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories), January to June, 1934**, by W. B. Timm and associates. 1935. 209p. 1 fig., tables.
 Contents.—*General review of investigations, by W. B. Timm.—Investigations No. 551-580.*
 Out of print. *Cat. No. M32-747*
- 748.—**Investigations in ore dressing and metallurgy, (Testing and Research Laboratories), July to December, 1934**, by W. B. Timm and associates. 1936. 202p. 2 pls., 3 figs., tables.
 Contents.—*General review of investigations, by W. B. Timm.—Investigations No. 581-608.*
 Out of print. *Cat. No. M32-748*
- 749.—**The mineral industries of Canada, 1933**, (abridged edition), compiled by A. H. A. Robinson. 1934. 39p.
 Voir le rapport n° 750 pour l'édition française. See also report No. 738.
 Out of print. *Cat. No. M32-749*
- 750.—**Les industries minérales du Canada, 1933**, (édition abrégée), compilation par A. H. A. Robinson. 1934. 40p.
 See report No. 749 for English edition. Voir aussi le rapport n° 739.
 Édition épuisée. *N° de cat. M32-750F*
- 751.—**Road gravels in Quebec**, by R. H. Picher. 1935. 214p. Tables.
 Voir le rapport n° 752 pour l'édition française.
 Out of print. *Cat. No. M32-751*
- 752.—**Graviers de voirie dans la province de Québec**, par R. H. Picher. 1935. 241p. Tableaux.
 See report No. 751 for English edition.
 Édition épuisée. *N° de cat. M32-752F*
- 753.—**Analyses of coals and other solid fuels, 1932, 1933, and 1934**, compiled by J. H. H. Nicolls and C. B. Mohr. 1935. 58 p. Tables.
 Out of print. *Cat. No. M32-753*
- 754.—**A study of clay winning and its costs in the provinces of Ontario and Quebec**, by J. F. McMahan. 1935. 90p. 19 pls., 3 figs., 4 tables.
 Out of print. *Cat. No. M32-754*
- 755.—**Limestones of Canada; their occurrence and characteristics. Part III: Quebec**, by M. F. Goudge. 1935. Reprinted, 1962. 274p.
 Illus., tables, figs., maps (2 folded in pocket).
 Voir le rapport n° 758 pour l'édition française. See maps No. 756 and 757. See also reports No. 682, 733, 742, 781, and 811.
 Out of print. *Cat. No. M32-755*

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- 756.—**Montreal district; map showing distribution of limestone and location of quarries**, by M. F. Goudge. 1935. 6000' : 1".
Accompanying report No. 755.
Out of print. Cat. No. M32-756
- 757.—**Part of southern Quebec; map showing limestone resources**, by M. F. Goudge. 1935. 8m : 1".
Accompanying report No. 755.
Out of print. Cat. No. M32-757
- 758.—**Les calcaires du Canada: gisements et caractéristiques. Partie III: Québec**, par M. F. Goudge. 1935. 294p. 36 planches, 13 figures, 4 tableaux, 2 cartes.
See report No. 755 for English edition. Voir aussi rapports n° 683 et 778.
Edition épuisée. N° de cat. M32-758F
- 759.—**Petroleum fuels in Canada, deliveries for consumption, calendar year 1933**, by J. M. Casey. 1935. 12p. 8 tables.
Issued in co-operation with the Dominion Fuel Board.
Out of print. Cat. No. M32-759
- 760.—**The Canadian mineral industry in 1934**. 1935. 119p.
Prepared in the Mineral Resources Division.
Out of print. Cat. No. M32-760
- 761.—**Wood fuel burning tests**, by E. S. Malloch and C. E. Baltzer. 1935. 6p. 1 pl., 1 fig., 1 table.
A report on tests conducted at the Fuel Research Laboratories, Dept. of Mines, in co-operation with the Forest Products Laboratories of Canada, Dept. of Interior.
Out of print. Cat. No. M32-761
- 762.—**Coal friability tests: a comparative study of methods for determining the friability of coal and suggestions for tumbler and drop shatter test methods**, by R. E. Gilmore, J. H. H. Nicolls, and G. P. Connell. 1935. 102p. 4 pls., 9 figs., 26 tables.
Appendices.—(1) Tumbler test for coal.—(2) Drop shatter test for coal.
Out of print. Cat. No. M32-762
- 763.—**Investigations in ore dressing and metallurgy (Testing and Research Laboratories), January to June, 1935**, by W. B. Timm and associates. 1936. 237p. 1 pl., tables.
Contents.—Review of investigations, by W. B. Timm.—Investigations No. 609-635 the results of which are recorded in detail.—Investigations the results of which are synopsized.
Out of print. Cat. No. M32-763
- 764.—**Gasoline survey for 1934**, by H. McD. Chantler. 1935. 22p. 1 fig., 14 tables.
Out of print. Cat. No. M32-764
- 765.—**Analyses of Canadian crude oils, naphthas, shale oil, and bitumen**, by P. V. Rosewarne, H. McD. Chantler, and A. A. Swinerton. 1936. 21p. 2 pls., 3 figs., 6 tables.
Out of print. Cat. No. M32-765

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Reports and maps—Rapports.—Continued—Suite.

- 766.—Laboratory tests on structural assemblies of brick and tile, by L. P. Collin. 1935. 33p. 2 pls., 1 fig., tables.
Contents.—Part I: The tensile and shear strength of assemblies of various types of brick with commonly used mortars.—Part II: Effect of absorption of tile on the adhesion and strength of concrete beams of different widths.
Out of print. Cat. No. M32-766
- 767.—Natural bonded moulding sands of Canada, by Correll H. Freeman. 1936. 144p. 11 pls., 7 figs., 15 tables.
Voir le rapport n° 768 pour l'édition française.
Out of print. Cat. No. M32-767
- 768.—Les sables naturels de moulage au Canada, par Correll H. Freeman. 1936. 11 planches, 7 figures, 15 tableaux.
See report No. 767 for English edition.
Édition épuisée. N° de cat. M32-768F
- 769.—Gold in Canada, 1935, by A. H. A. Robinson, 3rd edition. 1935. 127p. 7 figs., tables.
Voir le rapport n° 770 pour l'édition française.
Out of print. Cat. No. M32-769
- 770.—L'or au Canada, 1935, par A. H. A. Robinson, 3e édition. 1936. 133p. 7 figures, tableaux.
See report No. 769 for English edition.
Édition épuisée. N° de cat. M32-770F
- 771.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), July to December, 1935., by W. B. Timm and associates. 1937. 234p. Tables.
Contents.—Review of investigations, by W. B. Timm.—Investigations No. 636-663 the results of which are recorded in detail.—Investigations the results of which are synopsisized.
Out of print. Cat. No. M32-771
- 772.—Petroleum fuels in Canada, deliveries for consumption, calendar year 1934, by J. M. Casey. 1936. 20p. 1 fig., tables.
Issued in co-operation with the Dominion Fuel Board.
Out of print. Cat. No. M32-772
- 773.—The Canadian mineral industry in 1935. 100p. Graphs.
Out of print. Cat. No. M32-773
- 774.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), January to June, 1936, by W. B. Timm and associates. 1937. 186p. 3 pls., tables.
Contents.—Review of investigations, by W. B. Timm.—Investigations No. 665-683 the results of which are recorded in detail.—Investigations the results of which are synopsisized.
Out of print. Cat. No. M32-774
- 775.—Fuel briquetting, by R. A. Strong, E. Swartzman, and E. J. Burrough. 1937. 100p. 5 pls., 2 figs., 13 tables.
Out of print. Cat. No. M32-775

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- 776.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), July to December, 1936. 204p. 10 figs.
Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 684-703 the results of which are recorded in detail.—Investigations the results of which are synopsized.
 Out of print. Cat. No. M32-776
- 777.—Catalogue and index of Mines Branch reports. 16th edition. 1937. 83p.
 Out of print. Cat. No. M32-777
- 778.—Les calcaires de construction au Canada, par M. F. Goudge. 1937. 212p. 40 planches, 11 figures, tableaux.
 See report No. 733 for English edition. Voir aussi rapports n° 683 et 758.
 Édition épuisée. N° de cat. M32-778 F
- 779.—Analyses of coals and other solid fuels, 1934 to 1936, compiled by J. H. H. Nicolls and C. B. Mohr. 1937. 139p. Tables.
Appendices.—(1) Analyses of coals and peats, 1918 to 1925, hitherto unpublished.—(2) Analyses of ash from coals, cokes, peat, and woods.
 Out of print. Cat. No. M32-779
- 780.—Petroleum fuels in Canada, deliveries for consumption, calendar year 1935. by J. M. Casey. 1937. 20p. 1 fig., tables.
 Issued in co-operation with the Dominion Fuel Board.
 Out of print. Cat. No. M32-780
- 781.—Limestones of Canada; their occurrence and characteristics. Part IV: Ontario, by M. F. Goudge. 1938. 362p. 46 pls., 10 figs., tables, 2 maps.
 See maps No. 782 and 783. See also reports No. 682, 733, 742, 755, and 811.
 Out of print. Cat. No. M32-781
- 782.—Distribution of limestone in eastern and central Ontario; map, by M. F. Goudge. 1937. 4400' : 1".
 Accompanying report No. 781.
 Out of print. Cat. No. M32-782
- 783.—Distribution of limestone in southwestern Ontario; map, by M. F. Goudge. 1937. 4400' : 1".
 Accompanying report No. 781.
 Out of print. Cat. No. M32-783
- 784.—Not published.
- 785.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), January to June, 1937, by C. S. Parsons and associates. 1938. 158p. Tables.
Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 704-716 the results of which are recorded in detail.—Investigations the results of which are synopsized.
 Out of print. Cat. No. M32-785
- 786.—The Canadian mineral industry in 1936. 1937. 78p. Graphs.
 Out of print. Cat. No. M32-786

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Reports and maps—Rapports.—Continued—Suite.

- 787.—**Gasoline surveys for 1935 and 1936**, by P. V. Rosewarne and H. McD. Chantler. 1937. 40p. 2 figs., 11 tables.
Out of print. *Cat. No. M32-787*
- 788.—**Investigations in ore dressing and metallurgy** (Testing and Research Laboratories), **July to December, 1937**, by C. S. Parsons and associates, 1938. 137 p. 3 pls., tables.
Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 717-731 the results of which are recorded in detail.—Investigations the details of which are not published.—A résumé of special research completed, in progress, or under consideration.
Out of print. *Cat. No. M32-788*
- 789.—**Petroleum fuels in Canada, deliveries for consumption, calendar year 1936**, by J. M. Casey. 1938. 20p. 1 fig., 16 tables.
Issued in co-operation with the Dominion Fuel Board.
Out of print. *Cat. No. M32-789*
- 790.—**Comparative pulverized fuel boiler tests on British Columbia and Alberta coals, and on Ontario lignite**, by C. E. Baltzer and E. S. Malloch. 1938. 54p. 1 pl., 2 figs., tables.
Out of print. *Cat. No. M32-790*
- 791.—**The Canadian mineral industry in 1937**. 1938. 99p. pls., graphs, tables.
On cover: The Mineral Industry of Canada. 1937.
Out of print. *Cat. No. M32-791*
- 792.—**Investigations in ore dressing and metallurgy** (Testing and Research Laboratories), **January to June, 1938**, by C. S. Parsons and associates. 1939. 147p. 1 pl., 2 figs., tables.
Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 732-747 the results of which are recorded in detail.—Investigations the details of which are not published.—Résumé of special investigations and research completed, in progress, or under consideration.
Out of print. *Cat. No. M32-792*
- 793.—**Improving the properties of clays and shales**, by J. G. Phillips. 1938. 39p. 3 pls., 16 figs., 6 tables.
Out of print. *Cat. No. M32-793*
- 794.—**Petroleum fuels in Canada, deliveries for consumption, calendar year 1937**, by J. M. Casey. 1939. 20p. 1 fig., 16 tables.
Issued in co-operation with the Dominion Fuel Board.
Out of print. *Cat. No. M32-794*
- 795.—**The mining laws of Canada: a digest of Dominion and Provincial laws affecting mining**, compiled by A. Buisson. 3rd revised edition. 1939. 110p.
See also reports No. 627, 713, 828, and 854.
Out of print. *Cat. No. M32-795*
- 796.—**Gasoline surveys for 1937 and 1938**, by P. V. Rosewarne and H. McD. Chantler. 1939. 20p. 2 figs., 8 tables.
Out of print. *Cat. No. M32-796*

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 797.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), July to December, 1938, by C. S. Parsons and associates. 1940. 131p. 2 figs., tables.
Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 748-761 the results of which are recorded in detail.—Investigations the details of which are not published.—Résumé of special investigations and research completed, in progress, or under consideration.
 Out of print. Cat. No. M32-797
- 798.—Tests on the liquefaction of Canadian coals by hydrogenation, by T. E. Warren and K. W. Bowles. 1940. 106p. 4 pls., 3 figs., 6 tables.
 Out of print. Cat. No. M32-798
- 799.—Mineral map of the Dominion of Canada. 1939. 100m : 1".
 Out of print. Cat. No. M32-799
- 800.—Stabilized roads, by R. H. Picher. 1940. 37p. 3 pls., 1 fig.
 Voir le rapport n° 801 pour l'édition française.
 Out of print. Cat. No. M32-800
- 801.—La stabilisation des routes, par R. H. Picher. 1940. 45p. 3 planches, graphique.
 See report No. 800 for English edition.
 Édition épuisée. N° de cat. M32-801F
- 802.—Comparative tests of various fuels when burned in a domestic hot-water boiler, 1935 to 1938, by C. E. Baltzer and E. S. Malloch. 1940. 23p. 1 pl., 3 figs., tables.
 Out of print. Cat. No. M32-802
- 803.—Talc, steatite, and soapstone; pyrophyllite, by Hugh S. Spence. 1940. 146p. 8 pls., 4 figs., tables.
 Out of print. Cat. No. M32-803
- 804.—The Canadian mineral industry in 1938. 1939. 101p. Graphs.
 Out of print. Cat. No. M32-804
- 805.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), January to June, 1939, by C. S. Parsons and associates. 1940. 195p. 1 pl., 5 figs.
Contents.—Review of investigations, by C. S. Parsons.—Investigations No. 762-774 the results of which are recorded in detail.—Investigations the details of which are not published.—The activities of the chemical, mineralogical, physical testing and heat-treating laboratories, the analyses and tests made, including miscellaneous items, tests, and sampling jobs.—Résumé of special investigations and research completed, in progress, or under consideration.
 Out of print. Cat. No. M32-805
- 806.—Investigations in ore dressing and metallurgy (Testing and Research Laboratories), July to December, 1939, by C. S. Parsons and associates. 1941. 116p. 2 pls.
Contents.—Review of investigations, by C. S. Parsons.—Investigation: No. 775-787 the results of which are recorded in detail.—Investigations the details of which are not published.—Reports on the activities of the chemical, mineralogical, physical testing and heat-treating laboratories.—A résumé of special investigations and research completed, in progress, or under consideration.
 Out of print. Cat. No. M32-806

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 807.—**Industrial waters of Canada; report on investigations, 1934 to 1940**, by Harald A. Leverin. 1942. 112p. 4 figs., 6 tables.
Out of print. *Cat. No. M32-807*
- 808.—**Petroleum fuels in Canada, deliveries for consumption, calendar years 1927-1940**, by J. M. Casey. 1942. 31p. 32 tables.
Out of print. *Cat. No. M32-808*
- 809.—**Peat moss or sphagnum moss; its uses in agriculture, in industry, and in the home**, by Harald A. Leverin. 1943. 10p.
Voir le rapport n° 810 pour l'édition française.
Out of print. *Cat. No. M32-809*
- 810.—**Tourbe de mousse ou mousse de sphaigne; ses usages en agriculture, dans l'industrie et au foyer**, par Harald A. Leverin. 1943. 12p.
See report No. 809 for English edition.
Édition épuisée. *N° de cat. M32-810*
- 811.—**Limestones of Canada; their occurrence and characteristics. Part V: Western Canada**, by M. F. Goudge. 1946. 233p. 40 pls., 6 figs., 12 tables, 2 maps.
See maps No. 812 and 813. See also reports No. 682, 733, 742, 755, and 781.
Out of print. *Cat. No. M32-811*
- 812.—**Southern British Columbia and southeastern Alberta; map showing distribution of limestone and location of quarries**, by M. F. Goudge. 1945. 24m : 1".
Accompanying report No. 811.
Out of print. *Cat. No. M32-812*
- 813.—**Central and southern Manitoba; map showing distribution of limestone and location of quarries**, by M. F. Goudge. 1945. 20m : 1".
Accompanying report No. 811.
Out of print. *Cat. No. M32-813*
- 814.—**Petroleum fuels in Canada, deliveries for consumption, calendar years 1940-1944**, by J. M. Casey. 1945. 25p. Tables.
Out of print. *Cat. No. M32-814*
- 815.—**The Canadian mineral industry in 1944**. 1945. 102p.
Out of print. *Cat. No. M32-815*
- 816.—**The physical properties of Canadian building brick**, by J. G. Phillips. 1947. 102p. 4 pls., 18 tables, 3 graphs. Bilingual.
Out of print. *Cat. No. M32-816*
- 816.—**Les propriétés physiques de la brique canadienne de construction**, par J. G. Phillips. 1947. 102p. 4 planches, 18 tableaux, 3 graphiques. Bilingue.
Édition épuisée. *N° de cat. M32-816*
- 817.—**Peat moss deposits in Canada**, by Harald A. Leverin. 1946. 102p. 9 pls., 10 figs.
Voir le rapport n° 821 pour l'édition française.
Out of print. *Cat. No. M32-817*

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 818.—Catalogue and index of Bureau of Mines reports. 17th edition. 1946. 66p.
Out of print. *Cat. No. M32-818*
- 819.—Industrial waters of Canada; report of investigations, 1934 to 1943, by Harald A. Leverin. Revised edition, 1947. 109p. 4 figs., 6 tables.
See also report No. 807.
Out of print. *Cat. No. M32-819*
- 820.—The Canadian mineral industry in 1945. 1946. 103p. Tables.
Out of print. *Cat. No. M32-820*
- 821.—Les dépôts de tourbe de mousse au Canada, par Harald A. Leverin. 1947. 115p. 9 planches, 10 figures, tableaux.
See report No. 817 for English edition.
Édition épuisée. *N° de cat. M32-821F*
- 822.—The physical properties of Canadian structural tile, (made from clay or shale), by J. G. Phillips and G. A. Kirkendale. 1947. 12p. 4 pls., 2 graphs, 4 tables.
Voir le rapport n° 823 pour l'édition française.
Out of print. *Cat. No. M32-822*
- 823.—Les propriétés physiques de la tuile canadienne de construction (faite d'argile ou de schiste), par J. G. Phillips et G. A. Kirkendale. 1947. 12p. 7 planches, 2 graphiques, 4 tableaux.
See report No. 822 for English edition.
Édition épuisée. *N° de cat. M32-823F*
- 824.—The Canadian mineral industry in 1946. 1948. 137p. Tables.
Out of print. *Cat. No. M32-824*
- 825.—Summary of investigations on New Brunswick oil shales, conducted by the Mines and Geology Branch, under Agreement (1942), with the Province of New Brunswick. 1948. 24p. 5 pls., 5 maps in pocket.
Out of print. *Cat. No. M32-825*
- 826.—Drilling and sampling of bituminous sands of northern Alberta. Results of investigations 1942-1947. 1949.
- Vol. 1.—Results of investigations. 39p. 3 pls., 2 figs., tables.
Out of print. *Cat. No. M32-826/1*
- Vol. 2.—Detailed drilling and sampling records. 670p.
Out of print. *Cat. No. M32-826/2*
- Vol. 3.—Cross-sections and plans of areas drilled. 79p.
Out of print. *Cat. No. M32-826/3*
- 827.—The Canadian mineral industry in 1947. 1949. 134p. Tables.
Out of print. *Cat. No. M32-827*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 828.—**The mining laws of Canada, a digest of Dominion and Provincial laws and regulations affecting mining, by A. Buisson.** 4th edition. 1950. 133p.
See also reports No. 627, 713, 795, 854.
Out of print. *Cat. No. M32-828*
- 829.—**The Canadian mineral industry in 1948.** 1950. 126p. Tables.
Out of print. *Cat. No. M32-829*
- 830.—**The Canadian mineral industry in 1949.** 1951. 128p. Tables.
Out of print. *Cat. No. M32-830*
- 831.—**Analyses of Canadian coals and peat fuels, with appendix containing supplementary coal ash chemical analyses, by J. H. H. Nicolls.** 1952. 409p. Tables.
Out of print. *Cat. No. M32-831*
- 832.—**Analyses of Canadian crude oils, by H. McD. Chantler, P. B. Seely, and F. E. Goodspeed.** 1951. 90p. Tables.
Out of print. *Cat. No. M32-832*
- 833.—**Industrial water resources of Canada.** Water survey report series.
No. 1.—**Scope, procedure, and interpretation of survey studies, by J. F. J. Thomas.** 1953. 69p. 5 figs., 11 tables.
Out of print. *Cat. No. M32-833*
- 834.—**Industrial water resources of Canada.** Water survey report series.
No. 2.—**Ottawa River drainage basin, 1947-48, by J. F. J. Thomas.** 1952. 144p. 5 graphs, 12 tables, 2 maps (not numbered).
Out of print. *Cat. No. M32-834*
- 835.—**The Canadian mineral industry in 1950.** 1953. 148p. Tables.
Voir le rapport n° 840 pour l'édition française.
Out of print. *Cat. No. M32-835*
- 836.—**Analysis directory of Canadian coals, by E. Swartzman.** 2nd edition (1953). 1954. 204p. Charts, tables, 6 maps (not numbered).
See also reports No. 831 and 850.
Out of print. *Cat. No. M32-836*
- 837.—**Industrial water resources of Canada.** Water survey report series.
No. 3.—**Upper St. Lawrence river-Central Great Lakes drainage basin in Canada, by J. F. J. Thomas.** 1954. 212p. 9 figs., 7 tables, 2 maps (not numbered).
Out of print. *Cat. No. M32-837*
- 838.—**Industrial water resources of Canada.** Water survey report series.
No. 4.—**Columbia river drainage basin in Canada, 1949-50, by J. F. J. Thomas.** 1953. 80p. 5 figs., 6 tables, 2 maps (not numbered).
Out of print. *Cat. No. M32-838*

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 839.—Industrial water resources of Canada. Water survey report series.
 No. 5.—Skeena river drainage basin, Vancouver Island, and coastal areas of British Columbia, 1949-51, by J. F. J. Thomas. 1953. 53p. 4 figs., 5 tables, 1 map (not numbered).
 Out of print. *Cat. No. M32-839*
- 840.—L'industrie minière du Canada en 1950. 1953. 181p. Tableaux.
 See report No. 835 for English edition.
 Édition épuisée. *N° de cat. M32-840F*
- 841.—The Canadian mineral industry in 1951. 1953. 170p. Tables.
 Voir le rapport n° 843 pour l'édition française.
 Out of print. *Cat. No. M32-841*
- 842.—Industrial water resources of Canada. Water survey report series.
 No. 6.—Fraser river drainage basin, 1950-51, by J. F. J. Thomas. 1954. 91p. 4 figs., 5 tables, 2 maps (not numbered).
 Out of print. *Cat. No. M32-842*
- 843.—L'industrie minière du Canada en 1951. 1954. 203p. Tableaux.
 See report No. 841 for English edition.
 Édition épuisée. *N° de cat. M32-843F*
- 844.—The Canadian mineral industry in 1952. 1954. 198p. Tables.
 Voir le rapport n° 845 pour l'édition française.
 Out of print. *Cat. No. M32-844*
- 845.—L'industrie minière du Canada en 1952. 1955. 210p. Tableaux.
 See report No. 844 for English edition.
 Édition épuisée. *N° de cat. M32-845F*
- 846.—The granite industry of Canada, by F. G. Carr. 1955. 191p. 18 colored plates, 42 figs., tables, 7 maps.
 Voir le rapport n° 852 pour l'édition française.
 Out of print. *Cat. No. M32-846*
- 847.—Cobalt in Canada, by R. J. Jones. 1954. 96p. 31 figs., 19 tables.
 Out of print. *Cat. No. M32-847*
- 848.—The spectrum of steel; a table for the selection of homologous spectral lines, by John Convey and J. K. Hurwitz. 1954. 55p.
 Out of print. *Cat. No. M32-848*
- 849.—Industrial water resources of Canada. Water survey report series.
 No. 7.—Saskatchewan river drainage basin, 1951-52, by J. F. J. Thomas. 1956. 154p. 6 figs., 5 tables, 2 maps.
 Out of print. *Cat. No. M32-849*
- 850.—Analysis directory of Canadian coals, second edition (1953); Supplement No. 1 (1955), by E. Swartzman and T. E. Tibbets. 1956. 81p. Tables.
 See also report No. 836.
 Out of print. *Cat. No. M32-850*

MINES BRANCH PUBLICATIONS

Reports and maps—Rapports.—Continued—Suite.

- 851.—**The Canadian mineral industry, 1953.** 1955. 232p. Tables.
Voir le rapport n° 853 pour l'édition française. Cat. No. M32-851
Out of print.
- 852.—**L'industrie du granit au Canada** par G. E. Carr. 1957. 200p.
Ill., tableaux, cartes.
See report No. 846 for English edition. N° de cat. M32-852F
Édition épuisée.
- 853.—**L'industrie minière du Canada en 1953.** 1956. 277p. Tableaux.
See report No. 851 for English edition. N° de cat. M32-853F
Édition épuisée.
- 854.—**Digest of the mining laws of Canada**, 5th edition, by H. A. Graves and G. R. L. Potter. 1957. 148p.
It is most important to bear in mind that this publication is a digest only, and is intended merely as a general guide to the mining laws and regulations in effect at the time the text was prepared. In case of doubt or difficulty, reference should be made to the text of the various acts and regulations, as amended from time to time.
Out of print. Cat. No. M32-854
- 855.—**Industrial minerals of Newfoundland**, by G. F. Carr. 1958.
158p. Illus., tables, maps. Cat. No. M32-855
Out of print.
- 856.—**Industrial water resources of Canada.** Water survey report series. 29cm.
No. 8.—**Mackenzie river and Yukon river drainage basins in Canada, 1952-53**, by J. F. J. Thomas. 1957. 78p. Tables, graphs, maps (1 folded in pocket). Cat. No. M32-856
Out of print.
- 857.—**Canadian mineral industry, 1954.** 1956. 254p. Tables.
This volume contains reviews on the metals and minerals produced in Canada in 1954. Production statistics for 1954 are preliminary, those for 1953 being final.
Out of print. Cat. No. M32-857
- 858.—**Industrial water resources of Canada.** Water survey report series. 29cm.
No. 9.—**Churchill River and Mississippi River drainage basins in Canada, 1952-54**, by J. F. J. Thomas. 1958. 53p. Tables, graphs, maps (1 folded in pocket). Cat. No. M32-858
Out of print.
- 859.—**L'industrie minière du Canada en 1954.** 1957. 337p. Tableaux.
See report No. 857 for English edition. N° de cat. M32-859F
Édition épuisée.
- 860.—**Minerals, Canada and the world.** 1957. Maps, charts, graphs. 23cm.
This publication is a graphic presentation of the Canadian mineral industry in relation to the world mineral industry. It deals with 35 metals, non-metals and mineral fuels, and employs nearly 120 coloured world maps, Canada maps, bar charts, and line graphs to illustrate mineral production and trade.
Out of print. Cat. No. M32-860

PUBLICATIONS DE LA DIRECTION DES MINES

Reports and maps—Rapports.—Continued—Suite.

- 860S.—Statistical supplement to Minerals, Canada and the world. 114p. Tables. 23cm. Processed.

This booklet contains in tabular form the basic statistical data from which the maps, graphs and charts of "Minerals—Canada and the world" were prepared.

Out of print.

Cat. No. M32-860S

- 861.—Industrial water resources of Canada. Water survey report series. 29cm.

No. 10.—Nelson river drainage basin in Canada, 1953-56, by J. F. J. Thomas. 1959. 147p. Tables, graphs, maps (1 folded in pocket).

Out of print.

Cat. No. M32-861

- 862.—Canadian mineral industry, final edition 1955. 1959. 278p.

This volume contains reviews of the metals and minerals produced in Canada on a commercial scale during 1955, as well as a few others, which, while not produced in Canada, are nevertheless important to industry.

Out of print.

Cat. No. M32-862

- 863.—Industrie minière du Canada en 1955. 1959. 387p. Tableaux.

Le présent volume se compose d'exposés sommaires sur les métaux et les minéraux que le Canada a produits sur un pied commercial en 1955, ainsi que sur certains autres qui ne sont pas de production canadienne, mais qui n'en ont pas moins leur importance dans l'industrie. A moins d'indication contraire, les données statistiques sont définitives.

Edition épuisée.

N^o de cat. M32-863F

- 864.—Industrial water resources of Canada. Water survey report series. 29cm.

No. 11.—Atlantic Provinces, and Saint John River drainage basins in Canada, 1954-56, by J. F. J. Thomas. 1960. 158p. Tables, graphs, maps (1 folded in pocket).

Out of print.

Cat. No. M32-864

- 865.—Industrial water resources of Canada. Water survey report series. 29cm.

No. 12.—Water quality at some Canadian military establishments, 1956-57, by J. F. J. Thomas. 1959. 125p. Tables.

Out of print.

Cat. No. M32-865

Note: No. 865 ends the Report Series. Further publications of this nature are called Monographs and commence with No. 866.

MINES BRANCH PUBLICATIONS

Appendix — Appendice

BULLETINS

Bulletin Series, also issued and listed within the "Report and Map Series" of the Mines Branch. Nos. 1-33. 1909-1921.

Bulletins, série de rapports publiés entre 1909 et 1921 dans la série générale de la Direction des mines. Les Bulletins traduits en français sont indiqués dans le tableau qui suit.

NOTE

The following table is a cross-reference to the numbers used for the Report and Map Series where the complete bibliographical information is given.

Le tableau suivant donne la référence au numéro où on trouvera la description détaillée de la publication dans la série de rapport de la Direction des mines.

Bulletin No.—N°	Report No. Rapport n°	Title — Titre
1	30	Investigation of the peat bogs . . . 1908-09.
2	67	Iron ore deposits of the Bristol Mine.
2F	314	Gisements de minerais de fer de la mine Bristol.
3	68	Recent advances in the construction of electric furnaces.
3F	263	Progrès récents dans la construction des fours électriques.
4	71	Investigation of the peat bogs . . . 1909-10.
5	82	Magnetic concentration experiments.
6	111	Diamond drilling at Point Mamainse.
7	110	Western portion of Torbrook iron ore deposits.
8	151	Investigation of the peat bogs . . . 1910-11.
8F	180	Recherches sur les tourbières . . . 1910-11.
9	266	Investigation of the peat bogs . . . 1911-12.
9F	267	Recherches sur les tourbières . . . 1911-12.
10	336	Notes on clay deposits near McMurray.
11	351	Investigation of the peat bogs . . . 1913-14.
11F	352	Recherches sur les tourbières . . . 1913-1914.
12	385	Investigation of a reported discovery of phosphate at Banff.
12F	386	Recherches sur un gisement de phosphate signalé dans l'Alberta.

PUBLICATIONS DE LA DIRECTION DES MINES

Bulletin Series—Bulletins—Continued—Suite.

Bulletin No.—N°	Report No. Rapport n°	Title—Titre
13	406	Description of the laboratories of the Mines Branch.
14	430	Coal-fields and coal industry of Eastern Canada.
15	432	The mining of thin-coal seams.
16	435	Mineral springs of Canada; part 1.
17	447	Value of peat fuel for the generation of steam. Not published.
19	466	Test of some Canadian sandstones.
20	472	Mineral springs of Canada; part 2.
21	476	Occurrence and testing of foundry moulding sands.
22	479	Analysis of Canadian fuels, part I.
23	480	Analysis of Canadian fuels, part II.
24	481	Analysis of Canadian fuels, part III.
25	482	Analysis of Canadian fuels, part IV.
26	483	Analysis of Canadian fuels, part V.
27	496	Results of forty-one steaming tests.
28	502	The economic use of coal for steam-raising and house-heating.
29	507	Potash recovery at cement plants.
30	519	Smelter-treatment rates.
31	522	Report on some sources of helium in the British Empire.
32	530	Report on road materials along the St. Lawrence River.
33	565	Gas producer trials with Alberta coals.

MINES BRANCH PUBLICATIONS

MEMORANDUM SERIES

Mines Branch Memorandum Series. No. 1-137, 1921-1958.

Note.—The following reports and articles have been issued in mimeograph or processed form. Few of those are preliminary reports of investigations made by the Mines Branch which were printed in their final form in the Reports Series. In each case the reference to the Reports Series is given. The Memorandum Series was commenced in 1921 to make reports of general interest available to the public. Since 1952 it has been restricted mainly to surveys of mineral resources.

Mémoires de la Direction des mines. N° 1-137, 1921-1958.

Note.—Quelques mémoires de la Direction des mines ont été publiés en français. Dans la liste complète qui suit, les mémoires en anglais ou en français figurent sous leur numéro de série respectif et la référence à l'édition correspondante dans l'autre langue est donnée dans chaque cas.

- 1.—Alkali deposits of Western Canada, by L. H. Cole. January, 1921. 5p. Tables.
See Reports Nos. 586 and 588.
Out of print. Cat. No. M33-1
- 2.—Oil shales of Manitoba and Saskatchewan (preliminary statement), by S. C. Ells. November, 1921. 1p.
See Reports Nos. 586 and 588.
Out of print. Cat. No. M33-2
- 3.—Cretaceous shales of Manitoba and Saskatchewan, their economic value as a possible source of crude petroleum, by S. C. Ells. December, 1921. 10p. 2 maps.
See Reports Nos. 586 and 588.
Out of print. Cat. No. M33-3
- 4.—A new source of soapstone in Ontario (preliminary statement), by H. S. Spence. April, 1922. 4p.
See Reports Nos. 605 and 607.
Out of print. Cat. No. M33-4
- 5.—Pottery clays in Canada, by J. Keele. May, 1922. 8p. (with an amending sheet, dated April 21, 1934.)
Out of print. Cat. No. M33-5
- 6.—Investigation of a British market for Canadian non-metallic minerals, by Hugh S. Spence. December, 1922. 8p.
Out of print. Cat. No. M33-6
- 7.—Directory of Belgian buyers of metals and minerals. 1922. 2p.
Out of print. Cat. No. M33-7
- 8.—Directory of British buyers of metals and minerals. 1922. 10p.
Out of print. Cat. No. M33-8

PUBLICATIONS DE LA DIRECTION DES MINES

Memorandum Series—Mémoires.—Continued—Suite.

- 9.—Investigation of the economic value of a fossil resin from British Columbia, by R. T. Elworthy and R. K. Carnochan. November, 1922. 7p. (Prepared for the Annual Western Meeting of the Canadian Institute of Mining and Metallurgy.)
See Reports Nos. 605 and 607.
Out of print. Cat. No. M33-9
- 10.—Recovery of petroleum by shafts and galleries at Pechelbronn, Alsace, France, and at Wietze, Hanover, Germany, by Charles Camsell and Arthur Buisson. June, 1924. 11p.
Out of print. Cat. No. M33-10
- 11.—Selective flotation as applied to Canadian ores, by C. S. Parsons. March, 1924. 9p. Tables.
See memorandum No. 29 (revised edition).
Out of print. Cat. No. M33-11
- 12.—Notes on the work and organization of the Mines Branch, by John McLeish. November, 1922. 10p.
Out of print. Cat. No. M33-12
- 13.—Deschenes refinery of the British Nickel Corporation. February, 1922. 3p. 1pl.
Out of print. Cat. No. M33-13
- 14.—List of graphite consumers in Canada. 2p.
Out of print. Cat. No. M33-14
- 15.—The selective flotation of the lower grade nickeliferous pyrrhotite ores of Ontario, by W. B. Timm. April, 1924. 11p. Tables.
Prepared in the Division of Ore Dressing and Metallurgy.
See Report No. 617.
Out of print. Cat. No. M33-15
- 16.—Experimental tests on the beneficiation of Canadian iron ores, by W. B. Timm. April, 1924. 12p. Tables.
Prepared in the Division of Ore Dressing and Metallurgy.
See Report No. 617.
Out of print. Cat. No. M33-16
- 17.—The Lake George antimony ores and their concentration, by C. S. Parsons. September, 1924. 6p. Tables.
See Report No. 643.
Out of print. Cat. No. M33-17
- 18.—Gasoline survey for 1924, preliminary report, by P. V. Rosewarne and J. McD. Chantler. January, 1925. 8p. Chart.
See Report No. 644.
Out of print. Cat. No. M33-18
- 19.—Methods of sampling coal deliveries: Mines Branch instructions, by R. E. Gilmore and R. A. Strong. February, 1925. 6p. Illus.
Prepared in the Fuel Testing Division.
Out of print. Cat. No. M33-19

MINES BRANCH PUBLICATIONS

Memorandum Series—Mémoires.—Continued—Suite.

- 20.—The goldfields of Northwestern Quebec, by W. B. Timm and A. H. A. Robinson. February, 1925. 8p.
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- 29.—Selective flotation as applied to Canadian ores, by C. S. Parsons. Revised edition. March, 1927. 15p.
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Préparé par le Service des minéraux industriels.
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Out of print. *Cat. No. M33-131*

PUBLICATIONS DE LA DIRECTION DES MINES

Memorandum Series—Mémoires.—Continued—Suite.

- 132.—Interim report on hardness of major Canadian water supplies, by J. F. J. Thomas. 1956. 18p. Tables.
Prepared in the Division of Industrial Minerals.
Out of print. Cat. No. M33-132
- 133.—Power and population: Canada's present electricity requirements and the long-term outlook, by C. E. Baltzer and John Convey. 1956. 25p. Illus., maps.
Prepared in the Division of Fuels.
Voir le mémoire n^o 133F pour l'édition française.
Out of print. Cat. No. M33-133
- 133.—Energie et population; besoins présents du Canada en matière d'électricité, perspectives d'avenir, par C. E. Baltzer et John Convey. Ottawa, 1957. 29p. Ill., cartes. Polycopié.
Préparé par le Service des combustibles.
See Memorandum No. 133 for English edition.
Édition épuisée. N^o de cat. M33-133F
- 134.—Canadian Silica Industry, by R. K. Collings. Ottawa, 1956. 22p. Tables. Processed.
Prepared in the Division of Industrial Minerals.
Out of print. Cat. No. M33-134
- 135.—Columbium (niobium) and tantalum, by R. J. Jones. Ottawa, 1957. 56p. Illus., tables, maps.
Prepared in the Mineral Resources Division.
Out of print. Cat. No. M33-135
- 136.—Fifty years of fuel testing and research, by A. A. Swinnerton. Ottawa, 1957. 15p. Illus. Processed.
Prepared in the Fuels Division.
Out of print. Cat. No. M33-136
- 137.—Zinc in Canada with comments on world conditions, by R. E. Neelands and D. B. Fraser. Ottawa, 1958. 87p. Figs., tables, maps.
Prepared in Mineral Resources Division.
Out of print. Cat. No. M33-137

Note.—No. 137 ends the Memorandum Series. Further publications of this nature are issued by the Mineral Resources Division as Mineral Surveys.

MINES BRANCH PUBLICATIONS

TECHNICAL PAPERS

Mines Branch Technical Papers. No. 1-17, 1953-1957.

This series was begun in 1953 and is restricted to reports on the methods and results of research carried out in Mines Branch laboratories. Prior to 1953, many of such reports were published in the Memorandum Series. They are reproduced by offset processes.

- 1.—**The determination of thorium in ores by the column method**, by R. G. Guest. 1953. 24p. Figs., tables.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M34-1*
- 2.—**The constitution of bone china; Part I: High temperature phase equilibrium studies in the system tricalcium phosphate-alumina-silica**, by P. D. S. St. Pierre. 1953. 107p. Illus., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M34-2*
- 3.—**The colorimetric determination of copper with 2,2-diquinoyl in minerals and ores**, by R. J. Guest. 1953. 81p. Tables, graphs.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M34-3*
- 4.—**The determination of aluminum by the fluorophotometric method**, by J. B. Zimmerman. 1953. 12p. Table, graphs.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M34-4*
- 5.—**Effect of germanium on the transformation of white to grey tin at comparatively low temperature**, by R. R. Rogers and J. F. Fydell. 1953. 11p. Illus., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M34-5*
- 6.—**The determination of uranium in concentrates by the fluorophotometric method**, by J. B. Zimmerman, F. T. Rabbitts, and E. D. Kornelsen. 1953. 9p. Illus., tables.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M34-6*
- 7.—**The constitution of bone china; Part II: Reactions in bone china bodies**, by P. D. S. St. Pierre. 1954. 20p. Figs., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M34-7*
- 8.—**The determination of uranium in uranium concentrates using ethyl acetate**, by R. J. Guest and J. B. Zimmerman. 1954. 19p. Tables, graphs.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M34-8*

PUBLICATIONS DE LA DIRECTION DES MINES

Technical Papers.—*Continued.*

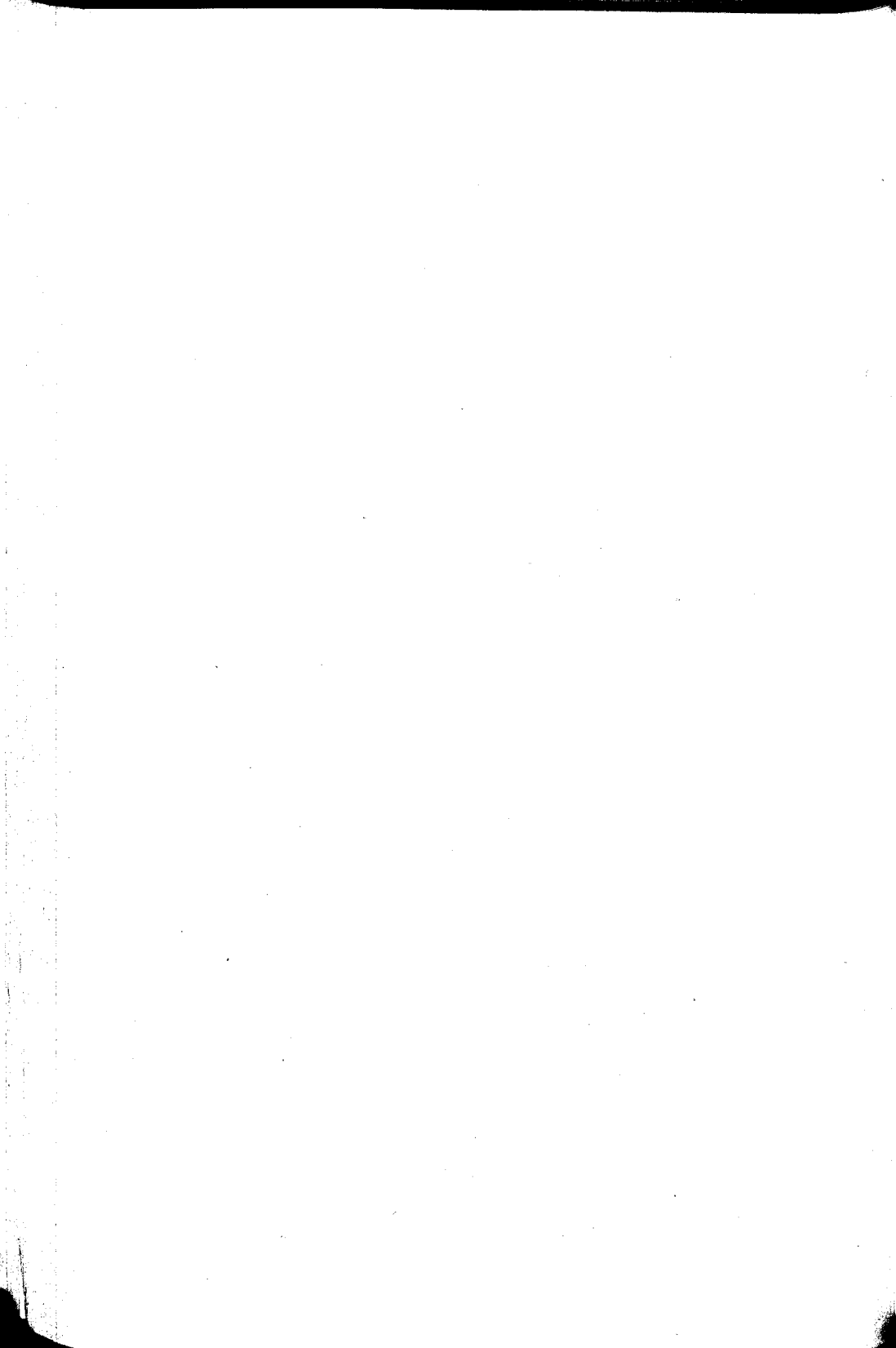
- 9.—**Electrode potentials and the dissolution of gold**, by G. Thomas. 1954. 14p. Figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M34-9*
- 10.—**Electronic concentration of low grade ores with the Lapointe Picker**, by A. H. Bettens and C. M. Lapointe. 1955. 13p. Illus., tables.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M34-10*
- 11.—**Refining antimony by electrode position and by distillation**, by R. R. Rogers and R. A. Campbell. 1955. 14p. Illus., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M34-11*
- 12.—**The constitution of bone china; Part III: High temperature phase equilibrium studies in the system tricalcium phosphate-anorthite-silica**, by P. D. S. St. Pierre. 1955. 19p. Figs., tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M34-12*
- 13.—**Development of the Port Radium leaching process for recovery of uranium**. 1955. Reprint 1956. 22p. Tables, charts. 25cm. Processed.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M34-13*
- 14.—**Measurement of thorium in ores by the thorium emanation method**, by J. B. Zimmerman and J. A. F. Bouvier. 1955. 21p. Illus., tables, graphs.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M34-14*
- 15.—**Studies on the precipitation of sodium polyuranates from solutions of sodium uranyl tricarbonate**, by H. J. Herbst. 1956. 29p. Tables, charts.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M34-15*
- 16.—**Master sieves at the Mines Branch for standardization of the sieves of the mining industry**, by J. Brannen and L. E. Djinghezuan. 1956. 36p. Tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M34-16*
- 17.—**Cyclone atomizer for briquet binder**, by J. Visman. 1957. 14p. Illus., tables, charts. 25cm.
Prepared in the Division of Fuels.
Out of print. *Cat. No. M34-17*

Note.—No. 17 ends the Technical Paper Series. Further publications of this nature are issued by the Mines Branch as Research Reports.

MINES BRANCH PUBLICATIONS

**LIST OF OPERATORS
OF
MINES, MILLS AND METALLURGICAL WORKS**

List No.	Title	Price	Cat. No.
1	Metallurgical works in Canada		
1-1	Part 1: Primary iron and steel. Annual . . .	o.p.	<i>M36-(year)/1-1</i>
1-2	Part 2: Non-ferrous and precious metals. Annual	o.p.	<i>M36-(year)/1-2</i>
2	Metal and industrial mineral mines in Canada. Annual	o.p.	<i>M36-(year)/2</i>
3	Milling plants in Canada		
3-1	Part 1: Metallic ores. Annual	o.p.	<i>M36-(year)/3-1</i>
	Processing plants in <u>Canada</u>		
3-2	Industrial minerals. Annual	o.p.	<i>M36-(year)/3-2</i>
4	Coal mines in Canada. Annual	o.p.	<i>M36-(year)/4</i>
5	Petroleum refineries in Canada. Annual	o.p.	<i>M36-(year)/5</i>
6	Ceramic plants in Canada. Annual	o.p.	<i>M36-(year)/6</i>
7	Natural gas processing plants in Canada. Annual	o.p.	<i>M36-(year)/7</i>



MINES BRANCH PUBLICATIONS

INFORMATION CIRCULARS

Information Circulars. No. MR1.-MR26, 1954-1957.

Prepared by the Mineral Resources Division.

- MR1.—Survey of developments in the titanium industry during 1953,**
by W. Keith Buck. Ottawa, February, 1954.
Out of print. *Cat. No. M38-2/1*
- MR2.—Survey of the iron ore industry in Canada during 1953,**
by W. Keith Buck. Ottawa, March, 1954.
Out of print. *Cat. No. M38-2/2*
- MR3.—Survey of the natural gas industry in Canada during 1953,**
by R. B. Toombs. Ottawa, March, 1954.
Out of print. *Cat. No. M38-2/3*
- MR4.—Survey of the petroleum industry in Canada during 1953,**
by R. B. Toombs. Ottawa, April, 1954.
Out of print. *Cat. No. M38-2/4*
- MR5.—Canadian iron ore industry and its relationship to the St.**
Lawrence Seaway, by W. Keith Buck. Ottawa, April, 1954.
Out of print. *Cat. No. M38-2/5*
- MR6.—Not published.**
- MR7.—Zirconium,** by R. J. Jones. Ottawa, July, 1954.
Out of print. *Cat. No. M38-2/7*
- MR8.—Columbium and tantalum in Canada,** by R. J. Jones. Ottawa,
September, 1954.
Out of print. *Cat. No. M38-2/8*
- MR9.—Cerium,** by W. J. Beard. Ottawa, February, 1955.
Out of print. *Cat. No. M38-2/9*
- MR10.—Beryllium in Canada,** by W. J. Beard. Ottawa, April, 1955.
Out of print. *Cat. No. M38-2/10*
- MR11.—Indium,** by R. E. Neelands. Ottawa, April, 1955.
Out of print. *Cat. No. M38-2/11*
- MR12.—Germanium,** by W. J. Beard. Ottawa, April, 1955.
Out of print. *Cat. No. M38-2/12*
- MR13.—Survey of the iron ore industry in Canada during 1954,**
by W. Keith Buck. Ottawa, April, 1955. 38p. Figs.
Out of print. *Cat. No. M38-2/13*
- MR14.—Survey of developments in the titanium industry during 1954,**
by W. Keith Buck. Ottawa, April, 1955. 26p. Tables.
Out of print. *Cat. No. M38-2/14*
- MR15.—Survey of the petroleum industry in Canada during 1954,**
by R. B. Toombs. Ottawa, May, 1955. 31p. Tables, charts.
Out of print. *Cat. No. M38-2/15*

PUBLICATIONS DE LA DIRECTION DES MINES

Information Circulars.—*Continued.*

- MR16.—Survey of the natural gas industry in Canada during 1954, by R. B. Toombs. Ottawa, June, 1955.
Out of print. *Cat. No. M38-2/16*
- MR17.—Survey of the iron ore industry in Canada during 1955, by W. Keith Buck. Ottawa, March, 1956. 48p. Figs.
Out of print. *Cat. No. M38-2/17*
- MR18.—Survey of developments in the titanium industry during 1955, by W. Keith Buck. Ottawa, April, 1956. 24p. Tables.
Out of print. *Cat. No. M38-2/18*
- MR19.—Survey of the petroleum industry in Canada during 1955, by R. B. Toombs. Ottawa, June, 1956.
Out of print. *Cat. No. M38-2/19*
- MR20.—Survey of the natural gas industry in Canada during 1955, by R. B. Toombs. Ottawa, June, 1956. 33p. Tables.
Out of print. *Cat. No. M38-2/20*
- MR21.—Rare or less common metals in Canada, by T. H. Janes. Ottawa, October, 1956. 16p.
Out of print. *Cat. No. M38-2/21*
- MR22.—Survey of the iron ore industry in Canada during 1956, by T. H. Janes. Ottawa, May, 1957. 83p. Figs.
Out of print. *Cat. No. M38-2/22*
- MR23.—Survey of the petroleum industry in Canada during 1956, by R. B. Toombs and R. A. Simpson. Ottawa, June, 1957. 80p. Tables.
Out of print. *Cat. No. M38-2/23*
- MR24.—Survey of the natural gas industry in Canada during 1956, by R. B. Toombs and R. A. Simpson. Ottawa, May, 1957. 49p. Tables, charts.
Out of print. *Cat. No. M38-2/24*
- MR25.—Survey of the gold mining industry in Canada during 1956, by T. W. Verity. Ottawa, May, 1957. 55p. Map.
Free. *Cat. No. M38-2/25*
- MR26.—Survey of developments in the titanium industry during 1956, by T. H. Janes. Ottawa, August, 1957. 40p. Tables.
Free. *Cat. No. M38-2/26*

Note.—This series is continued under the name of *Mineral Information Bulletins* by the *Mineral Resources Division*.

MINES BRANCH PUBLICATIONS

INFORMATION CIRCULARS

Information Circulars. No. IM1-3, 1955-1956.

Prepared by the Industrial Minerals Division.

IM1.—Lithium, by V. A. Haw. Ottawa, June, 1955. 10p. Tables.
Out of print. *Cat. No. M38-4/1*

IM2.—Sampling and examination of clay and shale deposits, by J. G. Phillips. Ottawa, December, 1955.
Out of print. *Cat. No. M38-4/2*

IM3.—Clays and shales of Eastern Canada, by J. G. Phillips. Ottawa, October, 1956. 13p.
Out of print. *Cat. No. M38-4/3*

Note.—IM3 ends the Industrial Minerals Division Information Circular series. Further publications of this nature are issued by the Mines Branch, under a new series, commencing with IC102.

PUBLICATIONS DE LA DIRECTION DES MINES

ACTS AND REGULATIONS

Administered by the Department of
Mines and Technical Surveys

	<i>Cat. No.</i>	<i>Price</i>
Canada Lands Surveys:		
Act, R.S.C., 1952, c. 26. 26p.	YX54-26	.35
—amended, S.C., 1956, c. 22. 1p.....	YX3-223/c.22	.25
Examination Regulations, P.C. 1955-1956		
SOR/61-259 (July 12, 1961) 6p.....	•	
Tariff of Fees, SOR/54-102 (April 14, 1954),		
1p.....	•	
 Department of Mines and Technical Surveys:		
Act, R.S.C., 1952, c. 73, 4p.....	YX54-73	.25
 Emergency Gold Mining Assistance:		
Act, R.S.C., 1952, c. 95. 10p.....	YX54-95	.25
—amended, R.S.C., 1952, c. 318, 2p.....	YX54-318	.25
—amended, S.C., 1952-53, c. 32, 2p.....	YX3-217/c.32	.25
—amended, S.C., 1953-54, c. 26, 1p.....	YX3-221/c.26	.25
—amended, S.C., 1955, c. 19. 2p.....	YX3-222/c.19	.25
—amended, S.C., 1956, c. 20. 1p.....	YX3-223/c.20	.25
—amended, S.C., 1958, c. 28. 1p.....	YX3-241/c.28	.25
—amended, S.C., 1960, c. 28, 1p.....	YX3-243/c.28	.35
Act and regulations. Office consolidation.		
1956. 39p.....	YX1-4056	.35
Regulations, P.C. 1960, SOR/60-401 (Sep-		
tember 14, 1960). 26p.....	SP2-560/401	.35
 Explosives:		
Act, R.S.C., 1952, c. 102. 11p.....	YX54-102	.25
—amended, S.C., 1953-54, c. 14. 4p.....	YX3-221/c.14	.25
Regulations, P.C. 1956-349, SOR/56-88. 68p.	SP2-556/88	.80
—amended, P.C. 1956-1552, SOR/56-396. 1p.	SP2-556/396	.25
—amended, P.C. 1957-335, SOR/57-84:		
Ammonium nitrate and fuel oil order. 1p.	SP2-557/84	.25

*Note.—Contained in the regular issue of the Canada Gazette, Part II, cited in each case. Price for single copies, 50c.

MINES BRANCH PUBLICATIONS

LOIS ET RÈGLEMENTS

**Appliqués par le ministère des Mines
et des Relevés techniques**

	<i>N de cat.</i>	<i>Prix</i>
Arpentage des terres du Canada:		
Loi, S.R.C., 1952, c. 26. 27p.....	YX54-26F	.35
—modifiée, S.C., 1956, c. 22. 1p.....	YX3-223/c.22F	.25
Règlements:		
Examens sur l'arpentage, C.P. 1955-1556, DORS/61-259 (12 juillet 1961). 6p.....	•	
Tarif des droits, DORS/54-102 (14 avril 1954). 1p.....	•	
Exploitation des mines d'or (aide):		
Loi, S.R.C., 1952, c. 95. 10p.....	YX54-95F	.25
—modifiée, S.R.C., 1952, c. 318. 2p.....	YX54-318F	.25
—modifiée, S.C., 1952-53, c. 32. 2p.....	YX3-217/c.32F	.25
—modifiée, S.C., 1953-54, c. 26. 1p.....	YX3-221/c.26F	.25
—modifiée, S.C., 1955, c. 19. 2p.....	YX3-222/c.19F	.25
—modifiée, S.C., 1956, c. 20. 1p.....	YX3-223/c.20F	.25
—modifié, S.C., 1958, c. 28. 1p.....	YX3-241/c.28	.25
—modifiée, S.C. 1960, c. 28. 1p.....	YX3-243/c.28	.35
Règlements, C.P. 1960-1162, DORS/60-401 (14 septembre 1961). 27p.....	SP2-560/401F	.35
Explosifs:		
Loi, S.R.C., 1952, c. 102. 11p.....	YX54-102F	.25
—modifiée, S.C., 1953-54, c. 14. 4p.....	YX3-221/c.14F	.25
Règlements, C.P. 1956-349, DORS/56-88. 73p.....	SP2-556/88F	.80
—modifiés, C.P. 1956-1552, DORS/56-396. 1p.....	SP2-556/396F	.25
—Modifiés, C.P. 1957-335, DORS/57-84. 1p.	SP2-557/84F	.25
Ministère des Mines et des Relevés techniques:		
Loi, S.R.C., 1952, c. 73. 4p.....	YX54-73F	.25

*Note.—Voir la livraison régulière de la Gazette du Canada, partie 2, à la date citée. Prix: 50c. l'exemplaire.

PUBLICATIONS DE LA DIRECTION DES MINES

ANNUAL REPORTS

Reports of the Department of Mines for the fiscal years ending March 31, during the period 1921 to 1936. Included are statements from the Geological Survey, the National Museum of Canada (formerly Victoria Memorial Museum), the Mines Branch, the Explosives Division, the Editorial Division and the Accounting Division.

Note.—The Department of Mines from 1907 to 1920 did not prepare an annual report distinct from the annual summary reports issued by the Geological Survey of Canada and the Mines Branch. These annual summary reports of the Mines Branch are listed under the series of reports, see pages 21 to 86.

Year	Pages	Pub. No.	Price	Cat. No.	Year	Pages	Pub. No.	Price	Cat. No.
1921	47p.	1903	o.p.	MI-1921	1929	58p.	2217	o.p.	MI-1929
1922	48p.	1968	o.p.	MI-1922	1930	61p.	2269	o.p.	MI-1930
1923	58p.	2005	o.p.	MI-1923	1931	61p.	2297	o.p.	MI-1931
1924	71p.	2047	o.p.	MI-1924	1932	50p.	2315	o.p.	MI-1932
1925	75p.	2076	o.p.	MI-1925	1933	43p.	2338	o.p.	MI-1933
1926	77p.	2116	o.p.	MI-1926	1934	44p.	2360	o.p.	MI-1934
1927	59p.	2142	o.p.	MI-1927	1935	48p.	2402	o.p.	MI-1935
1928	65p.	2182	o.p.	MI-1928	1936	54p.	2423	o.p.	MI-1936

Reports of the Department of Mines and Resources for the fiscal years ended March 31, during the period 1937 to 1949. Included are statements from the Mines and Geology Branch, the Lands, Parks and Forests Branch, the Surveys and Engineering Branch, the Indian Affairs Branch, the Immigration Branch, and reports of Soldier Settlement of Canada for 1937 to 1944.

Year	Pages	Price	Cat. No.	Year	Pages	Price	Cat. No.
1937	333p.	o.p.	MI-2/1937	1944	231p.	o.p.	MI-2/1944
1938	330p.	o.p.	MI-2/1938	1945	220p.	o.p.	MI-2/1945
1939	351p.	o.p.	MI-2/1939	1946	258p.	o.p.	MI-2/1946
1940	258p.	o.p.	MI-2/1940	1947	270p.	o.p.	MI-2/1947
1941	244p.	o.p.	MI-2/1941	1948	270p.	o.p.	MI-2/1948
1942	192p.	o.p.	MI-2/1942	1949	256p.	o.p.	MI-2/1949
1943	207p.	o.p.	MI-2/1943				

Reports of the Department of Mines and Technical Surveys for the fiscal years ended March 31, for the period beginning in 1950. Included are statements from the Explosives Division, the Surveys and Mapping Branch, the Geological Survey of Canada, the Mines Branch, the Dominion Observatories, and the Geographical Branch.

Year	Pages	Price	Cat. No.	Year	Pages	Price	Cat. No.
1950	112p.	o.p.	MI-3/1950	1954	107p.	o.p.	MI-3/1954
1951	98p.	o.p.	MI-3/1951	1955	118p.	o.p.	MI-3/1955
1952	108p.	o.p.	MI-3/1952	1956	113p.	o.p.	MI-3/1956
1953	98p.	o.p.	MI-3/1953	1957	131p.	o.p.	MI-3/1957

MINES BRANCH PUBLICATIONS

Annual Reports—Continued.

Reports of the Department of Mines and Technical Surveys for the calendar years for the period beginning in 1957. Included are statements from the Administration Branch (Explosives Division and Mineral Resources Division), the Surveys and Mapping Branch, the Geological Survey of Canada, the Mines Branch, the Dominion Observatories and the Geographical Branch.

Year	Pages	Price	Cat. No.	Year	Pages	Price	Cat. No.
1957	142p.	o.p.	M1-4/1957	1962	82p.	o.p.	M1-4/1962
1958	143p.	o.p.	M1-4/1958	1963	58p.	o.p.	M1-4/1963
1959	159p.	o.p.	M1-4/1959	1964	54p.	o.p.	M1-4/1964
1960	61p.	o.p.	M1-4/1960	1965		o.p.	M1-4/1965
1961	75p.	o.p.	M1-4/1961				

Summary of activities of the Department of Mines and Technical Surveys for the calendar years for the period beginning in 1950.

Year	Pages	Price	Cat. No.	Year	Pages	Price	Cat. No.
1950 (1st)	37p.	o.p.	M2-1950	1954 (5th)	42p.	o.p.	M2-1954
1951 (2nd)	50p.	o.p.	M2-1951	1955 (6th)	51p.	o.p.	M2-1955
1952 (3rd)	90p.	o.p.	M2-1952	1956 (7th)	63p.	o.p.	M2-1956
1953 (4th)	65p.	o.p.	M2-1953				

Note.—The publications covering the summary of activities for the calendar year 1956 ends this series. The annual reports should now be consulted for such information.

PUBLICATIONS DE LA DIRECTION DES MINES

RAPPORTS ANNUELS

Rapports du ministère des Mines pour l'année financière se terminant le 31 mars, pour la période 1921-1936 comprenant les rapports de la Commission géologique, du Musée national, de la Division des mines, de la Division des explosifs, de la Division des publications et de la Division de la comptabilité.

Note.—Le Ministère des Mines depuis sa création en 1907 jusqu'en 1920 ne prépara pas de rapports annuels distincts des rapports sommaires de ses deux Divisions principales: la Commission géologique et la Division des mines. Les rapports sommaires de la Division des mines font partie de sa série de rapports. (Voir pages 21-86.)

Année	Pages	Pub. n ^o	Prix	N ^o de cat.	Année	Pages	Pub. n ^o	Prix	N ^o de cat.
1921	49p.	1954	épuisé	M1-1/1921F	1929	62p.	2231	épuisé	M1-1/1929F
1922	50p.	1973	épuisé	M1-1/1922F	1930	65p.	2276	épuisé	M1-1/1930F
1923	62p.	2011	épuisé	M1-1/1923F	1931	39p.	2307	épuisé	M1-1/1931F
1924	75p.	2054	épuisé	M1-1/1924F	1932	31p.	2334	épuisé	M1-1/1932F
1925	79p.	2090	épuisé	M1-1/1925F	1933	27p.	2342	épuisé	M1-1/1933F
1926	83p.	2123	épuisé	M1-1/1926F	1934	30p.	2361	épuisé	M1-1/1934F
1927	63p.	2148	épuisé	M1-1/1927F	1935	41p.	2408	épuisé	M1-1/1935F
1928	67p.	2203	épuisé	M1-1/1928F	1936	44p.	2431	épuisé	M1-1/1936F

Rapports du ministère des Mines et des Ressources pour l'année financière terminée le 31 mars, pour la période 1937-1949 comprenant les rapports de la Division des mines et de la géologie, de la Division des terres, parcs et forêts, de la Division des arpentages et du génie, de la Division des affaires indiennes, de la Division de l'immigration, et le rapport sur l'établissement des soldats au Canada pour les années 1937-1944.

Année	Pages	Prix	N ^o de cat.	Année	Pages	Prix	N ^o de cat.
1937	352p.	épuisé	M1-2/1937F	1944	259p.	épuisé	M1-2/1944F
1938	346p.	épuisé	M1-2/1938F	1945	234p.	épuisé	M1-2/1945F
1939	372p.	épuisé	M1-2/1939F	1946	280p.	épuisé	M1-2/1946F
1940	268p.	épuisé	M1-2/1940F	1947	292p.	épuisé	M1-2/1947F
1941	260p.	épuisé	M1-2/1941F	1948	316p.	épuisé	M1-2/1948F
1942	200p.	épuisé	M1-2/1942F	1949	284p.	épuisé	M1-2/1949F
1943	224p.	épuisé	M1-2/1943F				

Rapports du ministère des Mines et des Relevés techniques pour l'année financière terminée le 31 mars, pour la période 1950-1957.

Sommaire.—Introduction.—Division des mines.—Commission géologique du Canada.—Division des levés et de la cartographie.—Observatoires fédéraux.—Division de la géographie.—Publications.

Année	Pages	Prix	N ^o de cat.	Année	Pages	Prix	N ^o de cat.
1950	127p.	épuisé	M1-3/1950F	1954	115p.	épuisé	M1-3/1954F
1951	110p.	épuisé	M1-3/1951F	1955	120p.	épuisé	M1-3/1955F
1952	129p.	épuisé	M1-3/1952F	1956	113p.	épuisé	M1-3/1956F
1953	112p.	épuisé	M1-3/1953F	1957	136p.	épuisé	M1-3/1957F

MINES BRANCH PUBLICATIONS

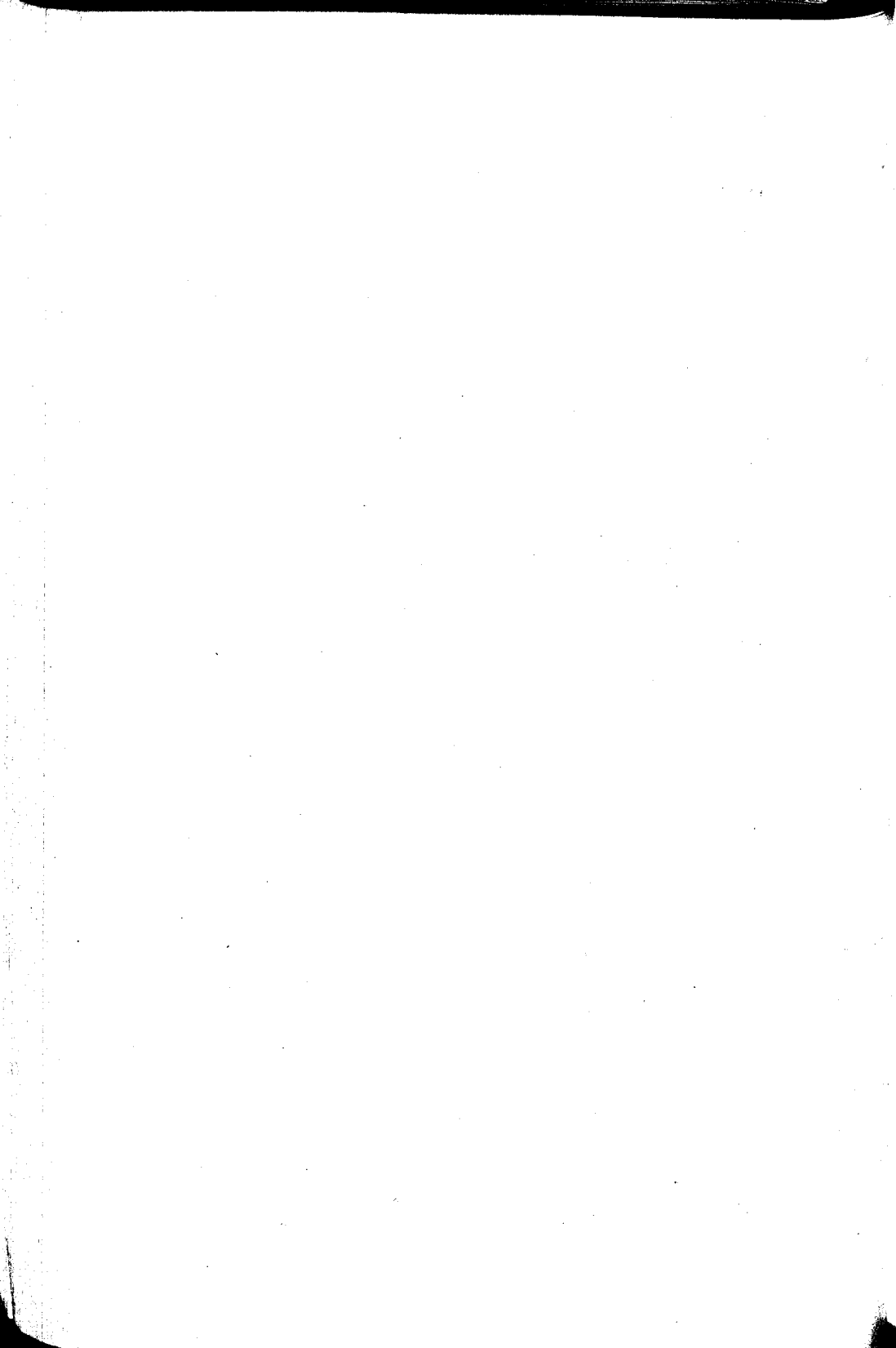
Rapports annuels.—*Suite.*

Rapports du ministère des Mines et des Relevés techniques pour les années civiles à partir de 1957 comprenant les rapports de l'administration (y compris la Division des explosifs et la Division des ressources minérales), de la Direction des levés et de la cartographie, de la Commission géologique du Canada, de la Direction des mines, de la Direction des observatoires fédéraux, ainsi que de la Direction de la géographie.

Année	Pages	Prix	N ^o de cat.	Année	Pages	Prix	N ^o de cat.
1957	147p.	épuisé	M1-4/1957F	1962	89p.	épuisé	M1-4/1962F
1958	155p.	épuisé	M1-4/1958F	1963	63p.	épuisé	M1-4/1963F
1959	173p.	épuisé	M1-4/1959F	1964	58p.	épuisé	M1-4/1964F
1960	69p.	épuisé	M1-4/1960F	1965		épuisé	M1-4/1965F
1961	81p.	épuisé	M1-4/1961F				

Exposé sommaire des travaux du ministère des Mines et des Relevés techniques pour les années civiles à partir de 1950.

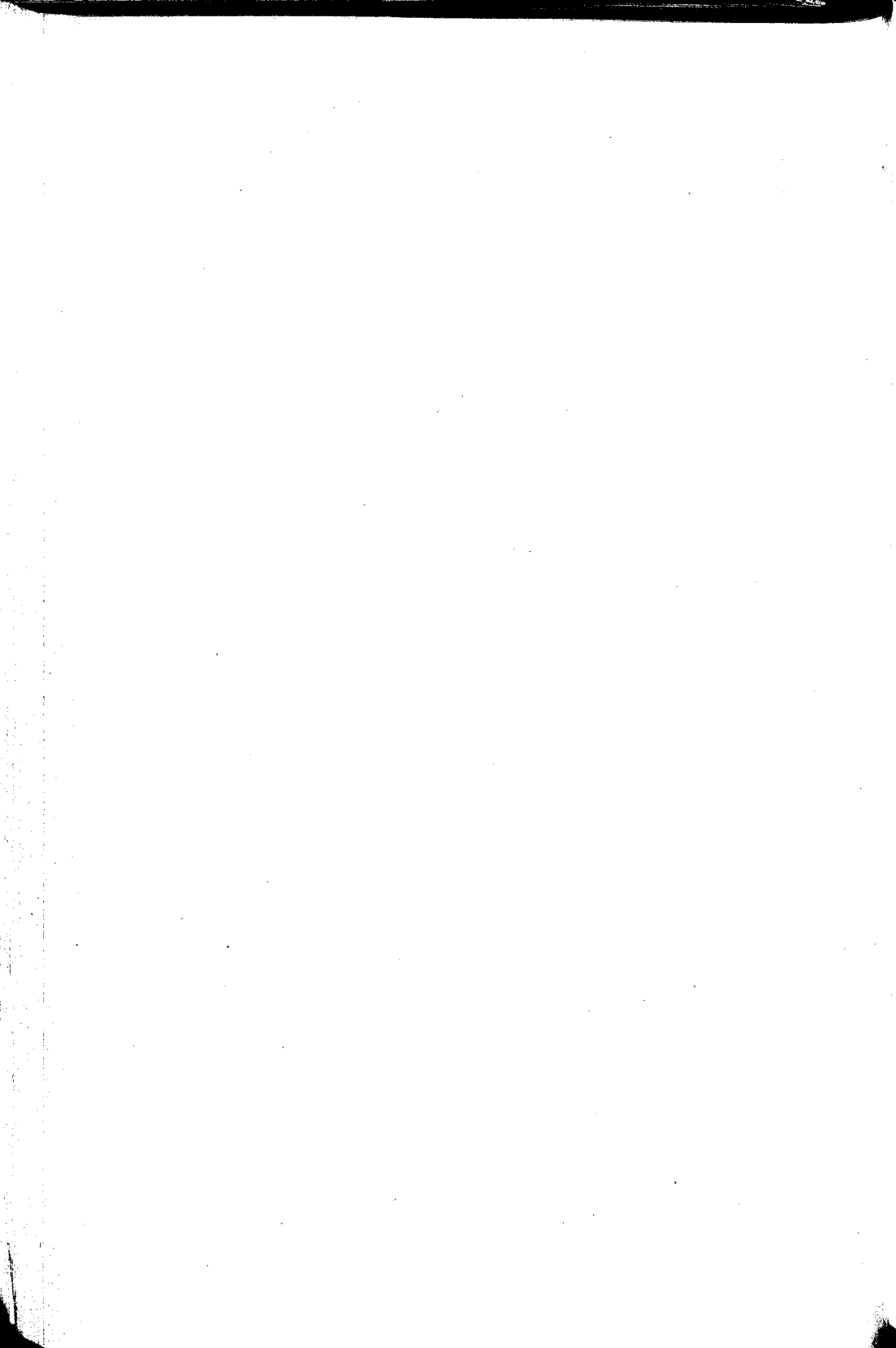
Année	Pages	Prix	N ^o de cat.	Année	Pages	Prix	N ^o de cat.
1950 (1er)	42p.	épuisé	M2-1950F	1954 (5e)	52p.	épuisé	M2-1954F
1951 (2e)	53p.	épuisé	M2-1951F	1955 (6e)	60p.	épuisé	M2-1955F
1952 (3e)	73p.	épuisé	M2-1952F	1956 (7e)	76p.	épuisé	M2-1956F
1953 (4e)	81p.	épuisé	M2-1953F				



Part III

Mines Branch Publications 1958

Monographs	157
Information Circulars	159
Research Reports	175
Technical Bulletins	201
Reprint Series—Série de réimpressions	217



MINES BRANCH PUBLICATIONS

MINES BRANCH PUBLICATIONS

The first five categories listed in Part I have been reduced to four—Monographs, Research Reports, Technical Bulletins and Information Circulars. The following paragraphs are intended to provide some information as to the scope of each.

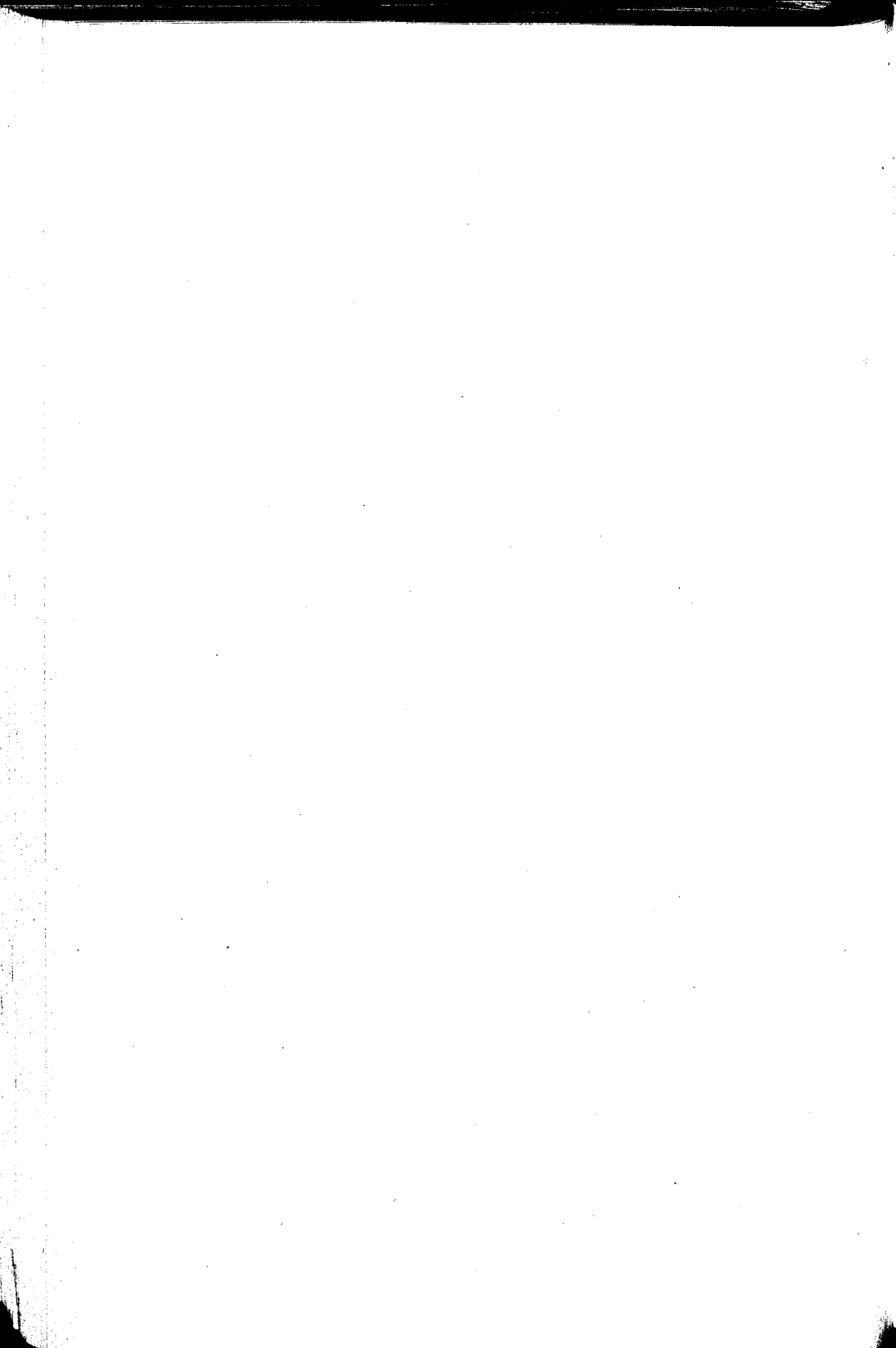
Monographs: Reports giving a thorough treatment of a particular subject or class of subjects and likely to be valuable as reference texts.

Research Reports: Original contributions to science and technology, based primarily on laboratory research conducted in the Mines Branch laboratories or under Mines Branch auspices. This class does not include literature surveys. Reprints of research papers published in journals are included in this group.

Technical Bulletins: Reports in this category describe investigations at the Mines Branch on specific materials by applications of established or lesser-known procedures, where the work is considered to be of wide interest to the industry or the technical public.

Information Circulars: Contributions of general interest to industry and the public at large. This category may include literature and statistical surveys of a periodic nature, as well as short information bulletins.

The Monograph replaces the Report series which ended with No. 865, the Research Report replaces the Technical Paper series ending with No. 17, the Information Circular replaces the Memorandum series ending with No. 137 and the old Information Circular series ending with No. 26.



MINES BRANCH PUBLICATIONS

MONOGRAPHS—MONOGRAPHIES

Mines Branch Reports or Monographs. No. 866- , 1959-

Note.—Series commences with No. 866. Reports giving a thorough treatment of a particular subject or class of subjects and likely to be valuable as reference tests.

- 866.—Manual of analytical methods for the uranium concentrating plant, by J. C. Ingles. 1959. 3 parts. Illus. 26cm. Looseleaf with binder.

Prepared in the Radioactivity Division.

Contents.—Part 1: General considerations.—Part 2: Methods—Uranium and thorium.—Part 3: Supplementary methods.

This manual is an attempt to fill the need and to provide, in addition to tested analytical methods, the auxiliary information which is so valuable in operating the laboratory efficiently. The Radioactivity Division is continually improving and simplifying these methods as well as developing new ones, and from time to time, new sheets will be issued to be inserted in alphabetical order in the specified Part.

Out of print.

Cat. No. M32-866

- 867.—Experimental coal-burning gas turbine exhaust-heated cycle, by J. W. Stachiewicz and D. L. Mordell. 1960. 176p. Illus., tables, graphs. Paper bound.

This report describes the initial research and development of a completely new power plant carried out in Canada. It describes only what might be regarded as a first phase. The work was primarily a research effort designed to reveal and elucidate the problems that will be encountered in connection with the design and operation of a prototype power plant, which could be regarded as a second phase.

Out of print.

Cat. No. M32-867

- Proceedings, conference on coal-burning gas turbines. 249p.

Out of print.

Cat. No. M32-867/1

- 868.—Analysis directory of Canadian coals, second edition (1953); Supplement No. 2 (1960), by T. E. Tibbetts and W. J. Montgomery. 1962. 56p. Tables, folded maps. 25cm. Paper cover.

Prepared in the Fuels and Mining Practice Division.

The object of this Directory is to provide general information on the characteristics of coals produced in various parts of Canada.

See Memorandum Series No. 100 and Reports Nos. 836 and 850.

Out of print.

Cat. No. M32-868

- 869.—Industrial water resources of Canada. Water survey report series. 29cm.

No. 13.—Lower St. Lawrence River drainage basin in Canada, 1955-60, by J. F. J. Thomas. 1962. 334p. Tables, graphs, maps (1 folded in pocket).

Out of print.

Cat. No. M32-869

- 870.—Industrial water resources of Canada. Water survey report series. 29cm.

No. 14.—Upper Great Lakes drainage basin in Canada, 1957-63, by J. F. J. Thomas and R. M. Gale. 1965. 137p. Tables, figs., maps (1 folded in pocket).

Prepared in the Mineral Processing Division.

Out of print.

Cat. No. M32-870

PUBLICATIONS DE LA DIRECTION DES MINES

Monographs.—Continued.

872.—Industrial water resources of Canada. Water survey report series. 29cm.

No. 12.—Water quality at some Canadian military establishments, 1959-1962: supplement, by J. F. J. Thomas. 1963. 52p. Tables.

Prepared in the Mineral Processing Division.

Out of print.

Cat. No. M32-872

873.—Bentonite in Canada, by J. S. Ross. 1964. 61p. Illus., tables, figs.

This report describes in detail many aspects of bentonite in Canada and includes sections on definitions, properties, identification, uses, specifications, history and production, trade, consumption, occurrence, reserves, exploration, mining, milling, laboratory investigation, technology, marketing and outlook.

Out of print.

Cat. No. M32-873

874.—Rock mechanics principles, by D. F. Coates. 1965. Various paging. Tables, figs. 28cm. Paper bound.

Prepared in the Mining Research Laboratories, Fuels and Mining Practice Division.

The purpose of this monograph is to provide some guidance for the young engineer or scientist entering the field of rock mechanics. The emphasis is on the application of engineering mechanics to problems arising from the needs either to prevent or to cause rock failure with particular reference to those problems encountered in mining.

35.

Cat. No. M32-874

MINES BRANCH PUBLICATIONS

INFORMATION CIRCULARS
CIRCULAIRES D'INFORMATION

Information Circulars. No. IC102- , 1958-

Circulaires d'information. N° IC102- , 1958-

- IC102.—**Forgeability of steels: a critical survey of the literature**, by W. A. Morgan and G. P. Contractor. Ottawa, January, 1958. 66p. Illus.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-3/102*
- IC103.—**Technical advances in milling and process metallurgy in Canada during 1957**, by L. E. Djigheuzian. Ottawa, March, 1958. 7p. Illus.
Prepared in the Mineral Dressing and Process Metallurgy Division.
(Reprinted from Canadian Mining Journal, February, 1958).
Out of print. *Cat. No. M38-3/103*
- IC104.—**Peat moss in Canada**, by A. A. Swinnerton. Ottawa, February, 1958. 31p. Illus., tables.
Prepared in the Fuels Division.
Out of print. *Cat. No. M38-3/104*
- IC104.—**Tourbe de mousse au Canada**, par A. A. Swinnerton, Division des combustibles, février 1958. Ottawa, 1961. 33p. Ill., tableaux.
Le présent rapport décrit la formation, les propriétés et les usages de la mousse de tourbière, les méthodes de préparation du produit dans l'industrie de la mousse de tourbière, et comprend également un résumé statistique de la production et du commerce de la tourbe de mousse.
Édition épuisée. *N° de cat. M38-3/104F*
- IC105.—**Story of the early days of the extraction of helium gas from natural gas in Canada, 1915-1920**, by John Satterly, University of Toronto. April, 1959. 42p. Illus.
Prepared in the Mines Branch.
Out of print. *Cat. No. M38-3/105*
- IC106.—**Review and evaluation of methods of particle size analysis**, by R. F. Pilgrim. November 3, 1958. 83p. Tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Contents.—Part 1: Definition of terms and classification of sizing methods.—Part 2: Sieve analysis.
Out of print. *Cat. No. M38-3/106*
- IC107.—**Copper in domestic water systems (a review)**, by John Ungar. September 1, 1959. 16p.
Prepared in the Mineral Processing Division.
Out of print. *Cat. No. M38-3/107*
- IC108.—**Extensive progress being made in high temperature technology**, by Norman F. H. Bright. Ottawa, October, 1958. 16p.
Prepared in the Mineral Dressing and Process Metallurgy Division.
(Reprinted from the December 25, 1958 issue of the Northern Miner).
Out of print. *Cat. No. M38-3/108*

PUBLICATIONS DE LA DIRECTION DES MINES

Information Circulars.—Continued.

Circulaires d'information.—Suite.

- IC109.—Direct reduction of iron ore, by R. R. Rogers. Ottawa, October, 1958. 11 p.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M38-3/109*
- IC110.—Not available.
- IC111.—The corrosion resistance of wrought iron and open-hearth steel. A literature survey, by I. I. Tingley and R. R. Rogers. Ottawa, December, 1958.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M38-3/111*
- IC112.—Not available.
- IC113.—Radiation laboratory of the Mines Branch, 1947-1959, by G. G. Eichholz. Ottawa, April 1, 1959. 51p. Illus.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M38-3/113*
- IC114.—Canadian gypsum industry, by R. K. Collings. Ottawa, October 30, 1959. 41p. Tables, map, chart.
Prepared in the Mineral Processing Division.
This report describes the occurrences, technology and uses of gypsum and briefly outlines the present-day position of gypsum in the Canadian mineral industry.
Out of print. *Cat. No. M38-3/114*
- IC115.—Propagating and non-propagating fatigue cracks in metals, by R. C. A. Thurston. Ottawa, January 20, 1960. 44p. Graphs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-3/115*
- IC116.—Physical metallurgy and uses of gold; bibliography for the ten-year period 1950 to 1959, by L. Badone, Canadian Metal Mining Association and N. S. Spence. Ottawa, January, 1960. 86p.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-3/116*
- IC117.—Directory and bibliography of high temperature condensed states research in Canada and elsewhere, 1959, by Norman F. H. Bright. Ottawa, March, 1960. 99p. Tables.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/117*
- IC118.—Directory and bibliography of high temperature condensed state research in Canada and elsewhere, January to March, 1960, by Norman F. H. Bright. Ottawa, May 30, 1960. 55p.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/118*
- IC119.—Directory and bibliography of high temperature condensed state research in Canada and elsewhere, April to June, 1960, by Norman F. H. Bright. Ottawa, August 25, 1960. 61p.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/119*

MINES BRANCH PUBLICATIONS

Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC120.—**Selection of steels for the avoidance of brittle failure**, by K. Winterton. July, 1960. 44p. Figs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-3/120*
- IC121.—**Present status of underground storage of natural gas in southern Ontario and Quebec**, by R. P. Charbonnier. Ottawa, May, 1960. 24p. Tables.
Prepared in the Fuels and Mining Practice Division.
Out of print. *Cat. No. M38-3/121*
- IC122.—**Biography of high temperature condensed states research in Canada and elsewhere, July to September, 1960**, by Norman F. H. Bright. Ottawa, November, 1960. 69p.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/122*
- IC123.—**Bibliography of high temperature condensed states research in Canada and elsewhere, October to December, 1960**, by Norman F. H. Bright. January, 1961. 74p.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/123*
- IC124.—**Brief history of welding technology**, by K. Winterton. Ottawa, March, 1961. 81p. Illus.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-3/124*
- IC125.—**Notes on the safe handling of uranium alloys in industry**, by G. G. Eichholz. Ottawa, January, 1961. 17p. Tables.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/125*
- IC126.—**Barium minerals industry in Canada**, by J. S. Ross. Ottawa, September, 1960. 60p. Tables, figs.
Prepared in the Mineral Processing Division.
Out of print. *Cat. No. M38-3/126*
- IC127.—**Fluorspar**, by C. M. Bartley. Ottawa, April, 1961. 55p. Tables.
Prepared in the Mineral Processing Division
This publication provides data on the properties and uses of fluorspar, on the world production and consumption-trends, and on Canadian deposits and occurrences.
Out of print. *Cat. No. M38-3/127*
- IC128.—**Bibliography of high temperature condensed states research in Canada and elsewhere, January to March, 1961**, by Norman F. H. Bright. Ottawa, June, 1961. 86p.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/128*

PUBLICATIONS DE LA DIRECTION DES MINES

Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

IC129.—Physical metallurgy and uses of gold: the properties of gold and alloys containing gold, by L. Badone of the Canadian Metal Mining Association, and N. S. Spence of the Physical Metallurgy Division. October, 1961. 192p. Tables, graphs.

Prepared in the Physical Metallurgy Division.

Out of print.

Cat. No. M38-3/129

IC130.—Bibliography of high temperature condensed states research in Canada and elsewhere, April to June, 1961, by Norman F. H. Bright. Ottawa, July, 1961. 97p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/130

IC131.—List of certified electrical apparatus, certified fire-resistant conveyor belting and certified diesel engines for coal mine use, by G. K. Brown. Certification list No. 1 to June 30, 1961, August, 1961. 16p. Tables.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-3/131

IC132.—Directory and bibliography of high temperature condensed states research in Canada and elsewhere, July to September, 1961, by Norman F. H. Bright. November, 1961. 41p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/132

IC133.—Analyses of coal and coke during 1960, by W. J. Montgomery and J. G. Jorgensen. December, 1961. 20p. Tables.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-3/133

IC134.—Analytical determination of uranium in iron and steel alloys, by J. C. Ingles, J. B. Zimmerman and J. L. Horwood. December, 1961. 104p. Illus., tables, graphs.

Prepared in the Extraction Metallurgy Division and Mineral Sciences Division.

Out of print.

Cat. No. M38-3/134

IC135.—Bibliography of high temperature condensed states research in Canada, October to December, 1961, by Norman F. H. Bright. February, 1962. 7p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/135

IC136.—Bibliography and directory of high temperature condensed states research in Canada and elsewhere, January to March, 1962, by Norman F. H. Bright. May, 1962. 12p. Tables.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/136

MINES BRANCH PUBLICATIONS

Information Circulars.—Continued.

Circulaires d'information.—Suite.

- IC137.—**Development of the Canadian lightweight aggregate industry**, by H. S. Wilson. Reprinted from the 1961 issue of the Journal of the Canadian Ceramic Society (with amendments). June, 1962. 22p. Graphs.
Prepared in the Mineral Processing Division. Cat. No. M38-3/137
Out of print.
- IC138.—**Analysis of coal and coke during 1961**, by W. J. Montgomery and G. C. Behnke. July, 1962. 20p. Tables.
Prepared in the Fuels and Mining Practice Division. Cat. No. M38-3/138
Out of print.
- IC139.—**Recollections of the development of the Athabasca oil sands**, by S. C. Ells. July, 1962. 114p. Illus., figs.
Prepared in the Fuels and Mining Practice Division. Cat. No. M38-3/139
Out of print.
- IC140.—**Bibliography of high temperature condensed states research in Canada, April-June, 1962**, by Norman F. H. Bright. July, 1962. 5p.
Prepared in the Mineral Sciences Division. Cat. No. M38-3/140
Out of print.
- IC141.—**Backfill methods in Canadian mines**, by M. A. Twidale. August, 1962. 21p. Illus., tables, figs.
Prepared in the Fuels and Mining Practice Division. Cat. No. M38-3/141
Out of print.
- IC142.—**Bibliography of high temperature condensed states research in Canada, July-September, 1962**, by Norman F. H. Bright. October, 1962. 5p.
Prepared in the Mineral Sciences Division. Cat. No. M38-3/142
Out of print.
- IC143.—**Alphabetical index to V. I. Mikheev's "X-ray determination of minerals"**, by E. H. Nickel. December 6, 1962. 25p.
Prepared in the Mineral Sciences Division. Cat. No. M38-3/143
Out of print.
- IC144.—**Stockage souterrain du gaz naturel dans le sud de l'Ontario et du Québec**, par R. P. Charbonnier. Janvier 1963. 30p. Tableaux.
Préparé dans la Division des combustibles et du génie minier. N° de cat. M38-3/144F
50c.
- IC145.—**Cyanide recovery from gold-barren waste solutions: a literature review**, by A. J. Gilmore and W. A. Gow. April, 1963. 10p. Tables, figs.
Prepared in the Extraction Metallurgy Division. Cat. No. M38-3/145
Out of print.

PUBLICATIONS DE LA DIRECTION DES MINES

Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC146.—**Bibliography of high temperature condensed states research in Canada, October-December, 1962**, by Norman F. H. Bright, January, 1963. 6p.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/146*
- IC147.—**Analyses of coal and coke during 1962**, by W. J. Montgomery and G. C. Behnke. April, 1963. 20p. Tables.
Out of print. *Cat. No. M38-3/147*
- IC148.—**Bibliography and directory of high temperature condensed states research in Canada and elsewhere, January-March, 1963**, by Norman F. H. Bright. April, 1963. 11p. Tables.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/148*
- IC149.—**Mines Branch contributions to the United Nations conference on the application of science and technology for the benefit of the less developed areas**, Geneva, February 4-20, 1963. Ottawa, May, 1963. 47p. Illus., figs.
Prepared by the Mines Branch staff.
Out of print. *Cat. No. M38-3/149*
- IC150.—**Physics and Radiotracer Subdivision of the Mines Branch, 1959-1963**, by G. G. Eichholz. May, 1963. 48p. Illus. 28cm. Paper cover.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/150*
- IC151.—**Mines Branch scientific and technical papers published by the staff in 1962**. Ottawa, 1963. 50p.
Out of print. *Cat. No. M38-3/151*
- IC152.—**Iron ore pelletizing**, a literature survey, by G. N. Banks, R. A. Campbell and G. E. Viens. August, 1963. 23p.
Prepared by the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-3/152*
- IC153.—**Survey of niobium alloys and their strengthening mechanisms**, by D. C. Briggs. July, 1963. 26p. Tables.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-3/153*
- IC154.—**Bibliography of high temperature condensed states research in Canada, April-September, 1963**, by Norman F. H. Bright. October, 1963. 8p.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/154*
- IC155.—**Bibliography of high temperature condensed states research, published in Canada, October-December, 1963**, by Norman F. H. Bright. January, 1964. 34p.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-3/155*

MINES BRANCH PUBLICATIONS

Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC156.—**Report on the Cambridge International Summer School for quantitative methods in reflected-light microscopy**, by E. H. Nickel. December, 1963. 49p.
Prepared in the Mineral Sciences Division. *Cat. No. M38-3/156*
Out of print.
- IC157.—**Salt and the Canadian salt industry**, by R. K. Collings. April, 1964. 34p. Tables, graphs, maps.
Prepared in the Mineral Processing Division. *Cat. No. M38-3/157*
Out of print.
- IC158.—**Polarographic and amperometric methods applied to metallurgical analysis**, by A. Hitchen. April, 1964. 11p. Tables.
Prepared in the Extraction Metallurgy Division. *Cat. No. M38-3/158*
Out of print.
- IC159.—**Bibliography of high temperature condensed states research published in Canada, January-March, 1964**, by Norman F. H. Bright. April, 1964. 8p.
Prepared in the Mineral Science Division. *Cat. No. M38-3/159*
Out of print.
- IC160.—**Exploitation of a small peat bog**, by T. E. Tibbetts and R. E. Kirkpatrick (Grand Falls Peat Co. Ltd., Grand Falls, N.B.). May, 1964. 48p. Tables, map, figs.
Prepared in the Extraction Metallurgy Division. *Cat. No. M38-3/160*
Out of print.
- IC161.—**Analyses of coal and coke during 1963**, by W. J. Montgomery and G. C. Behnke. May, 1964. 15p.
Prepared in the Fuels and Mining Practice Division. *Cat. No. M38-3/161*
Out of print.
- IC162.—**Mines Branch: Scientific and technical papers published by the staff in 1963**. June, 1964. 84p.
Cat. No. M38-3/162
Out of print.
- IC163.—**List of certified electrical apparatus, certified fire-resistant conveyor belting and certified diesel engines for coal mine use**, by G. K. Brown. 2nd edition. (Certification list No. 2—to June 30, 1964. Supersedes IC131). August, 1964. 22p. Tables.
Prepared in the Fuels and Mining Practice Division. *Cat. No. M38-3/163*
Out of print.
- IC164.—**Bibliography of high temperature condensed states research published in Canada, April-June, 1964**, by Norman F. H. Bright. July, 1964. 8p.
Prepared in the Mineral Sciences Division. *Cat. No. M38-3/164*
Out of print.

PUBLICATIONS DE LA DIRECTION DES MINES

Information Circulars.—Continued.

Circulaires d'information.—Suite.

IC165.—Dissemination of technical information to Canadian industry, by John Convey and F. T. Rabbitts. February, 1964. 39p.

The purpose of this report is to stimulate growth in Canadian industry by promoting more rapid and more widespread adoption of new technical developments through better means of communication.

Out of print.

Cat. No. M38-3/165

IC166.—Bibliography of high temperature condensed states research published in Canada, October-December, 1964, by Norman F. H. Bright. January, 1965. 7p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/166

IC167.—Bibliography of high temperature condensed states research published in Canada, July-September, 1964, by Norman F. H. Bright. October, 1964. 7p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/167

IC168.—Notch toughness of ultra-high-strength steels in relation to design considerations, by R. C. A. Thurston, December, 1964. 49p. Tables, figs.

Prepared in the Physical Metallurgy Division.

Out of print.

Cat. No. M38-3/168

IC169.—Athabasca tar sands as a source of crude oil, by D. S. Montgomery. September, 1964. 13p. Tables, figs.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-3/169

IC170.—Review of the properties of zinc sulphide, by E. H. Nickel. April, 1965, 38p. Tables.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/170

IC171.—Mines Branch: Scientific and technical papers published by the staff in 1964. February, 1965. 52p.

Out of print.

Cat. No. M38-3/171

IC172.—Bibliography of high temperature condensed states research published in Canada, January-March, 1965, by Norman F. H. Bright. April, 1965. 7p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/172

IC173.—Analyses of coal and coke during 1964, by W. J. Montgomery and G. C. Behnke. July, 1965. 18p. Tables.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-3/173

MINES BRANCH PUBLICATIONS

Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

- IC174.—**Occurrence of telluride minerals at the Acupan gold mine, Mountain Province, Philippines**, by Louis J. Cabri. Reprinted from *Economic Geology*, v. 60, No. 5, pp. 1080-1082 (1965). September, 1965.
Prepared in the Mineral Sciences Division. *Cat. No. M38-3/174*
Out of print.
- IC175.—**Bibliography of high temperature condensed states research published in Canada, April-September, 1965**, by Norman F. H. Bright. October, 1965. 12p.
Prepared in the Mineral Sciences Division. *Cat. No. M38-3/175*
Out of print.
- IC176.—**Preparation of "as-polished" metallographic finishes in non-ferrous metals**, by R. I. Hamilton and E. F. Connors. June, 1965. 28p.
Prepared in the Physical Metallurgy Division. *Cat. No. M38-3/176*
Out of print.
- IC177.—**Bibliography of high temperature condensed states research published in Canada, October-December, 1965**, by Norman F. H. Bright. January, 1966. 10p.,
Prepared in the Mineral Sciences Division. *Cat. No. M38-3/177*
Out of print.
- IC178.—**Bibliography of high temperature condensed states research published in Canada, January-March, 1966**, by Norman F. H. Bright. April, 1966. 8p.
Prepared in the Mineral Sciences Division. *Cat. No. M38-3/178*
Out of print.
- IC179.—**Preliminary mineralogical study of the silver deposits in the Cobalt area, Ontario**, by W. Petruk. June, 1966. 36p. Tables, figs.
Prepared in the Mineral Sciences Division. *Cat. No. M38-3/179*
Out of print.
- IC180.—**Filtration (a literature survey)**, by N. Nemeth, March, 1966. 15p. Tables.
Prepared in the Mineral Processing Division. *Cat. No. M38-3/180*
Out of print.
- IC181.—**Scientific and technical papers published by the staff in 1965**. June, 1966. 42p.
Out of print. *Cat. No. M38-3/181*
- IC182.—**Analyses of coal and coke during 1965**, by W. J. Montgomery and G. C. Behnke. June, 1966. 17p. Tables.
Prepared in the Fuels and Mining Practice Division. *Cat. No. M38-3/182*
Out of print.

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Information Circulars.—*Continued.*

Circulaires d'information.—*Suite.*

IC183.—Directory of high-temperature condensed states research in Canada, July, 1966, by Norman F. H. Bright. July, 1966. 16p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/183

IC184.—Bibliography of high temperature condensed states research published in Canada, April-June, 1966, by Norman F. H. Bright. July, 1966. 8p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/184

IC185.—Bibliography of high-temperature condensed states research published in Canada, July-September, 1966, by Norman F. H. Bright. October, 1966. 8p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/185

IC186.—Copper-zirconium alloys (a literature survey), by J. L. Dion and R. Thomson. November, 1966. 24p. Tables, figs.

Prepared in the Physical Metallurgy Division.

Out of print.

Cat. No. M38-3/186

IC187.—Bibliography of high temperature condensed states research published in Canada, October-December, 1966, by Norman F. H. Bright. January, 1967. 8p.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-3/187

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MINES BRANCH PUBLICATIONS

RESEARCH REPORTS

Research Reports. No. R1- , 1958-

Note.—Original contributions to science and technology, based primarily on laboratory research conducted in the Mines Branch laboratories or under Mines Branch auspices. This class does not include literature surveys. Reprints of research papers published in journals are included in this group.

- R1.—Some effects of pressure on consumable electrode arc melting, by J. W. Suiter. Ottawa, May, 1958. 9p. Figs.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/1
- R2.—Effects of furnace atmospheres on the sintering behaviour of uranium dioxide, by A. H. Webster and N. F. H. Bright. Ottawa, February, 1958. 50p. Illus. Tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. Cat. No. M38-1/2
- R3.—Leaching of manganese from pyrolusite ore by pyrite, by G. Thomas and B. J. P. Whalley. Ottawa, February, 1958. 7p. Illus.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. Cat. No. M38-1/3
- R4.—Compound $\text{CaO.Ti}_2\text{O}_3$, by N. F. H. Bright, J. F. Rowland and J. G. Wurm. Ottawa, March, 1958. 4p. Tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. Cat. No. M38-1/4
- R5.—Influence of aluminum, lead and iron on the structure and properties of galvanized coatings, by J. J. Sebisty and J. O. Edwards. Ottawa, March, 1958. 47p. Illus., Tables.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/5
- R6.—Study of surface carbides, differential steel attack and pore formation in the galvanizing process, by J. J. Sebisty. Ottawa, March, 1958. 18p. Illus.
Prepared in the Physical Division.
Out of print. Cat. No. M38-1/6
- R7.—Some new fluoride complexes of trivalent titanium, by N. F. H. Bright and J. G. Wurm. Ottawa, April, 1958. 8p. Tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. Cat. No. M38-1/7
- R8.—Chemistry of manganese deposits, by W. R. Trost. June 4, 1958. Ottawa, June, 1959. 125p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. Cat. No. M38-1/8
- R9.—Properties of sand-cast magnesium alloys. Part I: Binary magnesium-zinc alloys, by B. Lagowski and J. W. Meier. June, 1958. Released for general distribution, 1964. 25p. Figs.
Prepared in the Physical Metallurgy Division.
(See R22, R36 and R63 for Part II, III and IV).
Out of print. Cat. No. M38-1/9

PUBLICATIONS DE LA DIRECTION DES MINES

Research Reports.—Continued.

- R10.—Will not be available.
- R11.—Design of heat-treatable titanium alloys, by A. J. Williams. Ottawa, June, 1958. 26p. Illus., tables.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/11*
- R12.—Will not be available.
- R13.—Will not be available.
- R14.—Voltaic cells in fused salts. Part III. The system: silver-silver chloride, cadmium-cadmium chloride, by S. N. Flengas and T. R. Ingraham. Ottawa, May, 1958. 6p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M38-1/14*
- R15.—Radioactive dial marker for the Decca Navigational Aid, by G. E. Alexander and G. G. Eichholz. Ottawa, June, 1958. 8p. Figs.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M38-1/15*
- R16.—Voltaic cells in fused salts. Part I. The silver-silver chloride, cobalt-cobaltous chloride system, by S. N. Flengas and T. R. Ingraham. Ottawa, 1958. 11p. Figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. *Cat. No. M38-1/16*
- R17.—Voltaic cells in fused salts. Part II. The systems: (a) silver-silver chloride, lead-lead chloride; (b) silver-silver chloride, zinc-, zinc chloride; (c) silver-silver chloride, nickel-nickelous chloride, by S. N. Flengas and T. R. Ingraham. Ottawa, 1958. 6p. Illus. tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M38-1/17*
- R18.—Measurement of the residence time of slurries in an aerator tank using radioactive tracers, by E. C. Gibson and G. G. Eichholz. Ottawa, June, 1958. 10p. Illus.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M38-1/18*
- R19.—Experimental electric smelting of manganese ores, Part I, by R. A. Campbell, G. E. Viens and R. R. Rogers. Ottawa, 1958. 7p. Tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M38-1/19*
- R20.—Voltaic cells in fused salts. Part IV. Electrode potentials of the systems: Ti/TiCl₃ (KCl-NaCl), Cu/CuCl (KCl-NaCl), Cu/CuCl₂, (KCl-NaCl), Cr/CrCl₂ (KCl-NaCl), and Cr/CrCl₃ (KCl-NaCl). Radox potentials of the systems: Pt/CuCl, CuCl₂ (KCl-NaCl), and Pt/CrCl₂, CrCl₃ (KCl-NaCl), by S. N. Flengas and T. R. Ingraham. Ottawa, 1958. 13p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division:
(Reprinted from Canadian Journal of Chemistry, vol. 36, 1958, pp. 1103-1115).
Out of print. *Cat. No. M38-1/20*

MINES BRANCH PUBLICATIONS

Research Reports.—Continued.

- R21.—On the occurrence of E-carbide in iron, by F. W. C. Boswell. Reprinted from ACTA Crystallographica, vol. 2, part 1, January, 1958. Ottawa, 1958. 4p. Table.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/21*
- R22.—Properties of sand-cast magnesium alloys, part 2: Metallography of magnesium-zinc alloys, by B. Lagowski. August, 1958. (Released for general distribution, 1964.) 14p. Figs.
Prepared in the Physical Metallurgy Division.
See R9, R22 and R63 for Part I, II and IV.
Out of print. *Cat. No. M38-1/22*
- R23.—Effect of shot peening prior to electroplating on the fatigue properties of an alloy steel, by N. B. Brown. Ottawa, September, 1958. 12p. Illus., tables.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/23*
- R24.—Gamma-ray analysis of atmospheric dust samples, by J. L. Horwood. Ottawa, September, 1958. 22p. Table, figs.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M38-1/24*
- R25.—Determination of kerosene entrainment losses in the solvent extraction of a leach liquor, by C. M. Lapointe. Ottawa, September, 1958. 16p. Figs.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M38-1/25*
- R26.—Composition and chrysallography of niocalite, by E. H. Nickel, J. F. Rowland and J. A. Maxwell. Ottawa, September, 1958. 9p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
(Reprinted from the Canadian Mineralogist, vol. 6, part II, 1958).
Out of print. *Cat. No. M38-1/26*
- R27.—Composition and microtexture of an ulvöspinel magnetite intergrowth, by E. H. Nickel. Ottawa, September, 1958. 9p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
(Reprinted from the Canadian Mineralogist, vol. 6, part II, 1958).
Out of print. *Cat. No. M38-1/27*
- R28.—Effect on reagent consumption of recycling solutions in the weak acid leaching of a uranium ore, by V. M. McNamara and W. A. Gow. Ottawa, November, 1958. 20p. Tables, figs.
Prepared in the Radioactivity Division.
Out of print. *Cat. No. M38-1/28*
- R29.—Voltaic cells in fused salts. Part V. The systems: Sn/SnCl₂ (KCl-NaCl), Fe/FeCl (KCl-NaCl), and Mn/MnCl₂ (KCl-NaCl), by S. N. Flengas and T. R. Ingraham. Ottawa, September, 1958. 6p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M38-1/29*

PUBLICATIONS DE LA DIRECTION DES MINES

Research Reports.—Continued.

- R30.—Low pressure hydrogenation of coker distillate from Athabasca bitumen, by F. L. Booth, R. E. Carson, K. W. Bowles and D. S. Montgomery. Ottawa, September 5, 1958. 92p. Tables, figs.
Prepared in the Fuels Division.
Out of print. Cat. No. M38-1/30
- R31.—Studies in the separation of the rare earths from thorium in sulfate solutions, using cation exchange resins, by D. C. Lewis and J. C. Ingles. Ottawa, October, 1958. 40p. Tables, figs.
Prepared in the Radioactivity Division.
Out of print. Cat. No. M38-1/31
- R32.—Some solubility studies in the system: thorium carbonate-sodium carbonate-sodium bicarbonate-sodium sulphate-water, by J. C. Ingles and F. J. Kelly. Ottawa, October, 1958. 9p. Tables.
Prepared in the Radioactivity Division.
Out of print. Cat. No. M38-1/32
- R33.—Recovery of uranium from an acid leach liquor, using an anion exchange resin and sodium carbonate and bicarbonate as eluting agents, by E. Kornelsen, V. M. McNamara and J. C. Ingles. Ottawa, June, 1959. 47p. Tables, figs.
Prepared in the Extraction Metallurgy Division.
Out of print. Cat. No. M38-1/33
- R34.—“Thorin” colorimetric method for thorium determination: effect of some common ions, and methods for overcoming interferences, by J. A. F. Bouvier and R. J. Guest. Ottawa, November, 1958. 14p. Tables.
Prepared in the Radioactivity Division.
Out of print. Cat. No. M38-1/34
- R35.—Effects of cold work and quenching on the magnetic susceptibility of a commercial titanium alloy, by Y. L. Yao. Reprinted from American Society for Metals No. 114; vol. 51, trans. 1958. 9p. Figs.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/35
- R36.—Measurement of wall thickness of metal from one side only, by the direct current conduction method, by J. G. Buchanan, F. W. Marsh and R. C. A. Thurston. Reprinted from Jan.-Feb., 1958 issue of Non-destructive Testing. 5p. Figs.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/36
- R37.—Effect of different surface treatments on the fatigue strength of drill steel, by T. W. Wlodek. Reprinted from the Canadian Mining and Metallurgical Bulletin, February, 1958. 13p. Figs., tables.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/37

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Research Reports.—*Continued.*

- R38.—Effect of various factors on the mechanical properties of magnesium alloy castings, by J. W. Meier. Reprinted from Congrès International de fonderie, Bruxelles 1958, p. 225-240. Figs., tables. Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/38
- R39.—Pressure distribution within a vacuum arc furnace, by J. W. Suiter. Reprinted from Journal of the Electrochemical Society, vol. 105, January, 1958. 3p. Tables, figs.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/39
- R40.—Grain boundaries in metals, by F. Weinberg. Figs.
Contents.—A. Grain boundary melting by F. Weinberg and E. Teightsoonian. Reprinted from Acta Metallurgica, vol. 5, No. 8, 1957, p. 455-464.—B. Further observations on grain boundary melting. Reprinted from Acta Metallurgica, vol. 6, No. 8, 1958, p. 535-538.—C. Grain boundary shear in aluminum. Reprinted from Trans. of the Metallurgical Society of AIME, vol. 212, Dec. 1958.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/40
- R41.—Elution with carbonate solution of an ion exchange resin loaded with uranyl sulphate, by V. M. McNamara and W. A. Gow. Ottawa, January, 1959. 17p. Tables, figs.
Prepared in the Radioactivity Division.
Out of print. Cat. No. M38-1/41
- R42.—Orbital theory in the transition metals, by W. R. Trost. Ottawa, August, 1958. 77p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. Cat. No. M36-1/42
- R43.—Some analytical applications of solvent extraction from sulphate solution with long chain alkyl amines, by R. J. Guest and J. A. F. Bouvier. Ottawa, March, 1959. 39p. Tables, figs.
Prepared in the Radioactivity Division.
Out of print. Cat. No. M38-1/43
- R44.—Grain boundaries in metals, by F. Weinberg. 82p. Illus.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/44
- R45.—Alum-amine process for the recovery of alumina from shale, by G. Thomas and T. R. Ingraham. Ottawa, April, 1959. 27p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. Cat. No. M38-1/45
- R46.—Graphical determination of uranium and thorium in ores from their gamma-ray spectra, by J. L. Horwood. Ottawa, December, 1959. 24p.
Prepared in the Mineral Sciences Division.
Out of print. Cat. No. M38-1/46

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Research Reports.—*Continued.*

- R47.—**Vacuum degassing of steel, Part I: literature survey and preliminary work**, by D. E. Parsons and W. A. Morgan. Ottawa, May, 1959. 81p. Tables, figs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/47*
- R48.—**Crystallography of compounds in the calcium oxide-niobium pentoxide system**, by John F. Rowland, Norman F. H. Bright and Arnout Jongejan. Ottawa, June, 1959. 19p. Tables.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M38-1/48*
- R49.—**Embrittlement of solid metals in a liquid metal**, by W. A. Morgan. Ottawa, September, 1959. 7p.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/49*
- R50.—**Solubilities of $TiCl_4$ in mixtures of $KCl-MgCl$ and the electrode potentials of the titanium chlorides in 1/1 (mole) $KCl-NaCl$ solutions**, by S. N. Flengas. Reprinted from Ann. N.Y. Acad. Sci. 79, Art. 11, January 30, 1960. Pp. 853-872. Tables, graphs.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/50*
- R51.—**Radiochemical evaluation of fire assay method for determination of silver**, by G. H. Faye and W. R. Inman. Ottawa, June, 1959. 5p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
35c. *Cat. No. M38-1/51*
- R52.—**Electromotive force series of metals in fused salts and activities of metal chlorides in 1:1 molar $KCl-NaCl$ solutions**, by S. N. Flengas and T. R. Ingraham. Ottawa, August, 1959. 8p. Tables, figs.
Prepared in the Mineral Dressing and Process Metallurgy Division.
Out of print. *Cat. No. M38-1/52*
- R53.—**Surface area determination of magnesium powder with chromium-51 tracer solutions**, by H. P. Dibbs. Ottawa, October, 1959. 16p. Tables, figs.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-1/53*
- R54.—**Effect of casting temperature on aluminium alloy test bar properties**, by J. W. Meier and A. Couture. Ottawa, February, 1959. 44p. Tables, figs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/54*
- R55.—**Slopes of working curves in emission spectrometric analysis of certain silicates**, by J. K. Hurwitz. Ottawa, December, 1959. 4p. Tables.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/55*

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Research Reports.—Continued.

- R56.—**Properties of sand-cast magnesium alloys. Part III: Effect of titanium additions to magnesium-zinc alloys**, by B. Lagowski and J. W. Meier. January, 1960. Released for general distribution, 1964. 28p. Tables, figs.
Prepared in the Physical Metallurgy Division.
See R9, R22 and R63 for Part I, II and IV.
Out of print. *Cat. No. M38-1/56*
- R57.—**Occurrence of native nickel-iron in the serpentine rock of the eastern townships of Quebec Province**, by E. H. Nickel. Ottawa, January, 1960. 13p. Tables, figs.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-1/57*
- R58.—**Exchange reactions between zinc and its ions**, by J. E. Sandor. Ottawa, October, 1959. 27p. Illus., graphs.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-1/58*
- R59.—**Continuous monitoring of uranium leach solutions**, by G. G. Eichholz. Ottawa, January 21, 1960. 24p. Illus., tables, graphs. Bilingual synopsis.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-1/59*
- R60.—**Surface area determination of magnesium powders by sorption of C-14-labeled oleic acid**, by C. M. Lapointe. Ottawa, March 7, 1960. 10p. Illus.; graph.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-1/60*
- R61.—**Isolation of the rare earth elements**, by Bernard Zimmerman and John C. Ingles. Reprinted from Analytical Chemistry, February, 1960. Ottawa, March, 1960. 6p. Tables.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/61*
- R62.—**Surface exchange reactions of silver and its ions**, by J. E. Sandor. Ottawa, April 19, 1960. 22p. Table, graphs.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-1/62*
- R63.—**Properties of sand-cast magnesium alloys, part 4: Mg-Ag, Mg-Ag-Zr and Mg-Ag-Zn-Zr alloys**, by B. Lagowski and J. W. Meier. May, 1960. (Released for general distribution—1964.) 27p. Tables, figs.
Prepared in the Physical Metallurgy Division.
See R9, R22 and R56 for Part I, II and III.
Out of print. *Cat. No. M38-1/63*
- R64.—**Effect of high temperatures on concretes incorporating different aggregates**, by N. G. Zoldners. Ottawa, May, 1960. 48p. Illus., tables, graphs.
Prepared in the Mineral Processing Division.
Out of print. *Cat. No. M38-1/64*

PUBLICATIONS DE LA DIRECTION DES MINES

Research Reports.—*Continued.*

- R65.—Corrosion study in processing uranium ore, by I. I. Tingley and R. R. Rogers. Ottawa, January, 1960. 6p. Illus., tables.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/65*
- R66.—Equilibrium decomposition pressure of K_2TiCl_6 , by S. N. Flengas and T. R. Ingraham. Ottawa. February, 1960. 5p. Tables, figs.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/66*
- R67.—Determination of total rare earths in high grade uranium Products, by R. J. Guest. Ottawa, August, 1960. 22p. Tables, graph.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/67*
- R68.—Mechanical and structural changes during the deformation of copper by fatigue, by J. T. McGrath and R. C. A. Thurston. Ottawa, July, 1960. 20p. Table, figs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/68*
- R69.—Amerometric determination of uranium (IV) in mixtures of uranium oxides, by A. Hitchen. Ottawa, 1960.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/69*
- R70.—Study of mercury-cathode membrane cells for the electrolytic reduction of uranyl solutions, by J. W. Kim and R. Simard. Ottawa, September 28, 1960. 32p. Tables, graphs.
Prepared in the Extraction Metallurgy Division.
35c. *Cat. No. M38-1/70*
- R71.—Measurement of dissolved air in alkaline solutions from uranium mills and from gold mills, by G. Thomas and T. R. Ingraham. Ottawa, June, 1960. 5p. Table, figs.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/71*
- R72.—Development of an improved steel for the production of propulsion shafting for naval vessels: Part I, An examination of steel currently in use; Part II, Modifications of this steel, by R. D. McDonald and W. A. Morgan. Ottawa, October, 1960. 27p. Illus., tables.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/72*
- R73.—Decomposition pressures of ferric sulphate and aluminum sulphate, by N. A. Warner and T. R. Ingraham. Reprinted from Canadian Journal of Chemistry, v. 38, 1960, pp. 2196-2202. Ottawa, July, 1960. 7p. Tables, figs.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/73*

MINES BRANCH PUBLICATIONS

Research Reports.—Continued.

- R74.—Development of the alum-amine process for the recovery of alumina from shale, by G. Thomas and T. R. Ingraham. (Reprinted from the Canadian Journal of Chemical Engineering, December, 1960, pp. 220-222.) Ottawa, December, 1960. 3p. Tables, figs.
Prepared in the Extraction Metallurgy Division.
Out of print. Cat. No. M38-1/74
- R75.—Criteria of ductility in uniaxial tension, by H. H. Bleakney. January 16, 1961. Ottawa, January, 1961. 32p. Tables, graphs.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/75
- R76.—System iron-titanium-oxygen at 1200° C and oxygen partial pressures between 1 Atm. and 2×10^{-14} Atm, by A. H. Webster and Norman F. H. Bright. Reprinted from the Journal of the American Ceramic Society, v. 44, No. 3, pp. 110-116 (1961). Ottawa, April, 1961. 7p. Diags.
Prepared in the Mineral Sciences Division.
Out of print. Cat. No. M38-1/76
- R77.—Electrode potentials of the uranium chlorides in fused alkali chloride solutions, by S. N. Flengas. Reprinted from the Canadian Journal of Chemistry, vol. 39 (1961), pp. 773-784. June 27, 1960. Ottawa, 1961. Tables, figs.
Prepared in the Extraction Metallurgy Division.
Out of print. Cat. No. M38-1/77
- R78.—Study of the Athabasca bitumen from the Abasand Quarry, Alberta, Canada. Part I: Early history, analysis of the bituminous sand, and isolation and structural analysis of the asphaltene fraction, by M. L. Boyd and D. S. Montgomery. November, 1961. 67p. Illus., tables, graphs.
Prepared in the Fuels and Mining Practice Division.
Out of print. Cat. No. M38-1/78
- R79.—Double-notched (V-V) bar tension-bending test, by T. W. Wlodek. Reprinted from the Canadian Mining and Metallurgical Bulletin. Ottawa, January, 1961. 15p. Illus., tables, figs.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/79
- R84.—Vapour-phase stripping of Lloydminster crude oil in a sloping-plate distillation tower, by F. L. Booth, R. E. Carson and D. S. Montgomery. July, 1961. 60p. Illus., tables, charts, graphs.
Prepared in the Fuels and Mining Practice Division.
Out of print. Cat. No. M38-1/84
- R85.—Laboratory study of gamma-ray spectra at the surface of rocks, by A. F. Gregory, Geophysics Division, Geological Survey of Canada and J. L. Horwood. April, 1961. 52p. Tables, graphs.
Un résumé en français est inclus.
Prepared in the Mineral Sciences Division.
Out of print. Cat. No. M38-1/85

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Research Reports—*Continued.*

- R86.—**Influence of combined additions of tin, cadmium, antimony and copper on the structure and properties of galvanized coatings**, by J. J. Sebisty and R. H. Palmer. August, 1961. 52p. Illus., tables.
Un résumé en français est inclus.
Prepared in the Physical Metallurgy Division. Cat. No. M38-1/86
Out of print.
- R87.—**Metallography of creep-rupture fracture in aluminum**, by H. H. Bleakney. October, 1961. 9p. Illus.
Un résumé en français est inclus.
Prepared in the Physical Metallurgy Division. Cat. No. M38-1/87
Out of print.
- R88.—**Study of the Athabasca bitumen from the Abasand Quarry, Alberta, Canada. Part 2: Initial chromatographic separation of the pentane extract and the structure and properties of the resinous components**, by M. L. Boyd and D. S. Montgomery. December, 1961. 94p. Tables, graphs.
Un résumé en français est inclus.
Prepared in the Fuels and Mining Practice Division. Cat. No. M38-1/88
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- R89.—**Anionic adsorption on three sulphide minerals**, by Hugh P. Dibbs. October, 1961. 18p. Tables, graphs.
Un résumé en français est inclus.
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Out of print.
- R90.—**Measurement of the surface area of uranium dioxide powder**, by Pietro R. Gorla. (Reproduced from Nuclear Science and Engineering, v. 11, pp. 48-54, 1961.) January, 1961. 7p. Tables, figs.
Prepared in the Mineral Sciences Division. Cat. No. M38-1/90
Out of print.
- R91.—**Fluorescence effects in ion exchange resins**, by T. R. Flint and G. G. Eichholz. November, 1961. Ottawa, 1962. 35p. Tables, graphs.
Prepared in the Mineral Science Division. Cat. No. M38-1/91
Out of print.
- R92.—**Metal inert-gas welding of tin bronze castings**, by M. J. Nolan and K. Winterton. June, 1962. 25p. Illus., tables, figs.
Prepared in the Physical Metallurgy Division. Cat. No. M38-1/92
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- R93.—**Towards a common basis for the sampling of materials**, by J. Visman. July, 1962. Ottawa, 1962. 39p. Figs., tables.
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- R94.—**Mineral constitution of some Ordovician shales of eastern and southern Ontario**, by A. G. Sadler. March, 1962. 87p. Tables, graphs.
Prepared in the Mineral Processing Division. Cat. No. M38-1/94
Out of print.

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Research Reports.—Continued.

- R95.—Influence of uranium additions to ferrous alloys: an interim review.** Edited by R. F. Knight and D. K. Faurschou. April, 1962. 320p. Tables, figs.
Prepared by the Physical Metallurgy Division in collaboration with the Mineral Sciences Division, the Extraction Metallurgy Division, Eldorado Mining and Refining Limited and the Canadian Uranium Research Foundation.
This research program began in 1959 with the support of Eldorado Mining and Refining Limited. In January 1961 the producing uranium companies formed the Uranium Research Foundation, and since that time this group has contributed toward the programme being carried out at the Mines Branch. This report has been prepared to present, in general terms, the results of our work. A great deal of the research described is still under way, with new results being obtained daily from long time laboratory tests and plant trials.
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- R96.—Non-metallic thermal storage media,** by V. D. Svikis. February, 1962. 42p. Tables, graphs, figs.
Prepared in the Mineral Processing Division.
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- R97.—Uranium in non-ferrous metals,** by R. Thomson and J. O. Edwards. July, 1962. 42p. Illus., tables, graphs.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/97
- R98.—Determination of methyl and methylene groups in the oil and resin fractions of Athabasca bitumen using infrared spectroscopy,** by F. E. Goodspeed and D. S. Montgomery. April, 1962. 25p. Tables, graphs.
Prepared in the Fuels and Mining Practice Division.
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- R99.—Effect of the mineralogical composition of whitemud formation clays on their utilization,** by J. G. Brady. August, 1962. 53p. Tables, figs.
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- R101.—I: Binary system Nb_2O_5 — SiO_2 ,** by Mohammad Ibrahim and N. F. H. Bright. **II: Binary system CaO — Nb_2O_5 ,** by Mohammad Ibrahim, N. F. H. Bright and J. F. Rowland. July 27, 1962. Pp. 221-222 and pp. 329-334. Illus., tables, graphs.
Prepared in the Mineral Sciences Division.
Out of print. Cat. No. M38-1/101
- R102.—Effect of some test bar variables on the mechanical properties of aluminum alloys,** by A. Couture and J. W. Meier. August, 1962. Released for general distribution, 1964. 36p. Tables, figs.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/102

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Research Reports.—*Continued.*

- R103.—Resolution of the operating variables of a small hydrocyclone, by R. F. Pilgrim and T. R. Ingraham. Reprinted from the Canadian Journal of Chemical Engineering, August, 1962. Pp. 169-172. Illus., tables, figs.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/103*
- R104.—Study of the Athabasca bitumen from the Abasand Quarry, Alberta, Canada. Part 3: Chromatographic separation of the oil fraction, and properties and structure of the oil components, by M. L. Boyd and D. S. Montgomery. November, 1962. 67p. Tables, graphs.
Prepared in the Fuels and Mining Practice Division.
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- R105.—Radiation effects on p- and n-type catalysts used in the thermal dissociation of ethyl alcohol, by Matteo Donato, August, 1962. 24p. Tables, graphs, diagram.
Prepared in the Mineral Sciences Division.
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- R106.—Infra-red absorption by colouring matter in natural waters, by J. Ungar. November, 1962. 1963, 12p. Tables, graphs.
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- R107.—Kinetic studies of the thermal decomposition of ferric sulphate and aluminum sulphate, by N. A. Warner and T. R. Ingraham. Reprinted from the Canadian Journal of Chemical Engineering, December, 1962. June 15, 1962. Pp. 263-267. Figs.
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Prepared in the Mineral Processing Division.
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- R110.—Spectrometric study of the attenuation in air of gamma rays from mineral sources, by A. F. Gregory and J. L. Horwood. September, 1963. 110p. Illus., tables, figs.
Prepared in the Geophysics Division, Geological Survey of Canada and in the Mineral Sciences Division, Mines Branch.
Out of print. *Cat. No. M38-1/110*

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Research Reports.—Continued.

- R111.—**Determination of copper in high-purity niobium, tantalum, molybdenum and tungsten metals with bathocuproine**, by Elsie M. Penner and W. R. Inman. Reproduced from *Talanta*, v. 10, pp. 407-412, 1963. June, 1963. [6p.] Tables.
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- R112.—**Wodginite, a new tin-manganese tantalate from Wodgina, Australia and Bernic Lake, Manitoba**, by E. H. Nickel, J. F. Rowland and R. C. McAdam. Reprinted from the *Canadian mineralogist*, v. 7, pt. 3, pp. 390-402, 1963. June 10, 1963. [13p.] Tables, figs.
Prepared in the Mineral Sciences Division.
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Prepared in the Physical Metallurgy Division.
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- R114.—**Study of sedimented organic matter and its natural derivatives**, by L. H. King, Frances E. Goodspeed and D. S. Montgomery (with appendix by M. M. F. Millson). June, 1963. 68p. Tables, graphs.
Prepared in the Fuels and Mining Practice Division.
Out of print. *Cat. No. M38-1/114*
- R115.—**Origin of the Albert Mines oil shale (New Brunswick) and its associated albertite**, by Lewis H. King. June, 1963. 24p. Illus., table, figs.
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- R116.—**On the origin of anthraxolite and impsomite**, by Lewis H. King. June, 1963. 9p. Illus.
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- R118.—**Kinetic studies on the thermal decomposition of calcium carbonate**, by T. R. Ingraham and P. Marier. Reprinted from the *Canadian Journal of Chemical Engineering*, August, 1963. 4p. Figs.
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- R119.—**Dense lithium fluoride for gamma-ray-free neutron shielding**, by V. D. Svikis. February, 1964. 30p. Illus., tables.
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- R120.—Ageing behaviour of Al-10% Mg casting alloys at room temperature and up to 150° C. (300° F.) by W. A. Pollard. November, 1963. 37p. Tables, graphs, figs.
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- R122.—Thermodynamic properties of zinc sulfate, zinc basic sulfate, and the system Zn-S-O, by T. R. Ingraham and H. H. Kellogg. Reprinted from Transactions of the Metallurgical Society of AIME, v. 227, December, 1963. 8p. Tables, figs.
Prepared in the Extraction Metallurgy Division.
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- R123.—Kinetics of the reaction of niobium pentachloride with water vapour, by T. R. Ingraham and B. J. P. Whalley. Reprinted from the Canadian Journal of Chemical Engineering, December, 1963. Pp. 265-268. Figs.
Prepared in the Extraction Metallurgy Division.
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- R124.—Ixiolite—a columbite substructure, by E. H. Nickel, J. F. Rowland and R. C. McAdam. Reprinted from the American Mineralogist, v. 48, Nos. 9 and 10, pp. 961-979, 1963. January 13, 1964. Tables, figs.
Prepared in the Mineral Sciences Division.
Out of print. Cat. No. M38-1/124
- R125.—Hot-dip galvanizing with less common bath additions, by J. J. Sebisty and R. H. Palmer. February, 1964. 40p. Tables, figs.
Prepared in the Physical Metallurgy Division.
This paper was prepared for presentation at the seventh International Galvanizing Conference, Paris, France. June 1964.
Out of print. Cat. No. M38-1/125
- R126.—Ion bombardment of single crystals of aluminum, by R. L. Cunningham, K. V. Gow and Joyce Ng-Yelim. Reprinted from Journal of Applied Physics, v. 34, No. 4 (Part I), pp. 984-989, April 1963. March, 1964. Figs.
Prepared in the Physical Metallurgy Division.
Out of print. Cat. No. M38-1/126
- R127.—Measurement of free cyanide concentration by continuous potentiometric titration, by J. C. Ingles. July, 1964. 20p. Illus., graphs, figs.
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Out of print. Cat. No. M38-1/127

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- R128.—**Determination of lead by a solvent extraction—EDTA titration procedure**, by A. Hitchen. March, 1965. 28p. Tables.
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- R129.—**Uranium in alloy steel**, by C. E. Makepeace. July, 1964. 67p. Tables, figs.
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- R131.—**Thorium intermediate member of the britholite-apatite series, physical and chemical studies**, by M. R. Hughson and J. G. Sen Gupta. Reprinted from the Journal of the Mineralogical Society of America. September 8, 1964. Pp. 937-951. Tables, figs.
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- R132.—**Study of the constitution of the titanium-rich corner of the titanium-aluminum-molybdenum system**, by A. J. Williams. September, 1964. 27p. Tables, figs.
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- R133.—**Viscosity of pure liquid zinc, determined by oscillating a cylindrical vessel**, by H. R. Thresh. July, 1964. 26p. Tables, figs.
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- R134.—**Accelerated test for determining the 28-day compressive strength of concrete**, by V. M. Malhotra, N. G. Zoldners and R. Lapinas. October, 1964. 36p. Illus., tables, graphs.
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- R135.—**Experimental flotation cell**, by L. L. Sirois and T. Takamori. October, 1964. 6p. Tables, fig.
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- R136.—**Mechanism of thermal decomposition of ammonium metavanadate**, by M. Taniguchi and T. R. Ingraham. Reprinted from Canadian Journal of Chemistry, v. 42, 1964. November, 1964. [7p.] Tables, figs.
Prepared in the Extraction Metallurgy Division. *Cat. No. M38-1/136*
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Research Reports.—*Continued.*

- R137.—**Split fractures in tension tests of steel**, by H. H. Bleakney. November, 1964. 16p. Tables, figs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/137*
- R138.—**Premium strength in sand-cast magnesium alloys**, by B. Lagowski and J. W. Meier. June, 1964. 31p. Tables, graphs, figs.
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- R139.—**Thermochemistry of the Co-S-O system from 950 to 1,200° K**, by T. R. Ingraham. Reprinted from Canadian Metallurgical Quarterly, v. 3, No. 3, July-September, 1964. November, 1964. [14p.] Tables, figs.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/139*
- R140.—**Properties of sand-cast magnesium alloys, Part 5: Mg-Zn-Ag-Zr alloys**, by B. Lagowski and J. W. Meier. October, 1964. 12p. Tables, figs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/140*
- R141.—**Magnesium content effect on properties of binary aluminum-magnesium alloys**, by W. A. Pollard. Reprinted from Trans. Afs 72, 587-599, 1964. November, 1964. [13p.] Graphs, figs.
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Out of print. *Cat. No. M38-1/141*
- R142.—**A brief study of nickel-rich alloys of the Ni-Hf-C and Ni-Zn-C systems**, by D. C. Briggs. November, 1964. 12p. Tables, figs.
Prepared in the Physical Metallurgy Division.
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- R143.—**Kinetics of the carbon catalyzed air oxidation of ferrous ion in sulphuric acid solutions**, by G. Thomas and T. R. Ingraham. Reprinted from Unit Processes in Hydrometallurgy, vol. 1, Metallurgical Society of AIME, 1965. January, 1965. Pp. 67-79. Tables, figs.
Prepared in the Extraction Metallurgy Division.
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Prepared in the Physical Metallurgy Division.
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- R145.—**Experiments in the Au-Bi-Te system**, by Ernst W. Winkler and Norman F. H. Bright. Reprinted from Solid State Communications, vol. 2, 293-295, 1964. February, 1965. [3p.] Figs.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-1/145*

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- R146.—**Simplified apparatus and technique for the determination of crystal orientation by ion bombardment**, by R. L. Cunningham and Joyce Ng-Yelim. February, 1965. 7p. Figs.
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Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/147*
- R148.—**Kinetics of the thermal decomposition of cupric sulfate and cupric oxysulfate**, by T. R. Ingraham and P. Marier. Reprinted from Transactions of the Metallurgical Society of AIME, vol. 233, pp. 363-367, February, 1965, March, 1965. Tables, figs.
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- R150.—**Investigations on sand-cast aluminum alloy test bars**, by W. A. Pollard and J. W. Meier. January, 1965. Various paging. Illus., tables, graphs, figs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/150*
- R151.—**Effect of test bar variables on the mechanical properties of magnesium casting alloys**, by A. Couture and J. W. Meier. February, 1965. 40p. Tables, figs.
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Out of print. *Cat. No. M38-1/151*
- R152.—**Properties of sand-cast magnesium alloys. Part 6: Effect of pouring temperature and holding time**, by A. Couture and J. W. Meier. February, 1965. 26p. Tables.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/152*
- R153.—**Properties of sand-cast magnesium alloys. Part 7: Effect of wall thickness on tensile properties of Mg-Al-Zn alloy castings**, by A. Couture and J. W. Meier. March, 1965. 41p. Tables, figs.
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Out of print. *Cat. No. M38-1/160*
- R161.—Properties of sand-cast magnesium alloys. Part VIII: Foundry characteristics of magnesium-zinc-silver-zirconium casting alloys, by B. Lagowski and J. W. Meier. May, 1965. 28p. Illus., tables, graph.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/161*
- R162.—Fe-Ta oxides: phase relations at 1200° C, by Allan C. Turnock. Reprinted from the Journal of the American Ceramic Society, v. 48, No. 5 (1965). June, 1965. 8p. Tables, figs.
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- R163.—Production of high-purity magnesia, by G. A. Kent. June, 1965. 11p. Tables.
Prepared in the Mineral Processing Division.
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- R164.—Hot-tearing of copper alloys, by A. Couture and J. O. Edwards. June, 1965. 54p. Tables, figs.
Prepared in the Physical Metallurgy Division.
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- R165.—Design and construction of a facility for research on the inelastic behavior of geologic materials, by H. R. Hardy, Jr. September, 1965. 139p. Illus., tables, figs.
Prepared in the Fuels and Mining Practice Division.
Out of print. *Cat. No. M38-1/165*
- R166.—Corrosion behaviour of uranium-bearing resulphurized chromium stainless steels, by G. J. Biefer and W. M. Crawford. July, 1965. 36p. Illus., tables, figs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/166*

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- R167.—**Corrosion fatigue of structural metals in mine shaft waters**, by G. J. Biefer. July, 1965. 25p. Illus., tables, figs.
Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/167*
- R168.—**Pillar loading. Part I: Literature survey and new hypothesis**, by D. F. Coates. October, 1965. 84p. Figs.
Prepared in the Fuels and Mining Practice Division.
Out of print. *Cat. No. M38-1/168*
- R170.—**Pillar loading. Part II: Model studies**, by D. F. Coates. November, 1965. Published, 1966. 101p. Tables, figs.
Prepared in the Fuels and Mining Practice Division.
Out of print. *Cat. No. M38-1/170*
- R171.—**Complexometric titration of zirconium in perchloric acid solution, and its application to the analysis of lead zirconate-titanate ceramics**, by A. Hitchen. November, 1965. 30p. Tables.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M38-1/171*
- R173.—**Thermal decomposition of pyrite**, by A. W. Coats and Norman F. H. Bright. August, 1965. 20p. Tables, figs.
Prepared in the Mineral sciences Division.
Out of print. *Cat. No. M38-1/173*
- R174.—**Determination of zirconium, niobium and hafnium in low alloy steels by x-ray spectrography**, by Dorothy J. Reed. December, 1965. 27p. Figs., tables.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-1/174*
- R178.—**Study of as-rolled carbon steels over ranges of uranium, sulphur and carbon contents**, by D. K. Faurshou. May, 1966. 54p. Tables, figs.
Prepared in the Physical Metallurgy Division.
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Prepared in the Physical Metallurgy Division.
Out of print. *Cat. No. M38-1/179*
- R180.—**Pillar loading. Part III: Field measurements**, by D. F. Coates. February, 1966. 71p. Tables, figs.
Prepared in the Fuels and Mining Practice Division.
Out of print. *Cat. No. M38-1/180*
- R182.—**Laboratory investigations of hydrogen explosion phenomena relating to electrical apparatus**, by G. K. Brown, E. D. Dainty and S. Silver. April, 1966. 72p. Illus., tables, graphs, figs.
Prepared in the Fuels and Mining Practice Division.
Out of print. *Cat. No. M38-1/182*

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Research Reports.—*Continued.*

R183.—**Effect of heat treatment on the corrosion behaviour of two zirconium-copper-molybdenum alloys**, by C. F. Dixon and H. M. Skelly. March, 1966. 13p. Tables, figs.

Prepared in the Physical Metallurgy Division.

Out of print.

Cat. No. M38-1/183

R184.—**Hypereutectic aluminum-silicon alloys produced by hot compaction of atomized powder**, by H. M. Skelley and C. F. Dixon, May, 1966. 13p. Tables, figs.

Prepared in the Physical Metallurgy Division.

Out of print.

Cat. No. M38-1/184

✓ R185.—**Ageing in niobium-rich niobium-hafnium-carbon alloys**, by D. C. Briggs and L. R. Harmatiuk. September, 1966. 31p. Tables, figs.

Prepared in the Physical Metallurgy Division.

Out of print.

Cat. No. M38-1/185

R186.—**Mechanical properties of zinc single crystals at high strain rates**, by A. Schweighofer and F. W. Marsh. November, 1966. 29p. Tables, figs.

Prepared in the Physical Metallurgy Division.

Out of print.

Cat. No. M38-1/186

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Research Reports.—*Continued.*

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TECHNICAL BULLETINS

Mines Branch Technical Bulletins. No. TB1- , 1959-

Bulletins techniques de la Direction des Mines. No TB1- , 1959-

- TB1.—Combustion of eastern Canadian coal in thin fires on a spreader-fire air-cooled oscillating grate**, by E. R. Mitchell, F. D. Friderich, Fuels Division and G. A. Gauthier, of the Dominion Coal Company Limited. July, 1959. 61p. Illus., tables, graphs.
Prepared in the Fuels Division.
Out of print. *Cat. No. M34-20/1*
- TB2.—Flotation of uranium ores from the Elliot Lake area, Ontario**, by W. R. Honeywell. September, 1959. 8p. Table, fig.
Prepared in the Extraction Metallurgy Division.
Out of print. *Cat. No. M34-20/2*
- TB3.—Air oxidation acid pressure leach investigations of uranium-bearing ores from Elliot Lake, Ontario**, by V. F. Harrison and W. A. Gow, Extraction Metallurgy Division. October, 1959. 25p. Tables, graphs.
Out of print. *Cat. No. M34-20/3*
- TB4.—A laboratory study on the agglomeration of coal in the presence of plasticizing agents at moderate temperatures and high pressures**, by Lewis H. King. August 26, 1959. 31p. Illus., tables, graphs.
Prepared in the Fuels Division.
Out of print. *Cat. No. M34-20/4*
- TB5.—Heavy media separation in aggregate beneficiation**, by V. A. Haw. September, 1959. 28p. Tables, figs.
Prepared in the Mineral Processing Division.
Out of print. *Cat. No. M34-20/5*
- TB6.—Relationship of various factors to the quality of coked briquets made from mixtures of coking coals and inert material**, by E. Swartzman. September, 1959. 20p. Tables, graphs. Bilingual synopsis.
Prepared in the Fuels Division.
Out of print. *Cat. No. M34-20/6*
- TB7.—Holmquistite from Barraute, Quebec**, by E. H. Nickel, J. A. Maxwell and J. F. Rowland of the Mineral Sciences Division, and B. S. Karpoff of the Quebec Lithium Corporation, and A zirconium-bearing garnet from Oka, Quebec, by E. H. Nickel, Mineral Sciences Division. Reprinted from the Canadian Mineralogist, Vol. 6, part 4, 1960. October, 1960. 14p. Illus., tables.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M34-20/7*
- TB8.—Standardized procedures for the determination of the physical properties of mine rock under short-period uniaxial compression**, by H. R. Hardy, Jr., Fuels and Mining Practice Division. December, 1959. 108p. Illus., tables, graphs.
Reissue of Fuels and Mining Practice Division, report No. FRL-242, dated December, 1957.
Out of print. *Cat. No. M34-20/8*

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Technical Bulletins.—*Continued.*

Bulletins techniques.—*Suite.*

- TB9.—**Briquetting coal with binders and statistical evaluation of briquets tests**, by R. P. Charbonnier and J. Visman, Fuels Division. October, 1959. 34p. Tables.
Out of print. *Cat. No. M34-20/9*
- TB10.—**Laboratory study of the binderless briquetting of western Canadian coals**, by A. R. McKenzie, Jacqueline L. Picard and J. Visman. December, 1959. 31p. Illus., tables, charts. Bilingual summary. Prepared in the Fuels Division.
Out of print. *Cat. No. M34-20/10*
- TB11.—**Viscometer for mineral suspensions**, by G. R. Purdy and G. G. Eichholz. December 10, 1959. 37p. Illus., tables, graphs. Bilingual synopsis. Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M34-20/11*
- TB12.—**Radioactive marking of steel balls for grinding tests**, by G. G. Eichholz. November 20, 1959. 6p. Illus. Bilingual synopsis. Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M34-20/12*
- TB13.—**Recovery of metal grade thorium concentrate from uranium plant ion exchange effluents by amine solvent extraction**, by R. Simard, Extraction Metallurgy Division. February 22, 1960. 25p. Tables.
Out of print. *Cat. No. M34-20/13*
- TB14.—**Research on the application of Eastern Canadian coals to large stokers**, by E. R. Mitchell, F. D. Friedrich and G. K. Lee. April, 1961. 43p. Illus., tables, graphs.
Contents.—Part 1: Coal properties, coal specification and combustion data.—Part 2: Recommendations for selection, design and operation of large stokers.—Part 3: Practical research on conventional stokers.
Out of print. *Cat. No. M34-20/14*
- TB15.—**Gated oscillator circuit for the measurement of short time intervals**, by J. D. Keys and G. E. Alexander, Mineral Sciences Division, October, 1959. Reproduced from *Electronics*, v. 33, No. 8, pp. 58-59, 1960. 2p., figs.
Out of print. *Cat. No. M34-20/15*
- TB16.—**Rapid test methods for determination of the approximate average pore radius, total pore volume and surface area contained in porous materials**, by W. D. Machin, B. I. Parsons and D. S. Montgomery, Fuels and Mining Practice Division. February, 1960. 18p. Figs.
Out of print. *Cat. No. M34-20/16*
- TB17.—**Conductimetric measurement and control of acid concentration in leach pulps**, by G. G. Eichholz, and A. H. Bettens, Mineral Sciences Division. Reprinted from *Transactions, Canadian Institute of Mining and Metallurgy*, v. 63, pp. 625-631, 1960. March, 1960. 7p. Illus., graphs.
35c. *Cat. No. M34-20/17*

MINES BRANCH PUBLICATIONS

Technical Bulletins.—*Continued.*

Bulletins techniques.—*Suite.*

- TB18.**—**Measurement of the wear rate of cast grinding balls using radioactive tracers**, by J. D. Keys and G. G. Eichholz. June, 1960. 14p. Tables, figs.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M34-20/18*
- TB19.**—**Index of ash clinkering and the influence of additives on eastern Canadian coals**, by G. K. Lee of the Fuels and Mining Practice Division, and J. Z. Skulski of the Dominion Steel and Coal Corporation Limited, Montreal, Quebec. July 1961. Ottawa, 1962. 19p. Illus., tables, graphs.
Prepared in the Fuels and Mining Practice Division.
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- TB20.**—**Mineralogy of the Bernic Lake pegmatite, Southeastern Manitoba**, by E. H. Nickel, Mineral Sciences Division. June, 1961. 38p. Illus., tables.
Out of print. *Cat. No. M34-20/20*
- TB21.**—**Nature and properties of some western Canada clays**, by J. G. Brady. June, 1961. 33p. Illus., tables, figs.
Prepared in the Mineral Processing Division.
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- TB22.**—**Evaluation of peat moss as applied to some bogs in southern Ontario**, by R. Bruce Graham, of R. Bruce Graham and Associates Limited, Toronto, and T. E. Tibbetts, of the Fuels and Mining Practice Division. December 1961. Ottawa, 1962. 100p. Maps.
Un résumé en français est inclus.
Prepared in the Fuels and Mining Practice Division.
Out of print. *Cat. No. M34-20/22*
- TB23.**—**Use of probability paper for the determination of diffusion coefficients**, by J. D. Keys, Mineral Sciences Division. May, 1961. 6p. Graphs.
Un résumé en français est inclus.
Out of print. *Cat. No. M34-20/23*
- TB24.**—**Flame photometric methods used in the Mineral Sciences Division, Mines Branch, Ottawa**, by Elsie M. Penner and W. R. Inman. Ottawa, September, 1961. 34p.
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Prepared in the Mineral Processing Division.
Out of print. *Cat. No. M34-20/29*
- TB30.—**Treatment of uranium leach plant solutions by liquid-liquid extractions to produce high purity uranium products**, by R. Simard, A. J. Gilmore, V. M. McNamara, H. W. Parsons and H. W. Smith. Reprinted from the Canadian Journal of Chemical Engineering, December, 1961, pp. 229-234. May, 1961. Illus., tables, figs.
Prepared in the Extraction Metallurgy Division.
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- TB31.—**Compositional variations in pyrochlore and niobian perovskite from a niobium deposit in the Oka district of Quebec**, by E. H. Nickel. February, 1962. 35p. Illus., tables, graphs.
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- TB36.—**Illustrative applications of the Jones wet magnetic mineral separator**, by R. A. Wyman, W. J. D. Stones and F. H. Hartman. June, 1962. 183p. Illus., tables.
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- TB42.**—**Effects and control of nickel and iron impurities in cyanide zinc plating baths**, by Wilfred Dingley. Reprinted from the 49th annual technical proceedings of the American Electroplater's Society, June, 1962. Pp. 155-160. Graphs.
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- TB43.**—**Semi-automatic monitor of cyanide solution strength for gold ore dissolution**, by G. G. Eichholz and C. A. Josling. March 20, 1963. 13p. Illus., tables, graphs, figs.
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- TB45.**—**Porosimetry by mercury injection**, by G. T. Shaw, B. I. Parsons and D. S. Montgomery. May, 1963. 28p. Table, graphs, diags.
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- TB46.—Control of zinc electrodeposition to decrease hydrogen embrittlement in steel, by W. Dingley and J. Bednar. Reprinted from the 50th annual technical proceedings of the American Electroplaters' Society, June, 1963. Pp. 71-77. Tables, figs.
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- TB48.—Agréats légers à béton provenant d'argiles et de schistes argileux du Québec, par H. S. Wilson. Juillet, 1963. 39p. Figs., cartes.
Préparé dans la Division du traitement des minéraux.
Édition épuisée. *N° de cat. M34-20/48F*
- TB49.—Determination of nickel by spectrophotometric measurement of the chloroform extract of nickel II—dimethylglyoximate-application to brasses, bronzes, magnesium and aluminum metals and their alloys, by Elsie M. Penner and W. R. Inman. September, 1963. 16p. Tables.
Prepared in the Mineral Sciences Division.
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- TB50.—Development of a chemical process for production of cesium chloride from a Canadian pollucite ore, by H. W. Parsons, J. A. Vezina, R. Simard and H. W. Smith. Reprinted from Canadian Metallurgical Quarterly, v. 2, No. 1, January-March, 1963. March, 1963. 13p. Tables, figs.
Prepared in the Extraction Metallurgy Division.
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- TB51.—Lightweight concrete aggregates from clays and shales in Ontario, by H. S. Wilson. October, 1963. 47p. Figs., maps.
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- TB53.—Experimental studies relating mineralogical and petrographic features to the thermal piercing of rocks, by James A. Soles and Lorant B. Geller. January 28, 1964. 13p. Illus., tables, graphs.
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Out of print. *Cat. No. M34-20/53*

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- TB54.—**Ceramic clays and shales of British Columbia**, by J. G. Brady and R. S. Dean. Reprinted from *Journal of Canadian Ceramic Society*, v. 32, 1963. January, 1964. Pp. 46-71. Tables, figs., map. Prepared in the Mineral Processing Division.
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- TB61.—**Improvement of cadmium-plating bath compositions**, by W. Dingley and J. Bednar. Reprinted from 52nd Annual Technical Proceedings of the American Electroplaters Society, June, 1964. December, 1964. [5p.] Tables, figs. Prepared in the Extraction Metallurgy Division.
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- TB62.—**Addendum to Bureau of Mines report No. 826 (volumes 1-3, 1949), "Drilling and sampling of bituminous sands of Northern Alberta"**, by K. W. Bowles and R. G. Draper. December, 1964. 10p. Tables, fig. Prepared in the Fuels and Mining Practice Division.
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TB63.—Preparation of commercial-grade vanadium pentoxide from boiler fly ash, by J. A. Vezina and W. A. Gow. January, 1965. 13p. Tables, fig.

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TB64.—Preparation of high-purity ammonium metavanadate from impure vanadium pentoxide by precipitation with ammonium chloride, by J. A. Vezina and W. A. Gow. January, 1965. 16p. Tables, figs.

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TB66.—Investigation of fuel-oil additives to prevent superheater slagging in naval boilers, by G. K. Lee, E. R. Mitchell, R. G. Grimsey and Lt. Comdr. S. E. Hopkins. Reprinted from Proceedings of the American Power Conference, v. 26, 1964. March, 1965. Pp. 531-552. Tables, figs.

Prepared in the Fuels and Mining Practice Division and in the Royal Canadian Navy.

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TB67.—An all-solid-state ultrasonic power oscillator, by R. H. Goodman and A. H. Bettens. March, 1966. 9p. Illus., figs.

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TB69.—Silica sand—Canadian sources of interest to the domestic glass industry, by R. K. Collings. Reprinted from Journal of Canadian Ceramic Society, v. 32, 1963. April, 1965. Pp. 39-44. Maps.

Out of print.

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TB70.—Floatability of eleven common non-metallic minerals, by R. A. Wyman. April, 1965. 33p. Tables.

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- TB72.—**Status of the hydrogen problem in steel**, by R. D. McDonald. July, 1965. 12p. Figs.
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- TB73.—**Polarization measurements on ASTM type 6061-T6 aluminum alloy in three Ontario mine shaft waters**, by G. J. Biefer. August, 1965. 16p. Illus., tables, figs.
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- TB77.—**Determination of silicon by measurement of the absorbance of the n-amyl alcohol extract of a silicomolybdic acid application to high-purity copper metal and brasses**, by Elsie M. Donaldson and W. R. Inman. September, 1965. 17p. Tables, figs.
Prepared in the Mineral Sciences Division.
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- TB78.—**Pilot plant for low and high pressure fluid catalyst bed reactions**, by J. P. Mogan, R. W. Taylor and F. L. Booth. November, 1965. Imprint, 1966. 29p. Illus., figs.
Prepared in the Fuels and Mining Practice Division.
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- TB79.—**Analytical procedures for a vanadium recovery process**, by R. J. Guest and J. C. Ingles. February, 1966. 62p. Tables, figs.
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- TB80.—**Survey of the titanium alloys, their application and their processing and manufacturing technology**, by H. V. Kinsey. March, 1966. 88p. Tables.
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Out of print. *Cat. No. M34-20/80*

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TB82.—Application of electronic sorting to minerals beneficiation,
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by Syed M. Ahmed. July, 1966, 26p. Tables, figs.

Prepared in the Mineral Sciences Division.

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**TB85.—Factors influencing the application of bacterial leaching to a
Canadian uranium ore,** by V. F. Harrison, W. A. Gow and M. R.
Hughson. December, 1966. 22p. Illus., tables, figs.

Prepared in the Extraction Metallurgy Division.

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RS1.—Making decomposition rate measurements on simple inorganic chemical powders by TGA, by T. R. Ingraham. Reprinted from Proceedings of the First Toronto Symposium on Thermal Analysis, Toronto Section, Chemical Institute of Canada, February 8, 1965, pp. 81-99. Tables, figs.

Prepared in the Extraction Metallurgy Division.

Out of print.

Cat. No. M38-8/1

RS2.—An investigation of gas explosion transmission through short cylindrical channels of varying length and diameter, by E. D. Dainty and G. K. Brown. Presented to Restricted International Conference of Directors of Safety in Mines Research, July 12th to 16th, 1965. 13p. Figs.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-8/2

RS3.—Flotation of uranium from Elliot Lake ores, by W. R. Honeywell and S. Kaiman. Reprinted from C.M.M. Bulletin, March, 1966. 9p. Illus., figs., tables.

Prepared in the Extraction Metallurgy Division.

Out of print.

Cat. No. M38-8/3

RS4.—Leaching of uranium from Elliot Lake ore in the presence of bacteria, by V. F. Harrison, W. A. Gow, Mines and Technical Surveys and K. C. Ivarson, Department of Agriculture. Reprinted from Canadian Mining Journal, May, 1966. Pp. 64-67. Figs., tables.

Prepared in the Mines Branch.

Out of print.

Cat. No. M38-8/4

RS5.—Stable copper cyanide plating baths, by W. Dingley, J. Bednar and R. R. Rogers. Reprinted from Plating, May, 1966. [8p.] Figs., tables.

Prepared in the Extraction Metallurgy Division.

Out of print.

Cat. No. M38-8/5

RS6.—Sulfurous acid corrosion of low carbon steel at ordinary temperatures—1. its nature, by W. McLeod and R. R. Rogers. Reprinted from corrosion, vol. 22, No. 5, May, 1966. Pp. 143-146. Tables.

Prepared in the Extraction Metallurgy Division.

Out of print.

Cat. No. M38-8/6

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- RS7.—Excited X-rays identify minerals as ore moves down conveyor belt, by R. H. Goodman, A. H. Bettens and C. A. Josling. Reprinted from Canadian Electronics Engineering, June, 1966. Pp. 43-45. Illus., figs.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-8/7*
- RS8.—Symposium on the preparation and properties of lead zirconate-lead titanate piezoelectric ceramics. Foreword by I. F. Wright. Reprinted from the Journal of the Canadian Ceramics Society, volume 34, 1965. Proceedings of a symposium held in Toronto, February, 1965. 1966. Pp. 97-136. Illus., tables, figs.
Prepared in the Mineral Processing Division.
Out of print. *Cat. No. M38-8/8*
- RS9.—Theory and experiment in methods for the precision measurement of viscosity, by H. R. Thresh. Reprinted from Transactions ASM 55 (3), 790-818 (1962). 1966. 59p. Tables, figs.
Prepared in the Physical Metallurgy Division.
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- RS10.—Ejection of atoms from metallic single crystals, by R. L. Cunningham and Joyce Ng-Yelim. Reprinted from American Journal of Physics, v. 33, No. 12, 1064-1069, December, 1965. 1966. (6p.) Illus., figs.
Prepared in the Physical Metallurgy Division.
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- RS11.—Some observations on niobium in steel, by D. R. Bell and G. P. Contractor. Reprinted from Tetrahedron, v. 52, No. 1, January, 1966, pp. 42-54. Tables, figs.
Prepared in the Physical Metallurgy Division.
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- RS12.—Instrumentation in the cyanidation process, by W. A. Gow, H. H. McCreedy and F. J. Kelly. Reprinted from The Canadian Mining and Metallurgist Bulletin, July, 1966. 9p. Figs.
Prepared in the Extraction Metallurgy Division.
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- RS13.—Synthetic wadginite, tapiolite and tantalite, by A. C. Turnock. Reprinted from the Canadian Mineralogist, v. 8, part 4, 1966. Pp. 461 to 470. Table, figs.
Prepared in the Mineral Sciences Division.
Out of print. *Cat. No. M38-8/13*

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Prepared in the Extraction Metallurgy Division.

Out of print.

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- RS15.—Glass insert stressmeters, by K. Barron. Reprinted from *Society of Mining Engineers*, December, 1965, pp. 287-299. Tables, figs.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-8/15

- RS16.—Classifications of rocks for rock mechanics, by D. F. Coates. Reprinted from *Rock Mechanics and Mining Science*, vol. 1, pp. 421-429, 1964.

Prepared in the Fuels and Mining Practice Division.

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- RS17.—Some cases of residual stress effects in engineering work, by D. F. Coates. Reprinted from *State of Stress in the Earth's Crust*, 1964. Pp. 679-688. Figs.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-8/17

- RS18.—Stability of slopes in open pits, by D. F. Coates. Preprint No. 42 of the 8th Commonwealth Mining and Metallurgical Congress, Australia and New Zealand, 1965, 13th technical session. 7p. Figs.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-8/18

- RS19.—Analyses of pit slides in some incompetent rocks, by D. F. Coates, K. L. McRorie and J. B. Stubbins. Reprinted from *Transactions of the Society of Mining Engineers of AIME*, March 1963, pp. 94-101, Illus., tables, figs.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-8/19

- RS20.—Mechanics of support and caving in longwall top-slicing, by D. F. Coates and M. Gyenge. Reprinted from the *Proceedings and 4th Intl. Conference on Strata Control and Rock Mechanics*, Columbia University, New York, May 1964, pp. 70-84. 14p. Figs.

Prepared in the Fuels and Mining Practice Division.

Out of print.

Cat. No. M38-8/20

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RS21.—**Mécanique du soutènement et du foudroyage dans l'exploitation en tranche unidescendante par longue taille**, par D. F. Coates et M. Gyenge. French version of paper reprinted from the Proceedings of the 4th Intl. Conference on Strata Control and Rock Mechanics, Columbia University, New York, May, 1964. 15p. Figs., graphs.

Prepared in the Fuels and Mining Practice Division.

Édition épuisée.

Cat. No. M38-8/21F

RS22.—**Loads on friction props on longwall face**, by H. Zorychta and G. S. Merrill. Reprinted from the Canadian Mining and Metallurgical Bulletin, vol. 58, No. 634, pp. 175-181, Feb. 1965. 7p. Figs., tables.

Out of print.

Cat. No. M38-8/22

RS23.—**Effect of xanthate in cyanidation**, by H. H. McCreedy and W. R. Honeywell. Reprinted from the Canadian Mining Journal, August, 1966, pp. 66-69. Table, figs.

Prepared in the Extraction Metallurgy Division.

Out of print.

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RS24.—**Production of high-purity niobium oxide from pyrochloropero-vskite concentrate**, by F. J. Kelly and W. A. Gow. Reprinted from The Canadian Mining and Metallurgical Bulletin, August 1965, 6p. Tables, fig.

Prepared in the Extraction Metallurgy Division.

Out of print.

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RS25.—**Système de détermination à distance de la vitesse de détonation de fortes charges explosives**, par G. E. Larocque, F. Kapeller, et A. Darling. Reimprimé de "Explosifs", n° 3, 1966, pp. 81-89. Figs.

Prepared in the Fuels and Mining Practice Division.

Édition épuisée.

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RS26.—**Experimental criteria for classification of rock substances**, by D. F. Coates and R. C. Parsons. Reprinted from Int. J. Rock Mech. Min. Sci., v. 3, pp. 181-189. Table.

Prepared in the Fuels and Mining Practice Division.

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RS27.—**Planning slopes in shale and other rocks**, by D. F. Coates. Conference preprint 342 of ASCE Water Resources Engineering Conference, Denver, Colorado, May 16-20, 1966. 43p. Illus., tables, figs.

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Prepared in the University of Alberta and the Fuels and Mining Practice Division.
Out of print. *Cat. No. M38-8/28*

RS29.—**Occurrence, étude et contrôle des dégagements instantanés du charbon et gaz au Canada**, par T. H. Patching et J. C. Botham. Conférence présentée au Congrès international sur des problèmes des dégagements instantanés de gaz et roche, octobre 13-18, 1966, Leipzig. 30p. Tableau, graphiques, carte.

Préparé à l'Université d'Alberta et à la Division des combustibles et du génie minier.

Édition épuisée.

N° de cat. M38-8/29F

RS30.—**Additives prevent low carbon steel corrosion in sulfurous acid**, by W. McLeod and R. R. Rogers. Reprinted from Materials Protection, v. 5, No. 12, December, 1966, pp. 28 and 29. Tables.

Prepared in the Extraction Metallurgy Division.

Out of print.

Cat. No. M38-8/30

RS31.—**Use of "on-live" computer for Moessbauer experiments**, by R. H. Goodman and J. E. Richardson. Reprinted from The Review of Scientific Instruments, v. 37, No. 3, pp. 283-286, March, 1966. Figs.

Prepared in the Mineral Sciences Division.

Out of print.

Cat. No. M38-8/31

RS32.—**Effects of some variations in fabrication procedure on the properties of load zirconate-titanate ceramics made from spray-dried, co-precipitated powders**, by A. H. Webster, T. B. Weston and V. M. McNamara. Reprinted from the Journal of Canadian Ceramic Society, v. 35, pp. 61-68, 1966. Tables, figs.

Out of print.

Cat. No. M38-8/32

RS33.—**Experimental alloy analysis by X-ray spectroscopy**, by D. J. Reed. Reprinted from the Canadian Spectroscopy, v. 12, issue No. 1, pp. 6-9, January, 1967. Tables, figs.

Prepared in the Mineral Sciences Division.

Out of print.

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MISCELLANEOUS—DIVERS

Canadian Metallurgical Quarterly.

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Vol 3, No. 2, April-June, 1964, p. 123-196.

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Vol. 4, No. 4, Oct.-Dec., 1965, p. 237-302.

Contents.—Use of gaseous thermal conductivity to determine the thermodynamics of barium chloride dehydration.—Use of gaseous thermal conductivity to determine the kinetics of barium chloride dehydration.—Effect of prior beta grain size on the ductility of zirconium-2.5 weight per cent niobium alloy.—Some aspects of the Fcc-Hcp transformation in a Cu-Si alloy.—Multicomponent organic corrosion inhibitors.—Sulphation of tricobalt tetroxide and nickel monoxide with fused sodium hydrogen sulphate.

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Vol. 5, No. 2, April-June, 1966. Pp. 77-160.

Contents.—Evaporation of liquid iron alloys under vacuum.—Zero-point-of-charge of hematite and zirconia.—Thermodynamics of the Mn-S-O system between 1000° K and 1250° K.—Photographic method for high-temperature strain measurements.—Shrinkage in fine gold wires.—Mechanical twinning of polycrystalline B.C.C. metals.

Vol. 5, No. 3, July-September, 1966, p. 161-263.

Contents.—Review of the mechanisms of fatigue.—Effect of fatigue on the ductile-brittle transition temperature of two mild steels.—Study of the reaction temperatures obtained during the isothermal reduction of iron ores.—Kinetics of hematite reduction by partially reformed natural gas.—Fused sodium pyrosulphate as a sulphation catalyst for NiO and Co₃O₄.—Diffusion constants in liquid lead-tin alloys.

50c.

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Reports

Mines memo, 1961: annual review of the work of the Mines Branch. Ottawa, 1962. 179p. Illus., organization charts. 25cm. Paper cover.

This 1961 research review is the first issue of a new series designed to present the scientific work of the Mines Branch in greater detail than heretofore. It should be of most interest to those who are concerned with discovering scientific facts and applying them for the most efficient use of Canada's mineral resources.

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Cat. No. M31-1261

Mines memo, 1962: Annual review of research investigations of the Mines Branch. Ottawa, 1963. 180p. Illus., organization chart. 25cm. Paper cover.

Mines Memo 1962, the second in an annual series, presents a review of the research carried out in the Mines Branch during 1962 for the benefit of the primary and secondary mineral and metallurgical industries in Canada.

\$1.

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Mines memo, 1963: Annual review of research investigations of the Mines Branch. Ottawa, 1964. 185p. Illus., organization chart. 25cm. Paper cover.

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Mines memo, 1965: Annual review of research investigations of the Mines Branch. Ottawa, 1965. 176p. Illus. 25cm. Paper cover.

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Cat. No. M31-12/1965

Mines memo, 1966: annual review of research investigations of the Mines Branch, Ottawa, 1966. 189p. Illus. 25cm. Paper cover.

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Cat. No. M31-12/1966

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Reports.—*Continued.*

Rapports.—*Suite.*

Proceedings of the rock mechanics symposium, held at McGill University, Montreal 7-8, 1962. Ottawa, 1963. 218p. Illus., tables, graphs. 25cm. Paper bound.

Published by Mines Branch.

Contents.—Boundary stresses around an elliptical opening in an infinite solid.—Some physical properties of rocks and their relationship to uniaxial compressive strength.—Measurement of rock stress.—Investigations related to outbursts of coal and gas.—Mining research at Steep Rock Iron Mines Limited.—Ground control at the Creighton Mine of the International Nickel Company of Canada Limited.—Development of a model for a mine structure.—Some aspects of the use of pillars for mine support.—Rapporteur's summary.—Concluding remarks.

\$4.

Cat. No. M37-462

Rock mechanics symposium, proceedings. Ottawa, 1964. 147p. Illus., tables, map, figs. 25cm. Paper bound.

Published by Mines Branch.

The symposium was held at Queen's University, Kingston, December 6-7, 1963. The program was laid on to serve three purposes. The first was to present papers on rock mechanics subjects for a rigorous examination by other workers in the field or associated fields. The second was to examine papers that described conditions that might be improved by rock mechanics work. The third was to acquaint the industry with projects underway in rock mechanics research.

\$3.25.

Cat. No. M37-663

Proceedings of the Boyer Conference (First conference on fuel technology in Canada), May 21-23, 1963. École Polytechnique, Université de Montréal, Montréal, Québec. Ottawa, 1964. 378p. Illus., tables, figs. 28cm. Paper bound. Bilingual.

This conference was sponsored by the Department of Mines and Technical Surveys, Ottawa, and the Institute of Combustion and Fuel Technology of Canada.

\$5.

Cat. No. M37-763

Comptes-rendus de la Conférence Boyer (Première conférence sur la technologie des combustibles au Canada), du 21 au 23 mai 1963, École Polytechnique, Université de Montréal, Montréal, Québec. Ottawa, 1964. 378p. Ill., tableaux, figs. 28cm. Cartonné. Bilingue.

Conférence, tenue sous les auspices du ministre des Mines et des Relevés techniques, Ottawa, et l'Institut de la combustion et de la technologie des combustibles du Canada.

\$5.

N^o de cat. M37-763

Proceedings of the Rock Mechanics Symposium held at University of Toronto, January 15-16, 1965. Ottawa, 1965. 204p. Illus., tables, figs. 25cm. Paper bound.

Published by Mines Branch.

\$3.25.

Cat. No. M37-965

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Part IV

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The Mineral Reports, Mineral Surveys and Mineral Information Bulletins cover studies on mineral resources, mineral economics, mineral legislation, mineral taxation, mining technology and other miscellaneous mineral industry subjects. However, it is intended that the Mineral Report series will consist of exhaustive authoritative studies having value as reference or historical documents, while publications in the Mineral Information Bulletin series will perhaps be of short-term value and not too exhaustive in scope. Publications in the Mineral Surveys series will fall between these two, having reasonably long-term value and a reasonably thorough treatment of the subject matter. Reprints of articles appearing in technical journals will be included in the Mineral Information Bulletin series.

Annual Mineral Reviews: Annual preliminary mineral reviews on metallics, industrial minerals and fuel commodities are prepared in collaboration with the Mines Branch. Initially published as separates, the reviews are later revised, bound in book form, and released as a Mineral Report for the year concerned.

Maps: Includes all maps not used principally as illustrative material in Divisional reports.

Miscellaneous publications: This category has no numbering system to indicate a continuing series, nor will publications falling within this group necessarily follow a prescribed format. Such as special reports, illustrated brochures and pamphlets having a broad content are included under this heading. Annual Reports on the Administration of the Emergency Gold Mining Assistance Act are included.

**PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES**

MINERAL REPORTS—RAPPORTS MINIERS

Mineral reports. No. 1- , 1960-

Rapports miniers. N° 1- , 1960-

Published by the Mineral Resources Division.

Publiés par la Division des ressources minérales.

1.—Canadian mineral industry, 1956. 1960. 447p. Tables, graphs.

Prepared in collaboration with the Mines Branch.

Earlier publications of this nature and under the same title appeared as Mines Branch Reports, the first for 1934 and the last for 1955. Like the previous issues, the present volume contains reviews of the metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during the year concerned. The reviews are the final versions of preliminary papers issued during 1957.

Out of print.

Cat. No. M38-5/1

1.—Industrie minière du Canada en 1956. 1961. 496p. Ill., tableaux, graphiques, cartes.

Le présent exposé traite surtout des progrès faits en 1956 par l'industrie minière du Canada mais il insiste passablement toutefois sur l'expansion que cette industrie a prise au cours des 30 dernières années.

Édition épuisée.

N° de cat. M38-5/1F

2.—Canadian mineral industry, 1957. 1960. 491p. Illus., tables, graphs, maps.

Prepared with the collaboration of the Mines Branch.

This annual report contains reviews of the metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during 1957.

Out of print.

Cat. No. M38-5/2

2.—Industrie minière du Canada en 1957. 1961. 549p. Ill., tableaux, graphiques, cartes.

Le présent rapport annuel contient des revues rétrospectives de la production et de la consommation des minéraux métalliques, des minéraux industriels et des combustibles minéraux au Canada en 1957.

Édition épuisée.

N° de cat. M38-5/2F

3.—Platinum metals, by C. C. Allen. 1960. 68p. Illus., tables, graphs, maps.

This publication was designed to present, against a brief historical background, a comprehensive survey of recent technical and economic progress relative to the production and use of the platinum metals in their various forms.

Out of print.

Cat. No. M38-5/3

3.—Métaux du groupe platine, par C. C. Allen. 1960. 74p. Ill., tableaux, graphiques, cartes.

En rappelant brièvement l'histoire de ces métaux, la présente publication voudrait faire le point des progrès techniques et économiques récents dans la production et l'utilisation des métaux du groupe platine sous leurs diverses formes.

Édition épuisée.

N° de cat. M38-5/3F

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral Reports.—Continued.

Rapports miniers.—Suite.

4. **Canadian mineral industry, 1958.** 1961. 508p. Illus., tables, graphs, maps.
This annual report contains reviews of the metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during 1958.
Out of print. Cat. No. M38-514
- 4.—**Industrie minière du Canada en 1958.** 1962. 532p. Ill., tableaux, graphiques, cartes.
Le présent rapport annuel contient des aperçus sur les minéraux métalliques, les minéraux industriels et les combustibles produits ou consommés en quantités marchandes au Canada en 1958.
Édition épuisée. N° de cat. M38-514F
- 5.—**Canadian mineral industry, 1959.** Ottawa, 1962. 515p. Illus., tables, graphs, maps.
This annual report contains reviews of the metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during 1959.
Out of print. Cat. No. M38-515
- 5.—**Industrie minière du Canada en 1959.** 1963. 530p. Ill., tableaux, graphiques, cartes.
Le présent rapport annuel contient des aperçus sur les minéraux métalliques et industriels ainsi que sur les combustibles produits et consommés en quantités marchandes au Canada en 1959.
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- 6.—Molybdenum, by V. B. Schneider. 1963. 176p. Illus., tables, figs.
This publication was designed to present a description of Canadian molybdenum resources, a summary of the metal's early development, an outline of its industrial applications, and an analysis of its present demand and future prospects.
Out of print. Cat. No. M38-5/6
- 7.—Canadian mineral industry, 1960. 1963. 605p. Illus., tables, graphs, maps.
This volume contains reviews of fifty-seven metallic minerals, industrial minerals and mineral fuels produced or consumed in commercial quantities in Canada during 1960. These reviews are preceded by a general article dealing with the overall economic and technical factors characteristic of the mineral industry during the year.
Out of print. Cat. No. M38-5/7
- 7.—Industrie minière du Canada en 1960. 1964. 604p. Ill., tableaux, graphiques, cartes.
Le présent volume contient des exposés sommaires sur 57 minéraux métallifères, minéraux industriels et combustibles, minéraux produits ou consommés en quantités marchandes au Canada en 1960. Ces exposés sont précédés de généralités sur l'ensemble des facteurs économiques et techniques marquants de l'industrie minière, au cours de l'année.
Édition épuisée. N° de cat. M38-5/7F
- 8.—Canadian mineral industry, 1961. 1963. 441p. Illus., tables, graphs, maps.
This volume contains in revised form, 57 mineral reviews originally issued as separates during 1962. The reviews deal with exploration and development, production, consumption, trade and technical matters in regard to specific minerals of current or potential importance in the Canadian economy.
Out of print. Cat. No. M38-5/8
- 8.—Industrie minière du Canada en 1961. 1965. 627p. Ill., tableaux, graphiques, cartes.
Cet ouvrage comprend 57 rapports révisés sur les minéraux, qui ont d'abord paru séparément en 1962. Ces rapports traitent des sujets suivants: exploration et mise en valeur, production, consommation, commerce et aspects techniques relatifs de minéraux qui sont ou qui peuvent devenir importants pour l'économie canadienne.
Édition épuisée. N° de cat. M38-5/8F
- 9.—Canadian minerals yearbook, 1962. 1964. 626p. Illus., tables, figs. Col. map (in pocket).
Out of print. Cat. No. M38-5/9
- 9.—Annuaire des minéraux au Canada, 1962. 1965. 664p. Ill., tableaux, graphiques, cartes (1 pliée dans pochette).
Édition épuisée. N° de cat. M38-5/9F
- 10.—Canadian minerals yearbook, 1963. 1965. 640p. Illus., tables, graphs, maps (1 folded in pocket).
This book consists of a number of individual mineral review chapters issued separately and in advance of the Yearbook itself. Content covers economic-engineering-resources developments in the Canadian mineral industry during the year concerned.
Out of print. Cat. No. M38-5/10

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral reports.—Continued.

Rapports miniers.—Suite.

- 10.—Annuaire des minéraux du Canada, 1963. 1966. 705p. Ill., tableaux, graphiques, cartes (1 pliée dans pochette).

Cette publication renferme une revue des faits nouveaux dans le domaine de l'économie, du génie et des ressources qui se sont produits au cours de l'année. Comme dans le passé, l'Annuaire consiste en une série de rapports préliminaires sur chaque minéral en particulier publiés séparément avant l'Annuaire lui-même.

Édition épuisée.

N^o de cat. M38-5/10F

- 11.—Canadian minerals yearbook, 1964. 1966. 744p. Illus., tables, graphs, maps (1 folded in pocket).

This yearbook describes the Canadian mineral industry in 1964 in terms of the more than 65 mineral commodities produced or consumed in significant quantities in Canada. Exploration and development, production, processing, markets, trade, consumption, uses and world trends are discussed.

Out of print.

Cat. No. M38-5/11

MINERAL SURVEYS

Mineral Surveys. No. MS1- , 1962-

- 1.—Canadian underground mine haulage, by Amil Dubnie. 1965. 74p. Illus., tables, figs.

This report is designed to focus attention upon ore-handling methods in Canadian mines, an activity in which the impact of technological advances is likely to be forcibly felt.

Out of print.

Cat. No. M38-6/1

- 2.—Transportation and the competitive position of selected Canadian minerals, by A. Dubnie. 1962. 140p. Illus., tables, maps (3 folded in pocket).

This survey is a broad, general study of the transportation of Canadian minerals. It is hoped that it will be useful to all mineral producers as a guide in their efforts to reduce the cost of transportation.

Out of print.

Cat. No. M38-6/2

- 3.—Silver in Canada, by J. W. Patterson. 1963. 110p. Illus., tables, graphs, figs. (2 fold.).

This report deals with the history of the Canadian silver industry, its geology and reserves, production methods and output, consumption and trade. It also contains a summary of the world industry.

Out of print.

Cat. No. M38-6/3

- 4.—Open pit mining practice in Canada, by Amil Dubnie. 1964. 93p. Illus., tables, figs.

This publication provides a general survey of the equipment, methods, and costs of open-pit mining in Canada. The objective has been to provide a basic understanding of current Canadian practice. Considerable descriptive material has been included to assist those who are unfamiliar with mining.

Out of print.

Cat. No. M38-6/4

**PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES**

Mineral Surveys.—Continued.

MINERAL RESOURCES DIVISION PUBLICATIONS

MINERAL INFORMATION BULLETINS

Mineral Information Bulletins. No. MR27- , 1958-

Prepared by the Mineral Resources Division.

MR27.—Survey of the iron ore industry in Canada during 1957, by T. H. Janes and R. B. Elver. June, 1958. 116p. Tables, graphs, maps. 28cm. Processed. Paper cover.

This publication provides a detailed study of the production, trade and developments of the iron ore industry in Canada during 1957. Maps showing the properties in production, properties under development for production within the next few years, and properties on which exploration of iron-bearing material is taking place are included.

Out of print.

Cat. No. M38-2/27

MR28.—Iron ore and other raw material sources for a primary iron and steel industry in Western Canada, by T. H. Janes. Ottawa, April, 1958. 10p. Tables, map.

Out of print.

Cat. No. M38-2/28

MR29.—Mineral legislation, 1958, compiled by E. C. Hodgson. December 12, 1958. 11p. 28cm. Processed. Paper cover.

This publication attempts to catalogue the more important changes in legislation and other governmental actions which have affected in a direct manner the Canadian mineral industry excluding petroleum and natural gas during the past year.

Out of print.

Cat. No. M38-2/29

MR30.—Summary review of federal taxation and certain other federal legislation affecting mining, oil and natural gas enterprises in Canada, compiled by E. C. Hodgson. January 8, 1959. 23p. 28cm. Processed. Paper cover.

Prepared with the co-operation and guidance of the Department of National Revenue and of the various Departments concerned.

Out of print.

Cat. No. M38-2/30

MR31.—Survey of the Canadian iron ore industry during 1958, by T. H. Janes and R. B. Elver. June, 1959. 148p. Tables, graphs, maps.

Out of print.

Cat. No. M38-2/31

MR32.—Survey of the primary zinc industry in Canada in 1958, by D. B. Fraser. August, 1959. 69p. Tables, graphs, map. 28cm. Processed. Paper cover.

This publication provides detailed information on the sources of primary production, trade, and consumption of zinc in Canada in 1958.

Out of print.

Cat. No. M38-2/32

MR33.—Markets for iron and steel products in Western Canada, by T. H. Janes. September, 1959. 28p. Tables. Processed. Paper cover.

This publication briefly lists the rolling mill capacities of the primary iron and steel producers of Western Canada. It provides information, in some detail, on the consumption of steel rolling mill products, by kind, of the four western provinces.

Out of print.

Cat. No. M38-2/33

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral Information Bulletins.—Continued.

- MR34.—Survey of the uranium industry in Canada, by J. W. Griffith. November, 1959. 94p. Tables, graph, maps, diagrs. Processed. Paper cover.
Contents.—Introduction.—Producers and former producers.—Mining methods.—Ore treatment processes.—Production costs.—Refining.—Prices.—Markets.—Uses and requirements.—World resources and production of uranium.—Thorium in Canada.
Out of print. Cat. No. M38-2/34
- MR35.—Survey of the petroleum industry in Canada, 1957 and 1958, by R. A. Simpson and R. L. Borden. June, 1959. 84p. Tables, graphs, maps. Processed. Paper cover.
Contents.—General summary.—Exploration and development.—Reserves of liquid hydrocarbons.—Development by provinces.—Transportation and storage.—Petroleum processing.—Marketing.—Supply and demand of all oils.—World statistics.
Out of print. Cat. No. M38-2/35
- MR36.—Survey of the steel pipe and tube industry of Canada, by T. H. Janes. October, 1959. 46p. Illus., tables. Paper cover.
Contents.—Historical.—General.—Production, trade and consumption.—Canadian industry.—Specifications for steel pipe and tubing.—Methods of manufacture.—Oil and gas pipeline mileage in Canada.—Future of the industry.
Out of print. Cat. No. M38-2/36
- MR37.—Survey of the copper industry in Canada, 1958, by A. F. Killin. October, 1959. 108p. Tables, graphs, map. Paper cover.
Contents.—General summary.—Copper producers in 1958.—Reserves of copper as related to production.—World mine production.—Domestic consumption and uses.—Prices.—Tariffs.
Out of print. Cat. No. M38-2/37
- MR38.—Some economic factors affecting Northern mineral development in Canada, by Amil Dubnie. December, 1959. 61p. Map fold. Paper cover.
The first part of this paper provides a description of prevailing northern conditions, with particular emphasis on those conditions which affect mining operations. The second part of the paper presents some detail on northern mining experience.
Out of print. Cat. No. M38-2/38
- MR39.—Survey of the natural gas industry in Canada 1957-1959, by R. A. Simpson and R. L. Borden. 1960. 82p. Tables, graphs, figs. (1 folded in pocket).
Out of print. Cat. No. M38-2/39
- MR40.—St. Lawrence Seaway and the Canadian mineral industry with particular reference to iron ore, by R. B. Elver. February, 1960. 21p. Tables, map.
Out of print. Cat. No. M38-2/40
- MR41.—Direct iron processes and their prospects in Eastern Canada, by R. B. Elver. March, 1960. 63p. Illus., tables, graph, map.
Out of print. Cat. No. M38-2/41

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Information Bulletins.—Continued.

- MR42.—Summary review of federal taxation and legislation affecting the Canadian mineral industry, compiled by E. C. Hodgson. Revised February 3, 1961. 30p.
This booklet is a summary of certain Federal legislation affecting mining, oil and gas enterprises in Canada.
Out of print. Cat. No. M38-2/42
- MR43.—Survey of the primary zinc industry in Canada, 1959, by D. B. Fraser. 1960. 84p. Tables, graphs, map.
This publication provides detailed information on primary production, trade and consumption of zinc in Canada in 1959.
Out of print. Cat. No. M38-2/43
- MR44.—Survey of the uranium industry in Canada, 1959, by J. W. Griffith. 1960. 46p. Illus., tables, graph, maps.
This bulletin is a summary of developments in the industry for the year 1959 but includes some developments up to the end of September 1960, and estimates of future production. It also deals with statistics on production for 1959 and 1958, ore reserves, costs, refining, prices, markets, world production and reserves, and a brief outline of thorium in Canada.
75c. Cat. No. M38-2/44
- MR45.—Survey of the Canadian iron ore industry during 1959, by R. B. Elver. 1960. 121p. Tables, graphs, maps.
Out of print. Cat. No. M38-2/45
- MR46.—Primary iron and steel industry in Canada, by T. H. Janes and G. E. Wittur. Ottawa, 1962. 79p. Illus., tables, graph.
Out of print. Cat. No. M38-2/46
- MR47.—Survey of the copper industry in Canada, 1959, by A. F. Killin. 1960. 107p. Tables, graph, map.
Out of print. Cat. No. M38-2/47
- MR48.—Survey of the petroleum industry in Canada, 1959, by R. A. Simpson, D. M. Nowlan and D. W. Rutledge, 1961. 82p. Tables, graphs, maps.
This survey covers the main developments in 1959 and presents an interrelated review of progress in each of the four principal sectors of the industry; exploration, development and production; transportation and storage; petroleum processing; and marketing.
Out of print. Cat. No. M38-2/48
- MR49.—Preliminary survey of the Canadian mineral industry in 1960. (Reprinted from February, 1961 issue of Canadian Mining Journal) 1961. 38p. Illus., tables, graphs.
Out of print. Cat. No. M38-2/49
- MR50.—Transportation of minerals in Northern Canada, by Amil Dubnie. 1961. 20p. Tables, map fold.
As the cost of transportation is a major factor in northern mineral development, this paper examines the existing transportation facilities in the northern areas of Canada.
Out of print. Cat. No. M38-2/50

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral Information Bulletins.—Continued.

- MR51.—**Canadian iron ore industry in 1960**, by R. B. Elver, 1961. 107p. Illus., tables, graphs, maps.
Out of print. *Cat. No. M38-2/51*
- MR52.—**Survey of the petroleum industry in Canada in 1960**, by R. A. Simpson, D. M. Nowlan and D. W. Rutledge. 1961. 91p. Tables, graphs, maps.
Out of print. *Cat. No. M38-2/52*
- MR53.—**Lead and zinc in Canada**, by D. B. Fraser and J. W. Patterson. 1961. 82p. Illus., tables, graphs, charts, map.
Out of print. *Cat. No. M38-2/53*
- MR54.—**Survey of the copper mining industry in Canada, 1960**, by A. F. Killin. 1962. 77p. Illus., tables, graphs, maps.
Out of print. *Cat. No. M38-2/54*
- MR55.—**Natural gas industry in Canada, 1960**, by R. A. Simpson, D. M. Nowlan and D. W. Rutledge. 1961. 55p. Tables, graphs, maps.
This survey presents an interrelated review of each of five principal sectors: production and reserves; exploration and development; natural gas processing; transportation and storage; marketing and trade.
Out of print. *Cat. No. M38-2/55*
- MR56.—**Preliminary survey of the Canadian mineral industry in 1961**. Reprinted from Canadian Mining Journal, February, 1962. 48p. Illus., graphs.
Prepared in the Mineral Resources Division and Mines Branch.
Out of print. *Cat. No. M38-2/56*
- MR57.—**Demand for energy in the Atlantic Provinces, 1950-1980**, by D. M. Nowlan, 1962. 113p. Tables, graphs, 1 folded chart.
This bulletin gives a detailed study of current trends and an assessment of the future outlook for energy demand.
Out of print. *Cat. No. M38-2/57*
- MR58.—**Survey of the mineral industry of Southern Africa**, by R. B. Toombs. 1962. 275p. Illus., tables, figs, maps. (3 folded in pocket).
This survey of the mineral industry of southern Africa has been prepared as a record of the Seventh Commonwealth Mining and Metallurgical Congress which was held in southern Africa during the period April 10-May 21, 1961. The Congress afforded the author an opportunity of visiting one of the important mineral regions of the world. To the extent that is possible from a relatively brief period of observation, this report describes the mineral industry of southern Africa and its economic environment.
Out of print. *Cat. No. M38-2/58*
- MR59.—**Canadian iron ore industry in 1961**, by R. B. Elver and G. E. Wittur. 1962. 103p. Illus., tables, graphs, maps.
This publication provides a detailed study of developments, production and trade in the iron ore industry of Canada during 1961.
Out of print. *Cat. No. M38-2/59*

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Information Bulletins.—Continued.

- MR60.—Lead and zinc in Canada, 1961**, by D. B. Fraser and J. W. Patterson. 1963. 90p. Illus., tables, graphs, maps.
This publication serves mainly to provide detailed information on primary production, trade and consumption of lead and zinc in Canada in 1961, but trends in the lead and zinc industries are shown in historical tables which go back many years to a period when production was almost negligible.
Out of print. Cat. No. M38-2/60
- MR61.—Chromium industry — Canada and the world**, by V. B. Schneider. 1963. 64p. Illus., tables, maps.
This bulletin describes, in summary form the Canadian chromium industry and includes a description of known domestic occurrences of chromite and past producing areas. It also outlines briefly world chromite deposits and trade. Sections describe mining, beneficiation, uses and specifications of chromite, uses and characteristics of chromium additives in steelmaking and the uses of chromium in the chemical industry.
Out of print. Cat. No. M38-2/61
- MR62.—Survey of the petroleum industry in Canada in 1961**, by R. A. Simpson, D. W. Rutledge and D. M. Nowlan. 1963. 96p. Tables, graphs, maps.
This survey of the petroleum industry in Canada covers the main developments in 1961 and presents an interrelated review of progress in each of the four principal sectors of the industry: exploration, development and production; transportation and storage; petroleum processing; and marketing.
75c. Cat. No. M38-2/62
- MR63.—Preliminary survey of the Canadian mineral industry in 1962.**
Reprinted from February, 1963 issue of Canadian Mining Journal.
1963. 48p. Illus., tables, graphs.
Out of print. Cat. No. M38-2/63
- MR64.—Mineral development policy**, by W. Keith Buck. 1963. 14p.
Contents.—Summary.—Introduction.—Minerals jurisdiction.—Tax incentives.—Government services.—Subsidies.—Bounties.—Government participation in mining and oil enterprises.—Commissions of enquiry into broad regional and national problems.—Education.—Conclusions.
Out of print. Cat. No. M38-2/64
- MR65.—Steel industry of the Prairie Provinces**, by T. H. Janes and R. B. Elver. 1963. 36p. Tables, maps.
Contents.—Primary iron and steel industry of the Prairie Provinces.—Consumption of steel rolling mill products.—Pipe requirements of oil and gas industries.—Steel pipe and tube industry.—Employment.
Out of print. Cat. No. M38-2/65
- MR66.—Technical and economic factors in the choice of steel plant location**, by R. B. Elver, T. H. Janes and J. H. Walsh. 1963. 12p.
Out of print. Cat. No. M38-2/66
- MR67.—Canadian iron ore industry in 1962**, by R. B. Elver. 1963. 100p. Illus., tables, graphs, maps.
\$1. Cat. No. M38-2/67

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

Mineral Information Bulletins.—Continued.

- MR68.—Canadian copper industry in 1962, by A. F. Killin. 1963. 108p. Illus., tables, graphs, maps.
Out of print. *Cat. No. M38-2/68*
- MR69.—Canadian nonferrous mineral industry in relation to the European Economic Community. 1963. 78p. Tables, graphs, maps.
Out of print. *Cat. No. M38-2/69*
- MR70.—Canadian steel industry: a pattern of growth, by W. Keith Buck and R. B. Elver. 1964. 18p. Illus., graph, map.
This paper describes the establishment and growth of the Canadian primary iron and steel industry within the context of Canadian economic development. It was prepared at the request of the United Nations Centre for Industrial Development for presentation at the United Nations Inter-regional Symposium on the Application of Modern Technical Practices in the Iron and Steel Industry in Developing Countries. The Symposium was held in Prague, Czechoslovakia and Geneva, Switzerland from November 11-26, 1963, inclusive.
Out of print. *Cat. No. M38-2/70*
- MR71.—Canadian mineral industry in 1963: preliminary. Reprinted from February, 1964 issue of Canadian Mining Journal. 1964. 53p. Tables, graphs.
Out of print. *Cat. No. M38-2/71*
- MR72.—Natural gas industry in Canada 1961 and 1962, by R. A. Simpson and D. W. Rutledge. 1964. 71p. Tables, figs., map.
Prepared in the Mineral Resources Division.
Out of print. *Cat. No. M36-2/72*
- MR73.—Summary review of federal taxation and legislation affecting the Canadian mineral industry, compiled by E. C. Hodgson and W. J. Beard. Revised February, 1964. 27p.
Prepared with the co-operation and guidance of the Department of National Revenue and of the various Departments concerned.
Out of print. *Cat. No. M38-2/73*
- MR74.—Economic aspects of iron ore in a changing market, by R. B. Elver. 1964. 32p. Tables, figs., map.
This paper analyses the forces that have caused the major changes in world iron ore production and trading patterns since World War II. Future trends are also considered.
Out of print. *Cat. No. M38-2/74*
- MR75.—Canadian minerals in national and international perspective, by R. B. Toombs. 1966. 63p. Tables, graphs.
This study is designed to describe the growth and present status of the Canadian mineral industry and to measure its importance in the Canadian economy in the world mineral industry.
Out of print. *Cat. No. M38-2/75*
- MR76.—Canadian iron ore industry, 1963, by G. E. Wittur. 1964. 98p. Illus., tables, graphs, maps.
This publication provides a detailed study of developments, production and trade in the iron ore industry of Canada during 1963.
Out of print. *Cat. No. M38-2/76*

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Information Bulletins.—Continued.

- MR77.—Canadian resources of uranium and thorium**, by J. W. Griffith and S. M. Roscoe. 1964. 12p. Illus., tables, maps.
This paper was prepared in order to attract the attention of countries, which are short of uranium and thorium, to Canada as a source of supply for their growing nuclear power programs. It presents a compilation of present reserves as well as a detailed assessment of future reserves—all in terms of economic criteria.
Out of print. Cat. No. M38-2/77
- MR78.—Survey of the petroleum industry in Canada, 1962 and 1963**, by R. A. Simpson and D. W. Rutledge. 1965. 125p. Illus., tables, graphs, maps (1 folded).
Prepared in the Mineral Resources Division.
Out of print. Cat. No. M38-2/78
- MR79.—Canadian mineral industry in 1964: preliminary.** Reprinted from Canadian Mining Journal, February, 1965. 65p. Illus., tables, graphs.
Prepared in the Mineral Resources Division and Mines Branch.
Out of print. Cat. No. M38-2/79
- MR80.—Canadian iron ore industry, 1964**, by G. E. Wittur. 1965. 110p. Illus., tables, graph, maps, 25cm.
This annual publication contains pertinent statistics and comments for 1964 and earlier years on the Canadian iron ore industry, including production, shipments, exports, imports, consumption, productive capacity and reserves.
Out of print. Cat. No. M38-2/80
- MR82.—Summary review, federal taxation and legislation affecting the Canadian mineral industry.** Compiled by E. C. Hodgson and W. J. Beard. Revised, January, 1966. 25p. 25cm.
\$1. Cat. No. M38-2/82
- MR84.—Mercury in Canada in international perspective, 1966**, by J. G. George. 1966. 20p. Figs., maps. 25cm.
Out of print. Cat. No. M38-2/84
- MR85.—Canadian iron ore industry, 1965**, by C. J. Gauvin and V. B. Schneider. 1967. 149p. Illus., tables, graphs, map, 25cm. Processed.
Out of print. Cat. No. M38-2/85

PUBLICATIONS DE LA DIVISION DES
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Mineral Information Bulletins.—Continued.

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Information Bulletins.—Continued.

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Mineral Information Bulletins.—Continued.

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Information Bulletins.—Continued.

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Mineral Information Bulletins.—Continued.

MINERAL RESOURCES DIVISION PUBLICATIONS

Mineral Information Bulletins.—Continued.

PUBLICATIONS DE LA DIVISION DES
RESSOURCES MINÉRALES

OPERATORS LISTS

Mineral Resources Operators Lists. Published annually by the Mineral Resources Division. Ottawa. 25cm. Paper cover. 20-50p. Illus.

- 1, Part 1—**Metallurgical works in Canada: primary iron and steel.**
50c. *Cat. No. M36-(year)/1-1*
- 1, Part 2—**Metallurgical works in Canada: non-ferrous and precious metals.**
50c. *Cat. No. M36-(year)/1-2*
- 2—**Metal and industrial mineral mines in Canada.**
50c. *Cat. No. M36-(year)/2*
- 3, Part 1—**Milling plants in Canada: metallic ores.**
50c. *Cat. No. M36-(year)/3-1*
- 3, Part 2—**Milling plants in Canada: Industrial minerals.**
50c. *Cat. No. M36-(year)/3-2*
- 4—**Coal mines in Canada (alternate years).**
50c. *Cat. No. M36-(year)/4*
- 5—**Petroleum refineries in Canada.**
50c. *Cat. No. M36-(year)/5*
- 6—**Ceramic plants in Canada.**
50c. *Cat. No. M36-(year)/6*
- 7—**Natural gas processing plants in Canada.**
50c. *Cat. No. M36-(year)/7*

MINERAL RESOURCES DIVISION PUBLICATIONS

PREPRINTS OF THE CANADIAN MINERALS YEARBOOK

Preprints or advanced chapters of the Canadian Minerals Yearbook. Published annually as separate looseleaf pamphlets. At the end of the year, these will be re-issued under one cover in the Canadian Minerals Yearbook.

The number of preprints in the series vary slightly from year to year depending on the importance of the commodity in the overall Canadian mineral industry scene.

A complete set of the preprints may be ordered at \$5 from the Queen's Printer, Ottawa. A high quality loose leaf binder for the preprints is available for \$4 and the subsequent Yearbook for \$5.

Single preprints are available only from the Mineral Resources Division at 25c each.

The following are the preprints to be published covering the Canadian mineral industry for the year 1965.

General Review.....	<i>R. B. Toombs and T. H. Janes</i>
Abrasives.....	<i>D. H. Stonehouse</i>
Aggregates, lightweight.....	<i>H. S. Wilson</i>
Aluminum.....	<i>W. H. Jackson</i>
Antimony.....	<i>D. B. Fraser</i>
Asbestos.....	<i>A. A. Winer</i>
Barite.....	<i>J. E. Reeves</i>
Bentonite.....	<i>J. E. Reeves</i>
Bismuth.....	<i>D. B. Fraser</i>
Cadmium.....	<i>D. B. Fraser</i>
Calcium.....	<i>W. H. Jackson</i>
Cement.....	<i>N. G. Zoldners</i>
Chromium.....	<i>V. B. Schnelder</i>
Clay and clay products.....	<i>J. G. Brady</i>
Coal and coke.....	<i>T. E. Tibbets and J. C. Hotham</i>
Cobalt.....	<i>V. B. Schnelder</i>
Copper.....	<i>A. F. Killin</i>
Feldspar.....	<i>J. E. Reeves</i>
Fluorspar.....	<i>J. E. Reeves</i>
Gold.....	<i>W. J. Beard</i>
Gypsum and anhydrite.....	<i>R. K. Collings</i>
Indium.....	<i>D. B. Fraser</i>
Iron ore.....	<i>C. J. Gauvin</i>
Iron and steel.....	<i>G. E. Wittur</i>
Lead.....	<i>J. G. George</i>
Lime.....	<i>D. H. Stonehouse</i>
Limestone.....	<i>D. H. Stonehouse</i>
Lithium minerals.....	<i>J. E. Reeves</i>

**PUBLICATIONS DE LA DIVISION DES
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Magnesite and brucite.....	<i>D. H. Stonehouse</i>
Magnesium.....	<i>W. H. Jackson</i>
Manganese.....	<i>V. B. Schneider</i>
Mercury.....	<i>J. G. George</i>
Mica.....	<i>J. E. Reeves</i>
Mineral pigments and fillers.....	<i>D. H. Stonehouse</i>
Molybdenum.....	<i>V. B. Schneider</i>
Natural gas.....	<i>D. W. Rutledge</i>
Nepheline syenite.....	<i>J. E. Reeves</i>
Nickel.....	<i>A. F. Killin</i>
Niobium (Columbium) and tantalum.....	<i>V. B. Schneider</i>
Petroleum.....	<i>D. W. Rutledge</i>
Phosphate.....	<i>C. M. Bartley</i>
Platinum metals.....	<i>A. F. Killin</i>
Potash.....	<i>C. M. Bartley</i>
Rare earths.....	<i>W. H. Jackson</i>
Roofing granules.....	<i>H. S. Wilson</i>
Salt.....	<i>D. H. Stonehouse</i>
Sand, gravel and crushed stone.....	<i>F. E. Hanes</i>
Selenium and tellurium.....	<i>A. F. Killin</i>
Silica.....	<i>R. K. Collings</i>
Silver.....	<i>J. G. George</i>
Sodium sulphate.....	<i>C. M. Bartley</i>
Stone, building and ornamental.....	<i>F. E. Hanes</i>
Sulphur.....	<i>C. M. Bartley</i>
Talc and soapstone.....	<i>D. H. Stonehouse</i>
Tin.....	<i>W. H. Jackson</i>
Titanium.....	<i>V. B. Schneider</i>
Tungsten.....	<i>V. B. Schneider</i>
Uranium and thorium.....	<i>R. A. Simpson</i>
Vanadium.....	<i>V. B. Schneider</i>
Zinc.....	<i>D. B. Fraser</i>

RAPPORTS PRÉLIMINAIRES DE L'ANNUAIRE DES MINÉRAUX DU CANADA

Rapports préliminaires ou anticipés de l'Annuaire des minéraux du Canada.

Publiés annuellement comme pamphlets séparés à feuilles mobiles et réimprimés à la fin de l'année sous le titre de l'Annuaire des minéraux du Canada.

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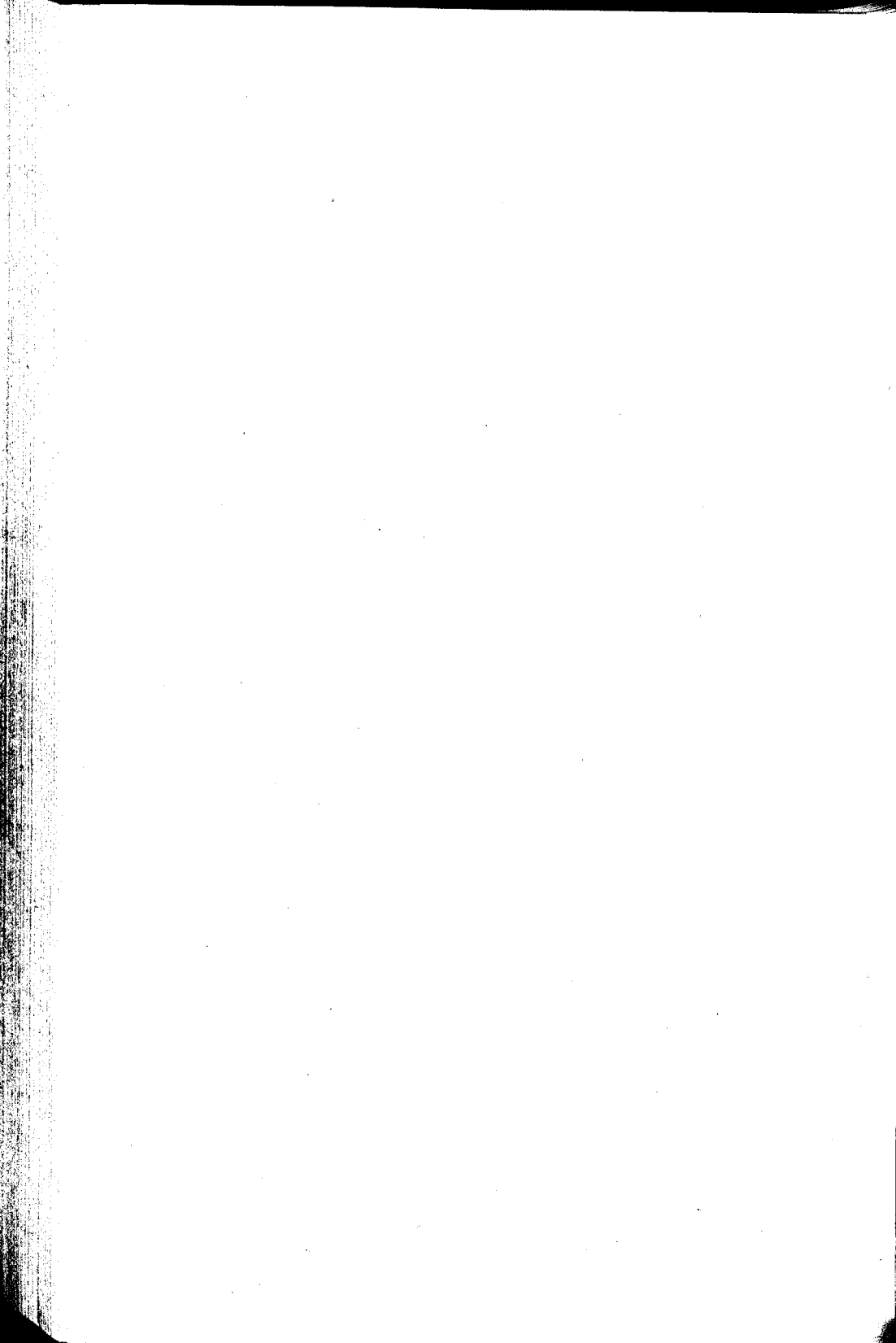
Minéralogie pratique et industrie minérale, par Jean-Paul Drolet, ingénieur des mines. Tiré à part du Jeune scientifique (ACFAS), v. 3, n^{os} 1 à 8. Ottawa, 1966, 50p. Ill., tableaux, carte des principales régions minières du Canada, pliée dans pochette. 28cm. Broché.

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Entrance awards for mineral industry courses at Canadian universities and technological institutes. Ottawa, revised 1966. 22p. Illus. 25cm. Paper cover.

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Part V

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- R.....Reports
- in R.*.....Article or report issued within a general report,
v.g. Summary Reports, or Investigations Reports,
or as an appendix to the report cited.
- R.M.....Maps

2. Memorandum Series (p. 120 to 132)

- M.S.....Memorandum

3. Technical Papers (p. 133 and 134)

- T.P.....Technical Paper

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- MR.....Mineral Maps

11. Reprint Series (p.)

- RS.....Reprint Series
- p. or pp.....page or pages

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- R..... Rapports
dans R..... Article formant une partie d'un rapport général,
v.g. Rapports sommaires ou appendice au rap-
port mentionné dans la référence.
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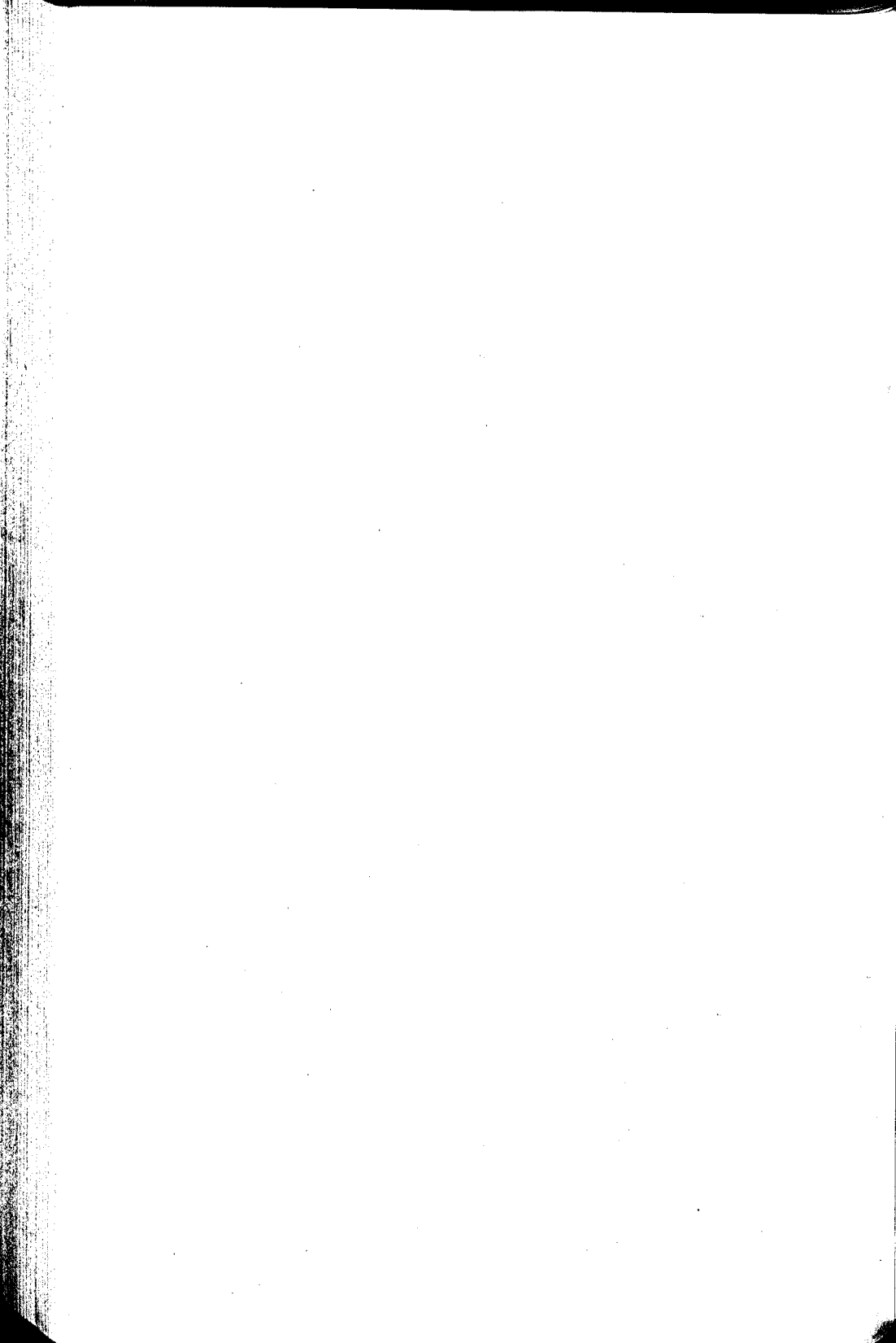
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RS..... Série de réimpressions

p. ou pp..... page ou pages

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