

**CIHM
Microfiche
Series
(Monographs)**

**ICMH
Collection de
microfiches
(monographies)**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

© 1998

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming are checked below.

- Coloured covers / Couverture de couleur
- Covers damaged / Couverture endommagée
- Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- Cover title missing / Le titre de couverture manque
- Coloured maps / Cartes géographiques en couleur
- Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- Bound with other material / Relié avec d'autres documents
- Only edition available / Seule édition disponible
- Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.
- Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from filming / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.
- Additional comments / Commentaires supplémentaires:

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- Coloured pages / Pages de couleur
- Pages damaged / Pages endommagées
- Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- Pages discoloured, stained or foxed / Pages décolorées, tachetées ou piquées
- Pages detached / Pages détachées
- Showthrough / Transparence
- Quality of print varies / Qualité inégale de l'impression
- Contains supplementary material / Contient du matériel supplémentaire
- Pages wholly or partially obscured by errata slips, issues, etc., have been refilmed to ensure the best possible image / Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible.
- Opposing pages with varying colouration or discolorations are filmed twice to ensure the best possible image / Les pages s'opposant ayant des colorations variables ou des décolorations sont filmées deux fois afin d'obtenir la meilleure image possible.

This item is filmed at the reduction ratio checked below / Ce document est filmé au taux de réduction indiqué ci-dessous.

10x		14x		18x		22x		26x		30x	
						<input checked="" type="checkbox"/>					
	12x		16x		20x		24x		28x		32x

The copy filmed here has been reproduced thanks to the generosity of:

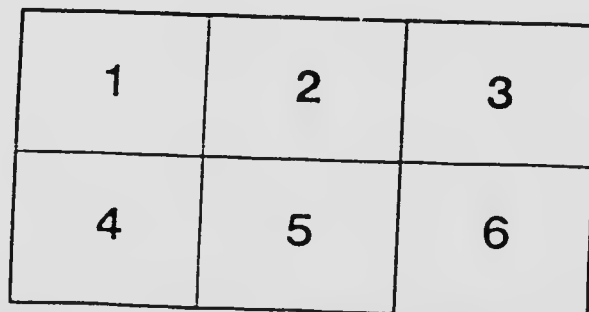
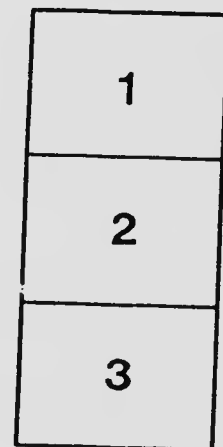
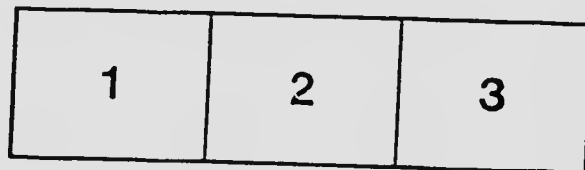
Legislative Library
Victoria

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol \rightarrow (meaning "CONTINUED"), or the symbol ∇ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

Legislative Library
Victoria

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

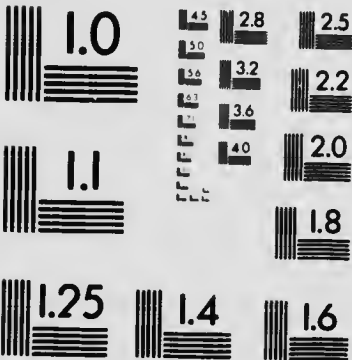
Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole \rightarrow signifie "A SUIVRE", le symbole ∇ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.

MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



APPLIED IMAGE Inc

1653 East Main Street
Rochester, New York 14609 USA
(716) 482 - 0300 - Phone
(716) 288 - 5989 - Fax

REFERENCE

LEGISLATIVE LIBRARY of BRITISH COLUMBIA



3 3298 00085 3631

The University of British Columbia
Vancouver, B.C.



Short Courses in
MINING
AND ALLIED SUBJECTS

For Metal Miners, Prospectors, Business Men and
others interested in Mining

JANUARY 14th to MARCH 9th, 1918
EIGHT WEEKS

P
378.711
B 882c.

University Buildings, Tenth Avenue and Laurel
Street, Vancouver, B.C.

P
378.711
L. 2

120
1/2 of

GENERAL



THE SHORT COURSES IN MINING and allied subjects offered by the University of British Columbia are not intended primarily for those who have had a technical training, but are designed to suit, and are given for the special benefit of those who have had practical experience in Mining and Prospecting, and of those who are connected with the business of Mining in any way. They may thereby obtain some practical technical knowledge helpful to them in their practical work or business. These courses are necessarily short and elementary in nature, as they are designed for those who have not the time nor qualifications necessary to take up full University Mining courses. As far as they go, however, they are complete courses, and adapted to fulfil their special purpose. For this reason no advanced series of Short Courses are given, and they are not in any way a substitute for the regular University Mining Course.

Anyone who takes the short courses will have the opportunity to acquire correct fundamental ideas in regard to the subjects taught and a practical working knowledge of many of the common minerals, ores and rocks of British Columbia, with a general knowledge of how ores are usually found, mined, smelted, and their values determined, with particular reference to the Province of British Columbia.

For the year 1918 these courses will be given for eight weeks only, as, on account of war conditions, the University has not been provided with equipment, teaching staff and building space sufficient to undertake more. When facilities are available, it is expected that the courses will be enlarged and lengthened.

For the present, instruction and practical work will be given at the University, Tenth Avenue and Laurel Street, Vancouver, B. C. Courses will be held in the day-time only, and require about 25 hours per week for those who attend all the courses.

A timetable is appended, subject to possible minor changes, in which, as far as possible, either the morning or afternoon of each day is left vacant, so that students may have time to attend to their personal affairs if necessary.

Short Mining Courses were inaugurated in January, 1917, and lasted six weeks, with 27 students in attendance. The attendance was well maintained throughout. Prospectors, Miners, Brokers, Business men, Newspapermen and others took the courses. Resolutions were passed stating their appreciation of the benefits derived and requesting further enlargement and extension of the work. As far as possible this request has been carried out this year, and it is expected that the course will be extended to twelve weeks later, and possibly be given in other centres than Vancouver.

Admission to Courses

Application for admission may be made personally at the Registrar's office, or by letter addressed to the Registrar, University of B. C., Vancouver, B. C., and must be accompanied by a registration fee of \$5.00, except in the case of Returned Soldiers, to whom it is free. The fee is the same, regardless of the number of courses taken.

Limitations of teaching staff, space and equipment, at present make it impossible to accommodate more than about eighty students in the lecture courses of Mining, Smelting, Geology, Surveying and Chemistry. While in the laboratory courses of Mineralogy, Assaying and Blacksmithing, not more than about twenty students can be accommodated. While every endeavour will be made to accommodate applicants to the utmost, no guarantee can be given to accept more than the numbers specified in any course, as given above.

Applications will be accepted in the order received until the vacancies are filled in any course, after which no more applications can be received for that course. Early application should therefore be made. If enough applications are received before December 15th, so that time will be left to obtain necessary apparatus, it may be possible to give Assaying and Mineralogy to a number of extra students, if the demand warrants.

Applications will be received until the courses are filled up, and each applicant will be notified as to the courses in which he has been accepted.

The fee will be returned to anyone whose application is received after the classes have been filled up.

Applicants are requested to use the form in the back of the Bulletin, or make out a similar form, when sending in their applications.

Returned Soldiers

All courses are free of charge to returned soldiers, who may apply, without registration fee, for any or all courses.

Selection of Courses

Applicants may choose all the courses, or make any selection desired, but must name the courses chosen in their application, in order that arrangements may be made for their accommodation. It is only fair to point out that anyone applying for a course which he does not afterwards intend to take, or actually take, may be preventing someone else from getting it.

Time and Place

Students will meet for the first time in the Geology Building of the University at 2 o'clock on the afternoon of Monday, January 14th, 1918.

PROVINCIAL LIBRARY
VICTORIA, B. C.

188595

Requirements

Ability to read and write and a desire to learn are the only requirements necessary in making application. No entrance examination is asked.

Students will supply their own notebooks, pens or pencils. They are advised to provide aprons or overalls in the laboratory courses. The University will supply all the materials and apparatus necessary without charge.

Those taking the Mineralogy course are required to provide themselves with a copy of "Dana's Manual of Mineralogy," revised by Ford, 1915 edition, published by John Wiley & Sons.

Board and Lodging

The University does not supply board and lodging. The University Buildings are at present situated on the corner of Tenth Avenue and Laurel Street, in one of the residential sections of Vancouver, about twenty minutes by car from the general Post Office. Board and lodging can readily be obtained within a reasonable distance.

The following Courses are Offered for 1918:

MINING.—Ores and Economic Minerals; Commercial Considerations; What to look for and where to look in British Columbia; Methods of Prospecting; Surface Indications; Use of Diamond or Core Drills; Preliminary Development of Properties; Tunnels and Shafts; Estimating Amounts and Values of Ores; Sampling Ore; Valuation of Prospects and Mines; Purchase and Sale of Properties; Simple Machinery and Mechanical Devices.

Lecture Course—2 hours per week.—**PROF. J. M. TURNBULL.**

SMELTING.—General Ideas in Regard to Smelting; Iron, Copper, Lead and Zinc Smelting; Adaptability to Different Ores; Selling and Buying of Smelting Ores; Treatment Rates; Concentrating Ores and Milling Methods; Choice between Milling and Direct Smelting.

Lecture Course—2 hours per week.—**PROF. J. M. TURNBULL.**

GEOLOGY AND ORE DEPOSITS.—Effects of Wind, Water and Ice; Vulcanism or Volcanic Action; Rock Alteration; Rock Structures and their Interpretation; Geological History; Underground Waters; Form, Structure and Texture of Mineral Deposits; Classification of Mineral Deposits; Deposits Formed by Rock Weathering; Placer Deposits; Bedded Deposits; Vein Deposits; Deposits Segregated in Igneous Rocks; Pegmatite Vein Deposits; Disseminated Deposits; Regionally Metamorphosed Deposits; Contact Metamorphosed Deposits; Miscellaneous Ore Deposits; Secondarily Enriched Ore Deposits; Coal and Petroleum.

Lecture Course—2 hours per week.—**DR. E. T. HODGE.**

MINERALOGY AND ROCK STUDY.—Physical and Chemical Tests; Use of Tables in the Determination of Unknown Minerals; Rapid Recognition of the more important Minerals and Rocks; Practical Work with the Blowpipe, etc. During the laboratory periods, short talks will be given on the physical and chemical properties, occurrence and value of minerals and rocks.

Laboratory Course—Two 2-hour periods per week.—DR. E. T. HODGE.

FIRE ASSAYING.—Practical Laboratory Course; Actual Determination by Fire Assay of Gold, Silver, and Lead, in ordinary ores. If time perm. copper assaying by simple wet methods will be taught, and blowpipe assaying. Students may bring their own samples, if desired, in limited number, and make their own assays on their own ore for practice during the later periods.

Laboratory course—One 9-hour period per week.

—PROF. J. M. TURNBULL.

CHEMISTRY.—An elementary course of lectures, illustrated by numerous experiments, and designed to give the students a clear idea of the nature of chemical action and the chemical properties of various substances, particularly of minerals. This course will greatly assist in understanding the other courses, such as Geology, Mineralogy and Smelting.

Lecture Course—2 hours per week.—DR. D. MCINTOSH.

SURVEYING.—Elementary Principles of Surveying; Use of Compass; Measurement of Distances on Slopes; Measurement by Pacing; Staking of Claims; Taking Notes; Making Sketch Maps.

Lecture Course—2 hours per week.—PROF. E. G. MATHESON.

BLACKSMITHING.—Practice in Blacksmithing and Forge Work can be arranged for a limited number of students. This will include sharpening and tempering of steel, welding, ironwork, etc.

Shopwork—3 hours per week.—MR. H. TAYLOR.



TIME TABLE



The following time table will be followed as closely as possible, but cannot be guaranteed against minor changes. It is arranged so that, as far as possible, either the morning or the afternoon of each day will be left vacant, permitting students to attend to their personal business in the vacant times.

MONDAY—

2 p.m. to 3 p.m.	.....	Mining
3 p.m. to 4 p.m.	.....	Smelting
4 p.m. to 5 p.m.	.....	Chemistry
5 p.m. to 6 p.m.	.....	Chemistry

TUESDAY—

9 a.m. to 6 p.m.	Fire Assaying
------------------	-------	---------------

WEDNESDAY—

9 a.m. to 10 a.m.	.....	Surveying
10 a.m. to 12 a.m.	.....	Mineralogy
12 a.m. to 1 p.m.	.....	Mining

THURSDAY—

9 a.m. to 10 a.m.	.....	Geology
10 a.m. to 11 a.m.	.....	Smelting

FRIDAY—

9 a.m. to 10 a.m.	.....	Geology
10 a.m. to 12 a.m.	.....	Mineralogy
1 p.m. to 2 p.m.	.....	Surveying

SATURDAY—

9 a.m. to 12 a.m.	Blacksmithing
-------------------	-------	---------------

THE UNIVERSITY OF BRITISH COLUMBIA
SHORT COURSES IN MINING

APPLICATION FOR ADMISSION

Date of Application.....

Name in full.....

Permanent Address.....

Vancouver Address, (if known).....

I hereby make application for the following Short Courses in Mining, and enclose Registration Fee of \$5.00.

.....
.....
.....
.....
.....

PROVINCIAL LIBRARY

VICTORIA, B. C.

Signature of Applicant.....

