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MINERAL INDUSTRIES  
LIBRARY

# Mineral Industries

THE PENNSYLVANIA STATE COLLEGE

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## *The Mineral Industries Library 1931-1941*

By

*Lucille Jackson*

THE Mineral Industries Branch Library actually had its beginning with the founding of the School of Mines in 1893 since, from that time, books were bought and periodical subscriptions carried, so that a collection of volumes accumulated which resulted in a nucleus for the present library. By 1928 these books, numbering about 1000, were kept in the Dean's secretary's office, where they could be used by students and members of the staff, but facilities were not exactly convenient. At that time, Edward Steidle, having become dean of the School of Mineral Industries, made plans for a new building and the obvious need for suitable library quarters was recognized. Thus, in 1930, when the School moved into its new building, provision had been made to house the books in an appropriate manner. Available funds were not adequate to have a full-time librarian so for the first year part-time help was employed, Mrs. Arthur Rose and Mr. Paul Campbell being the persons first in charge.

The College Library lent assistance at this time by checking the books, cataloging them and setting up a card catalog file. A group of books pertaining to the mineral industries subject fields was transferred from the College Library, the plan being to center such material henceforth where it could be used to best advantage as was already being done in the Schools of Chemistry and Physics, and Agriculture. The Mineral Industries Library was then ready to function as a unit of the School; a research program was being developed that would require literature source materials and the undergraduate curricula were undergoing transformation. A well-regulated library was a necessary adjunct to such enterprise.

In the fall of 1931 an increase in funds made it possible to hire Miss Lucille Jackson as the first School librarian. Responsibility for building the book collection, administration of library routines, and determination

of ways of serving the book needs of students and staff were delegated to the new member of the mineral industries staff. The budget was then part of the School appropriation, this arrangement prevailing until 1934, when the several School libraries became branches of the College Library. Besides the School budget, prior to this time, the College Library had been assigning a specific part of its book fund for mineral industries books. When mineral industries became a branch all funds were transferred to that division of the College, and all purchases were handled by the order department. Classification and cataloging were continued by the catalog department. Thus the Mineral Industries Librarian was free to devote full effort to matters of immediate concern in the School.

### **Problem of Space Acute**

As in most libraries the problem of space was soon acute. The original provision for housing of the books was seen to be inadequate even before the new building was completed. Therefore, it was decided to cut a door through the wall leading into an adjoining room in order to increase the accommodations. By the time the books were in place it was necessary to take over the room on the other side of the main library room, though direct entrance into this space was not effected until 1934. When the General State Authority undertook to remodel the building in 1939 further provision for additional space was made. One of the small rooms was given to the Extension Division, and the one on the other side was extended by having the wall between it and the adjacent laboratory taken out. How long the present space will be adequate is a question, as it now requires ingenuity to find room for incoming books.

Development of the Mineral Industries Branch Library offers an interesting study in retrospect. One of the main features of this process, of course, was the assembling of a significant book collection, and much

attention was given to the selection of the books that were added to it. In 1932 the volumes on the shelves numbered 1800 and by 1940 the figure had reached 7750. A good representation of the important works in the earth sciences, mining, metallurgy, fuel technology, ceramics and petroleum and natural gas as well as the most fundamental chemistry and engineering reference publications are included in the books now comprising the Mineral Industries Library. Besides current publications, a few of the most important of the early writings were acquired and are exhibited in the cases at the library entrance. Perhaps the most notable of these is a volume of selections from the books of Agricola in Latin, bound in the original parchment published in 1546. Other examples are a translation of "El Arte de Los Metales" by Barba; "The Mammoth" by Rembrandt Peale, London, 1802; "The Oil Regions of Pennsylvania" by William Wright, 1865; "Traite des Artes Ceramiques" by Alexandre Brongniart, second edition, 1854; and "El Arte del Vasaio" by Piccolpasso, a facsimile of the original manuscript, printed in 1934. Various histories of phases of the mineral industries have been considered as essential to a complete library covering these fields, and some of the most fascinating are included in the collection. Raphael Pumpelly's autobiography, "Man and Metals" by Rickard, "William Kelley: A True History of the So-Called Bessemer Process" by Boucher, and "Iron Brew" by Holbrook, all tell authentic tales of the evolution of the industries dealing with the products of the earth. Emphasis has not been placed on this type of publication, but it does have a definite leavening effect among the purely technical writings.

### **Periodical Literature Important**

In carrying on any kind of technical investigation one of the most important approaches is through articles already published in the periodical literature. Information is published there which is so specific that it can never be incorporated in general works, and periodical files are, therefore, a salient feature of a technical library intended to serve serious research. Among the volumes in the old School of Mines collection were

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## MINERAL INDUSTRIES

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THE PENNSYLVANIA STATE COLLEGE

Division of Mineral Industries Extension  
H. B. NORTHRUP, Director

### Pennsylvania's School of Mineral Industries and Experiment Station

Dedicated to education and research in the exploration, development, and conservation of Pennsylvania's natural mineral resources, and their preparation, processing, and efficient utilization.

#### Fields of Work

**Earth Sciences:** Geology, Mineralogy, Geography, Geophysics, Meteorology, and related subjects. **Mineral Economics:** Economics and conservation of minerals. **Mineral Engineering:** Mining Engineering, Mineral Preparation, and Petroleum and Natural Gas Engineering. **Mineral Technology:** Fuel Technology, Metallurgy, and Ceramics.

#### Divisions of Service

Resident Instruction  
Extension Instruction  
Correspondence Instruction  
Mineral Industries Research

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DECEMBER 1941

## TRENDS and OBJECTIVES

BY DEAN EDWARD STEIDLE

### 2000 A. D.

SOUND investment in education was discussed in the November 1941 issue of MINERAL INDUSTRIES. It is a question that is constantly in the thoughts of our faculty. A few

supplementary remarks may be in order at this time.

Attempts to peer into the future are admittedly of little value. It is a sobering thought that according to life expectancy tables it is an assured fact that some of our 18-

year-old freshmen will live to the ripe old age of 77 and thereby find themselves in the year 2000 A. D.

Part of any school's program in instruction or research must be based on a long-range basis which will allow planning for future conditions. Such planning is now complicated and overshadowed by the more immediate demands related to national defense. The importance and the gravity of the problems of defense cannot be denied. However, the problems of the post-war years will be even more serious in nature and of greater duration in time. Part of our



## Mineral Industries Library, 1931-1941

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bound sets of the most fundamental of the mineral industries magazines, most of them English language ones although the "Zeitschrift für Metallkunde," the "Fortsschritte der Mineralogie," and partial files of a couple of German geological publications were included. In 1931, subscriptions to 50 current periodicals were being carried. By 1941 this number had grown to 142, and of these, 14 are German, 3 French, 2 Canadian, 27 British; the rest are published in this country. Most of the titles are retained in bound form while some of the trade papers are only of such current value that they are stored for a certain period, then discarded. Of the volumes now on the mineral industries shelves, well over 50 per cent are bound periodicals.

#### Use of Library Increases

Use of the mineral industries books, chiefly by students and staff of the immediate School, has definitely increased with the expansion of the library. Statistical records of the main types of requests have been kept, and the response of library patrons has been gratifying. Reference questions, circulation of books, and consultation of reserve materials all show steady growth.

Opportunities for special service by the librarian have arisen as the activities of the School have thrived, and some of the more important of these will be mentioned. Reports and bibliographies have been compiled for the Experiment Station. Of the bibliographies, the most significant is a listing of all of the references to Pennsylvania coal, which was done in conjunction with a general bibliography on coal in which emphasis was placed on sections dealing with sulphur and ash softening temperature. Aid has been given to the Extension Division in the writing of textbook material. All of the departments of

responsibility is to train students in their special fields so that they can contribute to the welfare of society as a whole. Economic and social problems of constantly increasing complexity will be theirs to solve. Crests of prosperity and valleys of depression in the industrial organization of the country and conflicts in international relations may well appear as they have in the past.

The first 41 years of this century have been marked by a consumption of minerals unequaled by the aggregate of past historical time. How

the School have from time to time availed themselves of the convenience of having a library and a librarian at hand.

#### Use of Reference Material Taught

The principal project which has been carried on by the librarian has been the attempt to teach students the use of the reference materials in their several fields of interest. This has been done most effectively for students coming to the library with specific problems, though the librarian has talked also to groups of students in classes as the occasion warranted. Usually such instruction was given to senior seminars in the various curricula, sometimes even to freshmen. One consequence of these talks appeared in 1939 in a mimeographed "Guide to the Metallurgical Literature." Then in 1940, a bulletin titled "A Guide to Mineral Industries Literature," Library Studies No. 2, was published. This covers all phases of mineral industries subject material, and the divisions are grouped according to the School curricula. With so comprehensive a collection of source material at hand all Mineral Industries students should be assured the opportunity of learning how to find any needed information if it is in the literature.

#### Service Summarized

The Mineral Industries Library to date has had a full and interesting history. Physically it has grown satisfactorily in all aspects of its services; the quality of this service cannot be discerned so readily, for it is to be found only in the minds of those who have come to the library for help.

In February 1941, Miss Jackson resigned her position, and is now librarian of the Vanadium Corporation of America. Mr. E. Paul Jones became librarian in March, taking the Mineral Industries Branch Library into the second decade of its existence. Mr. Jones's biography appeared in the October 1941 issue of MINERAL INDUSTRIES.

much is left for the future, what new technologies and industries will appear, how will science supply the wants of a larger population in the face of a depleted mineral endowment, how can minerals be distributed to satisfy the needs of all? These are some of the problems that will be faced by our graduates of the future. That they will do a better job than the present generation is a reasonable hope. That we supply them with the training best suited to solve the unknown problems ahead is our present responsibility.

# DEPARTMENT NEWS

## EARTH SCIENCES

The Earth Sciences Summer Camp located in "Stone Valley" about 13 miles from State College was very well attended last summer by students from other colleges (Texas and California) as well as from The Pennsylvania State College. The camp was operated continuously from June 10 to August 9 and a greater variety of courses was taught than in previous years. In addition to the usual courses in geologic surveying and field geology, elementary geology and mineralogy were also taught. The enrollment in these latter courses was made up entirely of students of the School of Mineral Industries who wished to secure credits during the summer to avoid scheduling difficulties during the winter sessions and to bring nearer the day for graduation. From the experience of this summer it seems likely that the camp will become increasingly useful to incoming freshman students desiring to get a head start in their college work by completing in advance the six credits of geology required in the freshman year. The camp was under the direction of Professor C. A. Bonine assisted by Mr. C. R. Pelto.

Dr. Henry J. Bruman, instructor in geography, spent the latter part of the summer on an extended research trip to the University of California and the University of Texas. He is preparing some studies on a series of geographic descriptions made about the year 1580 in many parts of the Spanish possessions in America in response to an order of Philip II of Spain. Over 200 of these manuscripts are known, about half of which have never been published. They contain a wealth of geographic information on Latin America, much of it applicable to the present day. The department of geography of the University of California has microfilm copies of about 30 of these manuscripts, photographed in the archives of Spain some years ago. The University of Texas has about 45 originals, for most of which no official copies are known to exist. In his studies Dr. Bruman intends to point out the importance of these practically unknown source materials, and to show their wide potential usefulness to workers in the Latin-American field.

Dr. P. D. Krynine is presenting at the December meeting of the Geological Society of America (in Boston) eight papers giving the results of a five-year research program dealing

with basic problems of sedimentation. These papers cover various aspects of the differentiation of sediments during the life history of a land mass with appropriate examples from The Appalachian Trough and other regions of geosynclinal deposition.

Drs. A. P. Honess, P. D. Krynine, and W. M. Myers are presenting at the same meeting a paper on siliceous oolites and the application of the fundamental principles evolved during this study to problems of chemical sedimentation.

## METALLURGY

Dr. F. R. Morral, who has joined the staff of the Department of Metallurgy recently as assistant professor of metallurgy, was born in 1907. He is married and has two children.

He received the degree of "Bachelor" at the Institute General y Technic de Barcelona, Spain, in 1923 and "Periot" in Chemistry at the Escuela



DR. F. R. MORRAL

Industrial de Terrassa, in 1925. Coming to the United States from Cuba, he entered the course in electrochemical engineering at Massachusetts Institute of Technology, receiving the degree of B.S. in 1932.

In 1933 and 1934, he worked with Professor A. Westgren in the University of Stockholm, Sweden, on X-ray research on the tungsten-iron-carbon, the molybdenum-iron-carbon,

the aluminum-iron-carbon, and the iron-carbon alloy systems and on the determination of some alloy structures. In 1934-36 he was back in Spain, where he managed the wool spinning mill of Martin Morral in Sabadell and was active in planning and research in metallurgy and electrochemistry at the University of Barcelona. During 1935 and 1936, he was also business manager and assistant editor of the monthly technical journal "Metallurgia y Construcción Mecánica."

Returning to the United States in early 1937, he held the Continental Steel Corporation Fellowship in metallurgy at Purdue University, and received the Ph.D. degree in metallurgy from Purdue in 1940. From December 1938 to August 1941, he was research metallurgist for the Continental Steel Corporation at Kokomo, Ind.

Dr. Morral is a member of Sigma Xi, scientific honorary society, and of various technical societies including the American Institute of Mining and Metallurgical Engineers, the American Society for Metals, the American Electro-Chemical Society, the British Iron and Steel Institute and the (British) Institute of Metals.

He is the author and co-author of more than 20 papers in American, English, Swedish and Spanish technical journals and has built up a considerable reputation in America as an authority on metal coatings and on their resistance to corrosion. He has been granted one patent and has three other applications under consideration by the United States Patent Office.

Dr. Morral comes to Penn State with the highest recommendations from Purdue and Massachusetts Institute of Technology.

## EXTENSION

The trend in mining extension education in Pennsylvania is toward mechanical mining. Courses have been developed by the Division to instruct men in the construction and repair of mechanized mining equipment and to train them in its utilization and economical maintenance. These courses are of an advanced nature and men taking the work either shall have completed an intensive short preparation course in fundamentals or shall have completed the regular three-year mining extension course of the School, or its equivalent.

Extension instruction in mechanized mining is relatively new and in-

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## Department News

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structors trained in this important field are scarce. The Pennsylvania State College is the only educational institution in the Commonwealth conducting extension courses in mechanized mining. Mr. D. C. Jones, associate professor and supervisor of mining extension, has prepared the training program in mechanized mining and has been devoting a major part of his effort to the work. Just recently, Mr. H. A. Corre joined the staff of the extension division to assist Mr. Jones with an expanded effort in mechanized mining classes and to provide additional service to the mining industry of the State in organizing and supervising additional classes to study the long-established, three-year curriculum of coal mining extension.

## Bradford District Research Group In 6th Annual Meeting

The Sixth Annual Technical Meeting of the Bradford District Research Group was held on November 7 and 8 at the School of Mineral Industries. About 70 oil producers from the Pennsylvania oil regions attended the sessions. Two formal meetings were held at which technical papers were presented by Dr. S. T. Yuster, Dr. R. F. Nielson, and Mr. J. C. Calhoun, dealing with various phases of secondary recovery and covering some of the work carried on in the Mineral Industries research laboratories. An interesting feature of the meeting was a 15-minute motion picture taken of an experimental water flooding of a lucite five-spot model. The flooding patterns could be seen and the progress of the flood noted during the experiment. Since the actual experiment lasted several hours, the pictures were taken at a rate of one a second and then speeded up so that the action was reproduced in a short time. Co-chairmen of the Friday afternoon meeting were R. S. Pringle Jr., and W. L. Davis and on Saturday morning W. H. Young Jr. and E. F. Smith presided.

On Friday evening an informal dinner was held at the Nittany Lion Inn with J. P. Jones, of Bradford, presiding as toastmaster. Short talks were given by Dean Edward Steidle of the School of Mineral Industries and G. G. Bauer of the Bradford District Pennsylvania Oil Producers Association, Bradford.

## NEW STAFF MEMBER



MR. H. A. CORRE

Mr. H. A. Corre, who has joined the staff of the Extension Division recently as instructor and assistant supervisor of mining extension, was born in Dunlo, Pa., in 1906.

He received his secondary school education at Portage, Pa., and was graduated from The Pennsylvania State College with the degree of B.S. in Mining Engineering in 1930, E.M., 1934. He holds a first-grade mine foreman's certificate both in Pennsylvania and in West Virginia.

Mr. Corre's experience includes two years on the engineering corps for the C. A. Hughes and Company of Cresson, Pa., nine months as inspector for the Ebensburg Coal Company of Colver, Pa., one year as inspector for the Johnstown Coal and Coke Company of Portage, Pa., and ten years with the Consolidation Coal Company of West Virginia as assistant mine foreman in connection with mechanical mining operations.

Mr. Corre brings to the Division a background founded in the tradition

of the mines and an experience in all phases of coal mining, including mechanized mining practice, which coincides with the aims of the School and with the present trends in coal mining extension instruction.

## Ten Scholarship Men Enrolled In Mining Engineering

Ten scholarship men enrolled in mining engineering this semester. Six of these men are sponsored by the Pittsburgh Coal Company and four by the Lehigh Navigation Coal Company. This is the third year for the Pittsburgh Coal Company program and the second year for the Lehigh Navigation.

These men were picked by competitive test from a number of candidates, and those in school for a year or more have made enviable records in scholarship and are recognized leaders in campus activities. This year's recipients of these scholarships are: Michael M. Marchich, freshman, Finleyville, Pa., and John Rozanc, senior, Houston, Pa., Pittsburgh Coal Company; and Robert Gildea, freshman, Coaldale, Pa., and Harry Kemery, freshman, Tamaqua, Pa., the Lehigh Navigation Coal Company.

These companies have adopted a plan of selecting two scholarship men a year from company employees, sons of employees, or residents in the communities in which they operate. This has been necessary on account of the scarcity of young men enrolled in coal mining engineering, and is intended to partially provide technically trained men in the future for these companies in operation, engineering, safety, and research.

These companies recognize that the coal mining industry is becoming exceedingly complex and that only those companies will prosper that take advantage of, and keep in step with, the rapid advances being made in engineering and technology. It is likely that these scholarship men some day will be called upon to take over the leadership of these companies.