University of Arizona Bulletin

The State Bureau of Mines Lecture Course

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Bureau of Mines

CHARLES F. WILLIS, Director
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1917-18
ARIZONA STATE BUREAU OF MINES LECTURE SERVICE

The bringing of the work of the State Bureau of Mines directly to the people of the State in their home towns is to be an important feature of the work of the Bureau during the next year. Regular tours of lectures will be given, one or more members of the staff being continuously in the field.

In the center of this pamphlet will be found the details of the regular course of lectures, giving the dates, the names of the towns and the lecturers.

In addition to this the Bureau of Mines will be pleased to furnish special lectures for any occasion as far as its funds and the time of the men are available.

Practically all of the lectures are illustrated by moving pictures and lantern slides, and are available for general purposes—high schools, commercial clubs, boy scouts, women’s clubs, and any other organizations desiring the service of the Bureau in this line. Further information and details may be secured by writing Charles F. Willis, Director.

Apache Trail, The

A scenic lecture covering the country between Globe, Arizona, and Phoenix, Arizona, the Roosevelt Dam and the Tonto Basin cliff dwellers.

Arizona State Bureau of Mines, The

A lecture on the work of the State Bureau of Mines and what it has to offer. This lecture is somewhat of a revelation, as many people fail to realize the varied branches of the Bureau of Mines work.

Bronze Making. The Manufacture of Bronze

This illustrated lecture will outline the history of bronzes, and bronze making, as well as describe briefly the mining and preparation of the metals entering into its composition. The modern bronze manufacturing will also be dealt with.
Building Materials. Materials Used in Building. **Mr. Allen**

This lecture describes fully the mining, treating, and preparation of all stone and other mineral materials used in building. This will be illustrated with slides.

Business of Mining, The **Mr. Willis**

This is probably the least thought of branch of the mining industry, although of much importance. Business methods applied to mining and to mining investments will take mining out of the gambling and into the legitimate business class. Not illustrated.

Camp Welfare Work **Mr. Dickinson**

Mining camp welfare well illustrated by lantern slides; a sociological talk on the possibilities of the proper utilization of the leisure hour.

Ceramics. The Making of Fine China **Mr. Allen**

This is an illustrated lecture showing both American and European methods of mining and treatments of clays, and the making of pottery and fine china.

Commercial Possibilities of Latin-America **Mr. Fansett**

The title is self-explanatory. This lecture is well illustrated by pictures of the west coast of South America from the Panama Canal south.

Concrete on the Farm **Mr. Willis**

An illustrated talk on the use of concrete on the farm; methods of handling concrete and form building.

Cooperation **Mr. Willis**

A lecture on the stimulation of cooperative interest between the mining men, prospectors, manufacturers, and farmers in a community—the development of community interest, and the promoting of incoming capital.

Curious Minerals and Their Use **Mr. Allen**

The lecture, illustrated with lantern slides, calls attention, in an interesting manner to many of the curious minerals found in nature, and cites their uses.

Dye Industry. The Manufacture of Dye **Mr. Allen**

This is an illustrated lecture, showing all stages of the manufacture of dye, from the raw product, coal, to the dyed textile.
Dynamite on the Farm  
**MR. DICKINSON**
A lecture, well illustrated, on the use and advantages of dynamite in farming. From the particular point of view of the safe methods of handling dynamite.

Earth Sculpture  
**MR. WILLIS**
A study of scenery, and of the forces which have combined to make the scenic wonders of Arizona. A lecture and 50 most beautiful pictures.

England and France  
**MR. ALLEN**
Given in one, two or three lectures, illustrated with lantern slides, detailing a few of the things not commonly known about these countries, at the same time touching upon a few of the things our men in France may expect to see.

First Aid Instruction  
**MR. DICKINSON**
This may be given in a single demonstration, or any number of demonstrations up to the government course of fifteen hours. Consists of both instruction and practice.

Fuel Industry. Production and Marketing of All Fuel  
**MR. ALLEN**
A lecture dealing with the perfecting, production and marketing of oil and various kinds of coal; illustrated with lantern slides.

Geology of Oil  
**MR. ALLEN**
Oil is now known to be found in places in which geological structure is favorable to its occurrence. The knowledge of ore geology assists in oil finding. This lecture illustrates and treats this subject ably.

Glass Industry. The Manufacture of All Glass  
**MR. ALLEN**
Lantern slides illustrate very graphically this lecture, giving a comprehensive idea of the mining and manufacture of the raw material, and illustrating the different ingredients and processes of the different kinds of glass.

Grand Canyon, The  
**MR. WILLIS**
A beautifully illustrated lecture on the world's greatest scenic wonder, the Grand Canyon of the Colorado. Most of the lantern slides illustrating this lecture are well colored.

History and Importance of the Safety Movement  
**MR. DICKINSON**
The progress of the safety movement, and the many benefits
### SCHEDULE OF REGULAR LECTURE SERVICE

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**Arizona State Bureau of Mines Economic Series No. 15**
that have been derived from safety work. A lecture which will stimulate interest in safety.

*Household First Aid*  
**Mr. Dickinson**  
First aid to the injured applied to the household. This lecture is especially intended for women’s clubs, and is a thing every woman should hear.

*Interesting Things About Minerals*  
**Mr. Fansett**  
An illustrated lecture of popular interest, showing many interesting and curious things about minerals and their uses.

*Iron and Steel Industry—Mining of Iron Ore—Smelting to Pig Iron and Making of Steel*  
**Mr. Allen**  
The lecture deals in all details with the prospecting, mining, shipping, and smelting to pig iron; the manufacture of the pig iron to steel, and the various processes involved in making rails, wire, structural steel, etc.

*Keeping Your Town Clean*  
**Mr. Dickinson**  
A lecture on sanitation in mining communities; illustrated by lantern slides and moving pictures.

*Metals in Steel Other Than Iron*  
**Mr. Allen**  
A lecture fully illustrating and describing the various alloy steels, their uses, the minerals from which the alloy is derived, and the reasons why certain impurities in this alloy metal causes penalties.

*Marble Industry—Quarrying, Working and Marketing of Marble*  
**Mr. Allen**  
This lecture deals with the various kinds of marble, the uses of each, methods of quarrying, shaping, polishing, and marketing. Lantern slides illustrate each subject.

*Mineral Identification*  
**Mr. Fansett**  
This may be given in one lecture, or in a course of two or three lectures. It is virtually a course in mineralogy for the prospector, giving blowpipe methods of mineral determination. It is essentially a demonstration and practice course.

*Minerals in Household Use*  
**Mr. Allen**  
This lecture is well illustrated and fully treats of the mining, treatment, and fabrication of the many materials which are used in the home.
Mine Rescue Work in Metal Mines  
Mr. Dickinson  
Lecture illustrating and demonstrating the use of mine rescue apparatus in metal mines, particularly illustrative of its possibilities.

Our Dependence Upon Minerals and Metals  
Mr. Allen  
An illustrated lecture describing the extent to which modern day civilization depends upon minerals and metals, at the same time briefly illustrating the mining, metalurgy, and uses of some of the minerals and metals.

Panama Canal, The  
Mr. Fansett  
An illustrated lecture on the world’s greatest engineering feat, with some record of the engineering and sanitation problems encountered during the building of the canal.

Paper Industry. The Manufacture of Paper  
Mr. Allen  
A well illustrated lecture of the treatment and different processes through which the raw material goes before becoming paper, as well as the various minerals entering into the manufacture.

Peruvian Mining  
Mr. Fansett  
An illustrated lecture showing the methods of South American mining, South American life in mining camps, at 12,000 feet in the Andes Mountains.

Petroleum Industry. Mining and Refining Oil  
Mr. Allen  
This lecture describes and graphically illustrates geology, occurrence, drilling and operation of oil wells, cross country pipe lines, and refining of the crude oils to gasoline, kerosene, etc.

Placer Mining  
Mr. Willis  
A well illustrated industrial lecture, showing the methods of extracting gold from placer deposits, with particular emphasis on the placer deposits of Arizona and their possibilities.

Possibilities of Mineral Development  
Mr. Willis  
A dream of the mineral development carried 50 years ahead. This lecture is not illustrated as pictures on the subject are not available.
Precious Metals. Mining, Metallurgy and Use of the Precious Metals  
Mr. Allen  
A lecture describing the mining, winning from the ore, as well as the properties and uses of gold, silver, and platinum.

Precious Stones; Their Care and Conservation  
Mr. Fansett  
This lecture, which is well illustrated, is designed particularly for women's clubs, and shows the precious and ornamental stones from the point of view of their proper care. The lecture goes into the mining and treatment of the stones and is of considerable interest to women's organizations.

Prospecting  
Mr. Fansett  
This lecture is primarily intended as elementary instruction to the prospector in the methods of successful prospecting; where to look, and for what to look are things that every prospector should know.

Prospecting for Oil  
Mr. Allen  
As common as oil is, few people know the first principles of oil finding. This illustrated lecture tells one how to prospect for oil.

Publicity and Mining  
Mr. Willis  
A forceful talk on the relation between publicity and mining, methods of stimulating interest in new mining camps, and of reviving interest in old. A community lecture.

Rare Minerals. The Occurrence and Mining of the Rare Minerals  
Mr. Allen  
Many of the rare minerals useful commercially are not known by many. This lecture describes and illustrates these minerals, their occurrence, mining, etc.

Relation of Geology to Mining, The  
Mr. Allen  
This lecture, accompanied by lantern slides, will illustrate the importance of geology, in tracing and following ore deposits, as well as in some instances predicting the occurrence of coal or ore.

Relation of Outcrops to Ore Deposits, The  
Mr. Fansett  
The interpretation of outcrops is the theme of this talk. A study of altered rocks and their derivation is well illustrated by the 50 lantern slides accompanying this lecture.
Rock Identification

MR. FANSETT

This is a demonstration course for the prospector in petrology, or the determination of rocks by their physical characteristics. It is a thing every prospector should know, and may be given in one or two lectures.

Safety and Efficiency

MR. DICKINSON

A stimulating talk on the relation between safety work and efficiency. Something every miner should hear.

Scenic Beauties of Arizona

MR. WILLIS

An illustrated travelogue of a trip through Arizona, covering the caves of the Chiricahua Mountains, the beautiful Salt River Valley, Granite Dells, the Verde Valley, the Grand Canyon, and many other places unique and interesting, of which Arizona has so many.

Selling of Mines and Prospects, The

MR. WILLIS

A straight from the shoulder talk on the methods of preparing mines and prospects for sale; methods of interesting prospective buyers, and of transferring property. This talk should be heard by every man who has a prospect or mine to sell.

Steel Making

MR. WILLIS

An illustrated lecture, carrying the audience through the entire process of making the most important of all metals, steel, going from the mining through the large scale transportation methods, the smelting, and its manufacture into the various products.

Stimulating Interest in Safety

MR. DICKINSON

A lecture intended primarily for shift bosses and mine foremen, showing the many methods in use for creating greater interest in the safety movement. An inspiration.

Stone Production. The Arranging and Preparation of Building and Ornamental Stone

MR. ALLEN

This is an illustrated lecture, treating the arranging, preparation, and uses of building and ornamental stone.

Tin Can, The; From the Raw Material to the Finished Can

MR. ALLEN

Such a common article as a can does not recall, when seen, the interesting metal, mining, treatment, and manufacture of
the raw material, to the finished product. This illustrated lecture treats the subject fully.

University of Arizona, The
A lecture illustrated both by lantern slides and moving pictures on the work of the University, which, in its record growth during the past few years, has gained a national standing.

Utilization of Resources
Mr. Allen
This lecture illustrates and describes many of the mineral wastes of this generation, and gives methods by which these natural resources may be saved for future generations. Slides illustrate this lecture graphically.

War Minerals, The
Mr. Allen
An illustrated lecture treating in detail the minerals which enter into munitions and supplies; the occurrence, treatment, uses, and nature of these minerals.

West Coast of Latin-America
Mr. Fansett
A travelogue on the west coast of South America, given by a man who has spent many years in that country, and who is well acquainted with the life and traditions of its people.

Special lectures prepared for any purpose with sufficient notice.