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## **An Experiment in Visual Education**

By CLYDE O. MARTZ

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Visual education entered the field of legal study a few weeks ago when the mining law class at the University of Colorado School of Law donned hard shell hats and miners' lamps, and went underground to examine the workings of the Wolf Tongue tungsten mine north of Nederland, Colo.

With Dr. Ernest Wahlstrom, geologist and mineral engineer at the University of Colorado, and Mr. Arthur Johnson, Wolf Tongue foreman, as guides, the group spent the day jogging through the honeycombed workings under Hurricane Hill, measuring the dips and strikes of exposed vein faces, examining the methods used for drilling and for draining the mine, and observing the traces of vein matter which a miner will follow to the profitable pockets of ore.

The class had a three-fold purpose in the field trip. First, the students sought through visual study a definition of the technical mining terms, encountered in their cases, that had been foreign to most of them but a few weeks before. They saw the difference between a "cross-cut", often called a tunnel, and the "drifts", extending along the veins intersected by such cross-cut. They climbed up rough hewn ladders through timbered "raises" and examined the chambers, referred to by miners and judges alike, as "stopes," and the "chutes" through which the ore is dropped down into carts in the "drifts" below. Of particular interest to them were the diamond drills, by which the miner explores the rock hundreds of feet ahead of his workings, to determine the dip and strike of a vein and the richness of any pocket of ore contained therein.

As a second purpose, the students sought to apply the apex law that they had learned in class to actual lodes or veins of rock in place. The future lawyers had seen from their cases that the holder of a surface location has priority to all veins or lodes apexing within his surface boundaries, even though such veins in their courses downward extend beyond his boundaries beneath the land of his neighbor. From open cuts on the surface they observed the apex of the vein as it would almost disappear into the surface "slide" or "debris." In tracing the vein down through the workings, they examined its content, varying from a mere trace of vein matter in places, to a pocket of ore ten or twelve feet thick. The problem of proving "continuity" of the vein from the surface downward was illustrated on open faces where the vein matter would be but a fraction of an inch thick between the walls of granite and gneiss.

Using the geological instruments of Dr. Wahlstrom, the students measured the dip and strike of such veins and estimated whether exposures in the under-

ground workings, if continued upward on their present angle of dip, would apex beyond the surface location lines of the mine.

The third aim of the class was to determine what problems of proof a lawyer would meet in practice, in order to establish the existence of a vein and to show its continuity from the apex downward in support of a claim of extra-lateral rights. The cases studied in class had disclosed in every instance a mass of conflicting expert testimony on these questions. With only short sections of vein exposed from time to time in the underground workings, and with the angles of dip and the courses of the vein varying considerably from one exposure to the next, the students could see how difficult it is to determine what the vein does in the rock beyond the present workings and could readily understand why such conflicting evidence generally exists.

The students unanimously agreed that they had acquired in the space of a few hours an understanding of the problems of mining law that they could not achieve in weeks of case study. In class discussions of cases following the trip, mining terms have been handled with the assurance that comes from a thorough familiarity with their use.

Visual aids have here performed a valuable service and illustrate the potentiality of field studies in such technical subjects as mining law and water rights. To see the "facts" and to appreciate the "problem" is a major step towards an understanding of the law.

### **Hearing Examiner Positions Open**

The United States Civil Service Commission, Washington 25, D. C., has announced that applications for an examination for Hearing Examiner positions at salaries from \$4902 to \$9975 a year will be accepted until further notice. Positions are in Washington and in other parts of the United States. These are positions provided by the federal Administrative Procedure Act. Full information as to requirements and procedure in taking the examination can be had from the Civil Service Commission in Washington, or the regional office in the New Customhouse Bldg., Denver.

### **American Citizenship Committee Named**

President Horace F. Phelps of the Denver Bar Association has named the following committee on American Citizenship:

Harold M. Webster, District Court, Chairman	
E. R. Campbell	Joseph E. Cook
David Rosner	Walter F. Scherer
Gilbert McDonough	

The committee will have a large part in the visit of the Freedom Train to Denver.