

THE COLORADO STATE BUREAU OF MINES
COLLECTION

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The collection at the State Bureau of Mines in Denver presents, in rather typical form, some of the problems which come up in the relationship of technology to science. The collection originated thru the efforts of the various Exposition Commissions, and has since been in the care of the Bureau. Part of the material was purchased, however, from Dr. Elsner, an old Denver collector. As the position of Commissioner of Mines was a political appointment the collection has enjoyed for many years the vicissitudes of state politics. At times some very able men had charge of it, and at others it was allowed to go to rack and ruin.

With the advent of the new Commissioner of Mines, a more enlightened policy was adopted. As a first measure, all specimens were moved from the dark gloomy basement of the State Capitol and placed on the second floor in the State Museum Building. In the second place it was decided to radically change the system of arrangement. No complete catalogs of the material existed, the only key to a specimen being the block upon which it rested and it was a frequent occurrence to find a specimen on a block to which it showed no relationship whatever; for instance, a pyrite crystal on a block marked calcite.

Cataloging was begun immediately after the collection was moved, the specimens being numbered consecutively and listed individually. To each specimen a card was allowed and on it the following data was recorded:

1. The number of the specimen
2. The names of the mineral species present
3. The type of ore which the specimen represents
4. Any analysis
5. The locality
6. The donor

The index cards were of two classes: systematic cards and mineral resource cards. The difference between these will be more apparent when the discussion of the arrangement is taken up. On the systematic cards however, the name of the mineral species for which the specimen was exhibited was underlined in red ink, and the formula and percentage composition of that mineral given.

Sample cards are shown on the following page.

These cards have been cross-indexed for species, ores, mines, localities and donors, so that any information concerning a specimen can be found almost instantly.

The reason for the dual arrangement becomes apparent when the exigencies of the case are considered. In the first place, much of

the material consists of ore specimens which are exceedingly complex in mineralogical composition; secondly, the fact that the collection is also used to illustrate the mineral resources of the State has rendered desirable the inclusion of material that the mineralogist would instantly reject as not good enough for exhibition. These considerations lead to a dual grouping, a mineral resources series grouped according to locality and a systematic series grouped partially according to economic use and partially according to Dana. All the rock minerals are grouped systematically, while the ores are arranged according to their economic use. Into the first of these two groups all typical mineralogical specimens are diverted, other material going into the mineral resource cases.

As the collection stands at present, it comprises about 20,000 specimens and is exceedingly rich in Colorado ores, particularly the tellurides, the tetrahedrite-tennantite group, enargite and certain silver minerals, such as cerargyrite, embolite and pyrrargyrite. The collections of zeolites from Golden and of microcline and smoky quartz from the Crystal Peak District of Teller County are important, as are also the numerous specimens of uranium, tungsten and molybdenum ores.

About three hundred mineral species are included in the catalog, besides many rocks. Taking the volume of minerals into consideration, the writer believes this is by far the largest mineral collection in the Rocky Mountain region. It is proposed to push field work energetically this summer and to build up, if possible, an exchange list with other institutions and individuals. This should not prove difficult because of the relative abundance of a number of rare minerals within the borders of the state of Colorado.

SAMPLE
SYSTEMATIC
CARD

6768 **CALCITE** (White) Dana 270
On Limonite (Brown)
Calcium Carbonate
 CaCO_3

Case
17E

Lime, CaO56.0%
Carbon dioxide, CO_244.0%
Robert E. Lee Mine, Lake County,
Colorado

Donor, John G. Morgan.

SAMPLE
MINERAL
RESOURCE
CARD

3248 **Gold-Silver Ore**
Auriferous Pyrite (brassy) with wire silver (dark
filaments) in chert breccia.

Case
3N
Gold 15 oz. per ton
Silver 1000 oz. per ton

Ground Hog Mine, Eagle County,
Colorado.

Donor, W. E. Rennie.