

1280 0012

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Item 12

The minerals of
Cortez, Nevada
Arthur Atkins

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The Minerals Of Cortez, Nevada.

This summer (1939) in July the Hunt trip was working at the Cortez mine. In the course of the work there were collected and identified a large number of minerals. With the aid of the laboratory I was able to identify a few more and confirm the presence of a few others. Copiapite, stromeyrite, and massicot were the minerals that I found; azurite, malachite, and hemimorphite were those that I confirmed. There is one mineral which I suspect of being minium and another which I could not identify.

Following are the minerals and the properties by which I identified them:

Calamine; 3 cleavages, one perfect, one good, one fair
 $\beta = 1.6155$ optically negative, large 2V, || extinction.

1.

Copiapite; $n = 1.735$, yellow, slightly pleochroic, poor extinction, biaxial interference figure.

Malachite; medium green, nearly opaque, effervesces in acid, gives a strong test for copper.

Azurite; deep blue, effervesces in acid, gives a strong test for copper, one index about 1.73, others higher.

Stromeyrite; metallic luster, strong tests for copper silver and sulphur.

Massicot; yellow (buff), opaque, gives lead bead before blowpipe, in reducing flame.

Minium; orange-red, otherwise the same as above for massicot.

The one mineral which I was unable to identify has the following properties; metallic luster, sectile, before blowpipe gives reaction for sulphur, in solution with excess of ammonia gives no test for iron, copper or aluminum; by microchemical tests it the presence of lead is shown (KI and $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$) and by the same means negative tests for the following were obtained: antimony (CsCl)(KI & CsCl), silver ($(\text{NH}_4)_2\text{Cr}_2\text{O}_7$), zinc (Na_2CO_3) nickel (dimethylglyoxime), bismuth (H_2SO_4 & K_2SO_4)

The following list shows the total minerals found or suspected to be present.

Cortez Minerals.

Found by us.

Iron oxides prob. ✓
 Limonite, turgite, ✓
 goethite ✓
 Manganese oxides ✓
 pyrolusite ✓
 covellite ✓
 chalcocite ✓
 tetrahedrite ✓
 aurichalcite ✓
 linarite ✓
 caledonite ✓
 - azurite ✓
 - malachite ✓
 smithsonite ✓
 hydrozincite ✓
 - ~~copiapite~~ *limonite* (calamine) ✓
 cerussite ✓
 - galena ✓
 silver ✓
 jarosite ✓
 chrysocolla ✓
 - pyrite ✓
 calcite ✓
 quartz ✓
 tremolite ✓
 sphalerite ✓
 - ~~brochantite~~ ✓
 melanterite ✓
 epsomite ✓
 soda niter ✓
 kaolin ✓
 seircite ✓
 wallastonite ✓
 biotite ✓
 hornblende ✓
 - biotite ✓
 chalcopyrite ✓
 - ~~minium~~ ✓
 - massicot ✓
 Stromeite

From other sources.

pyromorphite
 - stromeyerite ✓
 stettinitite
 argentite
 stephanite
 pyrargyrite
 tennantite

Suspected to be present.

goslarite
 antlerite
 cervantite
 stibiconite
 diopase
 brochantite
 minium

tennantite

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