



UNIVERSITY OF SOUTH ALABAMA

GY 302: Crystallography & Mineralogy

Lecture 16: Poster Preparation

Instructor: Dr. Douglas Haywick

Mineralogy Lecture Test

Definitions (3 of 5)

euhedral, supergene, epithermal, placer etc.

Short Answer Questions (2 or 3 of 5)

Compare and contrast mineral resources and mineral reserves (ignore non-mineral items like food, water etc).

Longer Answer Questions (2 or 3 of 5)

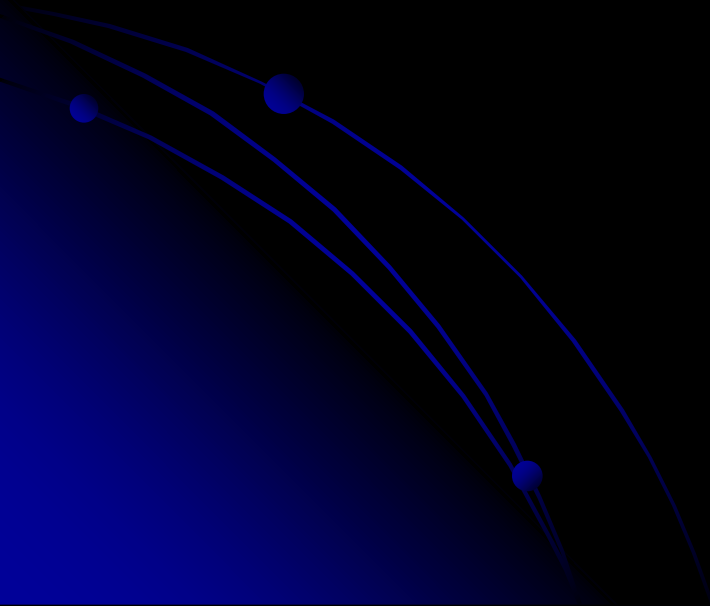
How are economic deposits of iron formed? Your answer should address where possible, geological and chemical processes and mineral associations..

Essay Questions (1 of 3)

Discuss the process of hydrothermal mineralization as it pertains to copper ores. Give examples of the minerals that form and the controls on their formation. Use sketches to illustrate your answer.

Today's Agenda

1. How to Produce effective posters
(Capstone project for GY 302)



Poster Preparation

GY 302 Poster Advise/Guidelines

The major assignment for GY 302 will be a “term” poster display. The following are the requirements for this assignment

Your poster *must* follow the format indicated on the next page

A poster can be considered a cut and paste version of a scientific paper, but it must be more concise, succinct and visually appealing. Write the most important concepts that you want to discuss and insert them into the text boxes that have been positioned on the poster template (you will receive this via e-mail later today).

Key points: Images are more important for a poster than they are for a paper. Make sure that the ones that you use are high quality. If they are “small” files (e.g., less than 250 KB), they will not enlarge well on your poster. If your image is pixilated, choose another one. Poor quality images will count against you.

Do not try to convert the equivalent of a 10 page paper into a poster. In particular, do not try to fit all of the text that you think is necessary into the information boxes. Figures really are more important than text for posters so you may have to cut out some of the necessary material. Use the poster guideline to help you with composition. Your text should be readable by people standing 4 feet away from your poster so. Use the fonts I selected for you(32 pt higher title font; 24 pt text font). Figure captions and references can afford to be a smaller font (e.g., 18pt).

Do not wait until the last minute to do this exercise. Get started now. Please note, the posters will be presented in GSA poster session format during the Nov 29th lab session. Be prepared to stand in front of your poster from 2:00 pm until the end of the lab.

The final poster is not redo-able

First Draft due :
Tuesday Oct 27 (11:00 AM)
(small format)

Critique: Thursday Oct 27
(11:00 AM)

Final Draft due: Tuesday
Nov 15(5:00 PM)
(final full size via Email)

**Posters must be printed
well in advance of the
poster session**

**Poster Session:
Tuesday Nov 22:
12:00-2:00 PM**

Poster Preparation

GY 302 Poster Guidelines

- Posters will measure 24" by 36" (portrait orientation)
- All posters will follow the same PowerPoint format and color scheme (don't monkey with it or risk an assessment penalty)
- Use only the template that I provide you with
- Print them out using the plotter in room 136 (you will be shown how to do this)
- This exercise is not redo-able



Cinnabar:

Student Name

Abstract

Cinnabar is a very interesting mineral that has historical significance as well as financial uses. It has had a medical impact as well as a cultural impact throughout history as the main ore of mercury and traditionally the main source of the vermilion red pigment.

Introduction

Cinnabar has had a variety of uses in many cultures and has been sought after historically for its beautiful coloring. This poster will explore the economic uses. It will also show occurrences and locations that this mineral has been mined and is currently being mined around the world.

Mineral Data

Chemical Formula: HgS
 Crystal Class: Trigonal (32)
 Color: Lead gray, Brown, Brown pink, Vermilion, Gray
 Specific Gravity: 8.1
 Streak: Bright red
 Hardness: 2.0-2.5
 Luster: Adamantine
 Transparent to opaque
 Crystal Habit: Disseminated, Massive, Drusy
 Cleavage: {101} Perfect



www.minerals.org

Cinnabar Uses

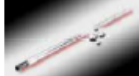
Used traditionally for pigments in many cultures
 Has been found to be used in burial practices to color the bodies red in Southeast Asia dating back to Mesolithic time periods
 Used to make jewelry and sculptures in ancient cultures
 Cinnabar is mined as the major ore of mercury
 Mercury is used for scientific apparatuses (like thermometers and barometers), the manufacture of chlorine and caustic soda, creating fluorescent light tubes, and historically to obtain gold from placer deposits, which is no longer used.



www.usabotany.com



www.citysearch.com



www.hard-gem.com



www.pinterest.com



www.kylin-art.com

Cinnabar Environment

Cinnabar is most often found near volcanic activity. It is known to form at low temperatures in vein and other pore spaces.

Cinnabar Mines and Occurrences

Cinnabar has been mined for at least 3600 years. Asia has been using this red mineral for artistic work since that time. China was not the only early civilization to mine cinnabar. The Roman mines in Almaden, Spain have been in operation since 700BC. In addition to these locations, other deposits also occur in Slovenia, Serbia, Idria, and Italy. Some areas in the US also have cinnabar deposits, California, Texas, Alaska, and Oregon are a few, but these areas are not mined.



www.globe.com



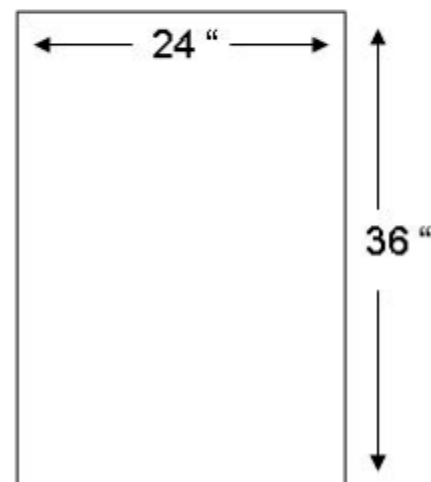
www.earth.com

Conclusions

The uses of cinnabar have been documented throughout history for many purposes and uses. With the health awareness of the detrimental effects of mercury, this mineral is not as mined as much as it has been in the past. Also, the decline in cinnabar mining may have resulted in the newer technology in medical instruments that are now digital instead of mercury based, like thermometers. Regardless, this mineral will continue to be studied and documented as it has been in the past.

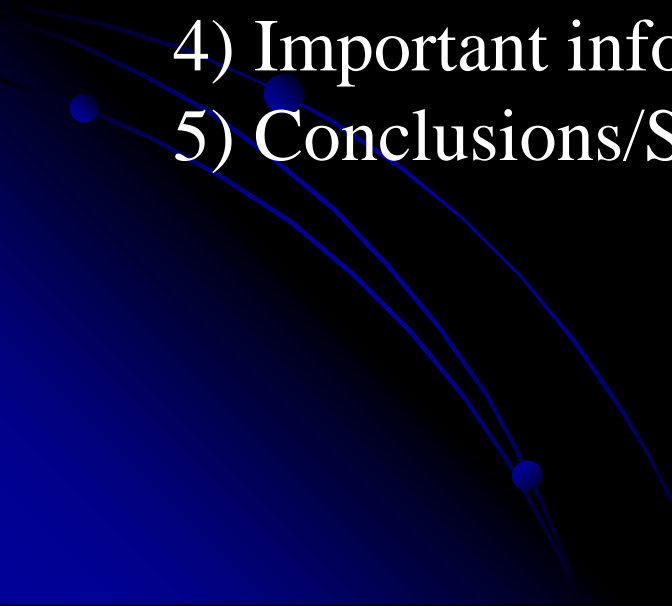
References

De, Herbert G. & Shaffer, Paul R. (2011) *Spinel, Garnet and Muscovite*. New York: Dr. Martin's Press.
 Kien, D.D. & Schneider, H.J. (Eds.) (1977) *Zinc and Silver-Related Ore Deposits*. New York: Springer-Verlag Berlin Heidelberg.
 Davis, Anthony M. (1980) *Ore Geology and Industrial Minerals*. (2nd ed.) Oxford: Blackwell Publishing.
 Rana, Chitra A. (1991) *Spinel Science and Classification in China*. Cambridge: Cambridge University Press.



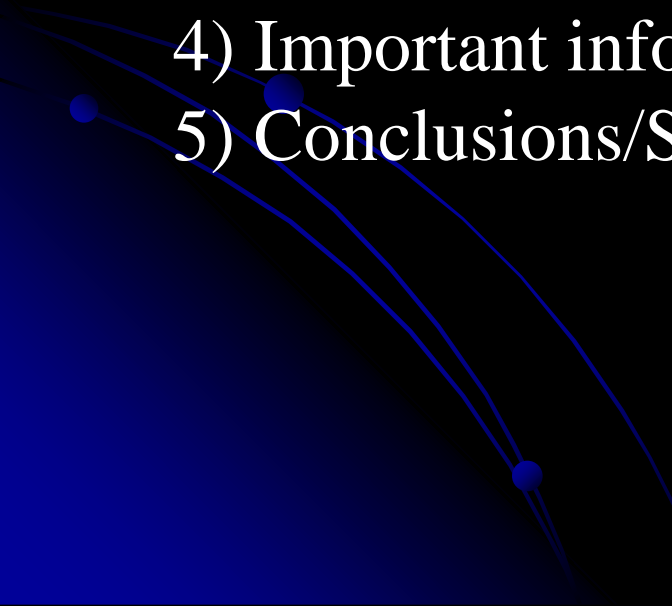
3 minute Poster Presentation

Maximum 5 “slides”

- 1) Title Slide
 - 2) Objectives
 - 3) Important info 1
 - 4) Important info 2
 - 5) Conclusions/Summary
- 

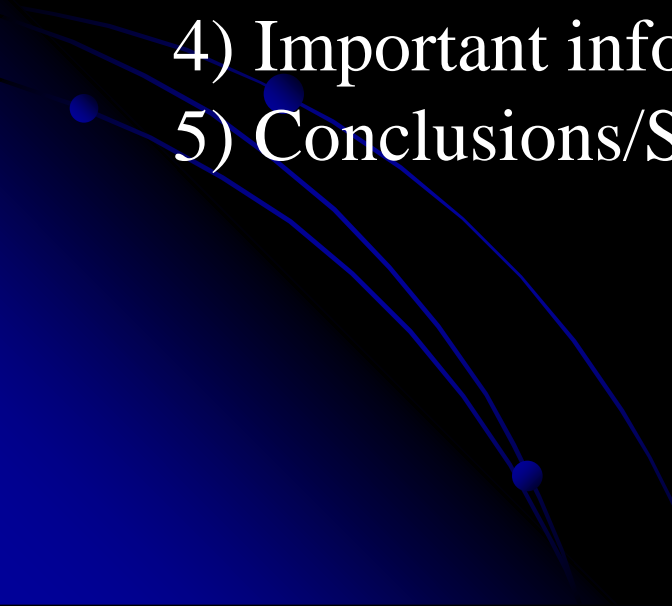
3 minute Poster Presentation

Maximum 5 “slides”

- 1) Title Slide
 - 2) Objectives
 - 3) Important info 1
 - 4) Important info 2
 - 5) Conclusions/Summary
- 

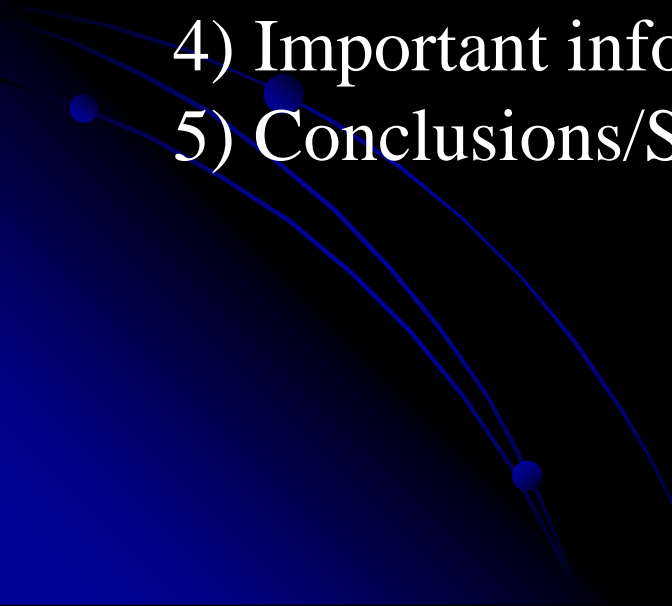
3 minute Poster Presentation

Maximum 5 “slides”

- 1) Title Slide
 - 2) Objectives
 - 3) Important info 1
 - 4) Important info 2
 - 5) Conclusions/Summary
- 

3 minute Poster Presentation

Maximum 5 “slides”

- 1) Title Slide
 - 2) Objectives
 - 3) Important info 1
 - 4) Important info 2
 - 5) Conclusions/Summary
- 

3 minute Poster Presentation

Maximum 5 “slides”

- 1) Title Slide
- 2) Objectives
- 3) Important info 1
- 4) Important info 2
- 5) Conclusions/Summary

Be succinct!

Be accurate!

Use your time wisely!

Do not be long!

Do not be short!

MOLYBDENITE



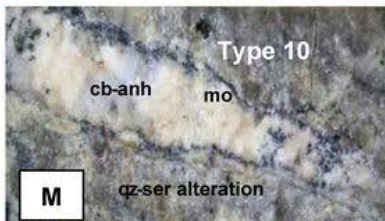
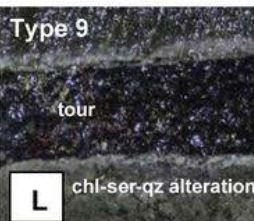
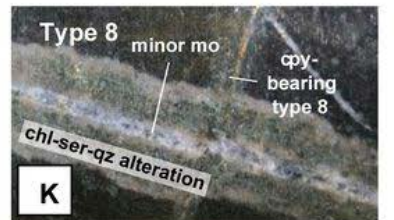
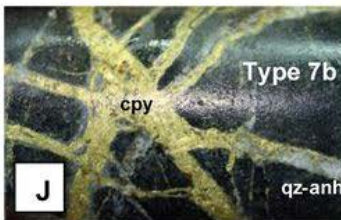
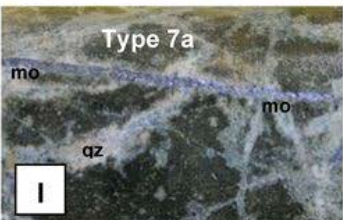
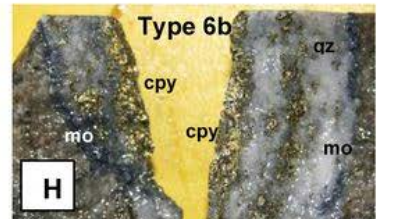
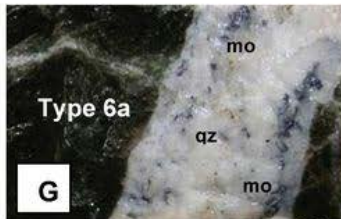
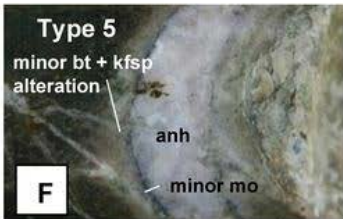
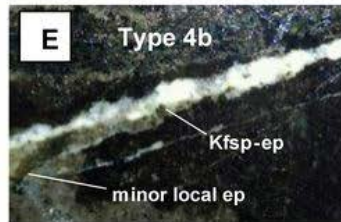
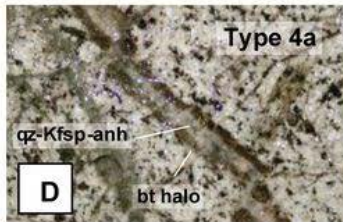
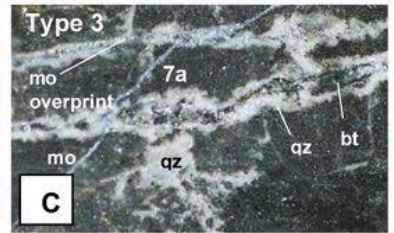
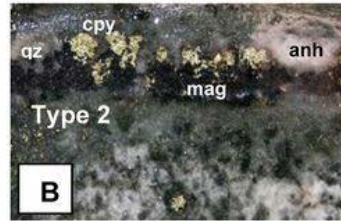
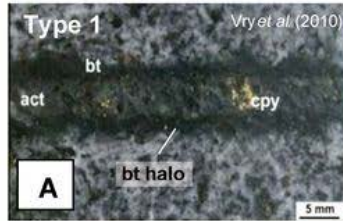
MOLYBDENITE

Joe Student
GY 302 Poster Presentation
Autumn 2015

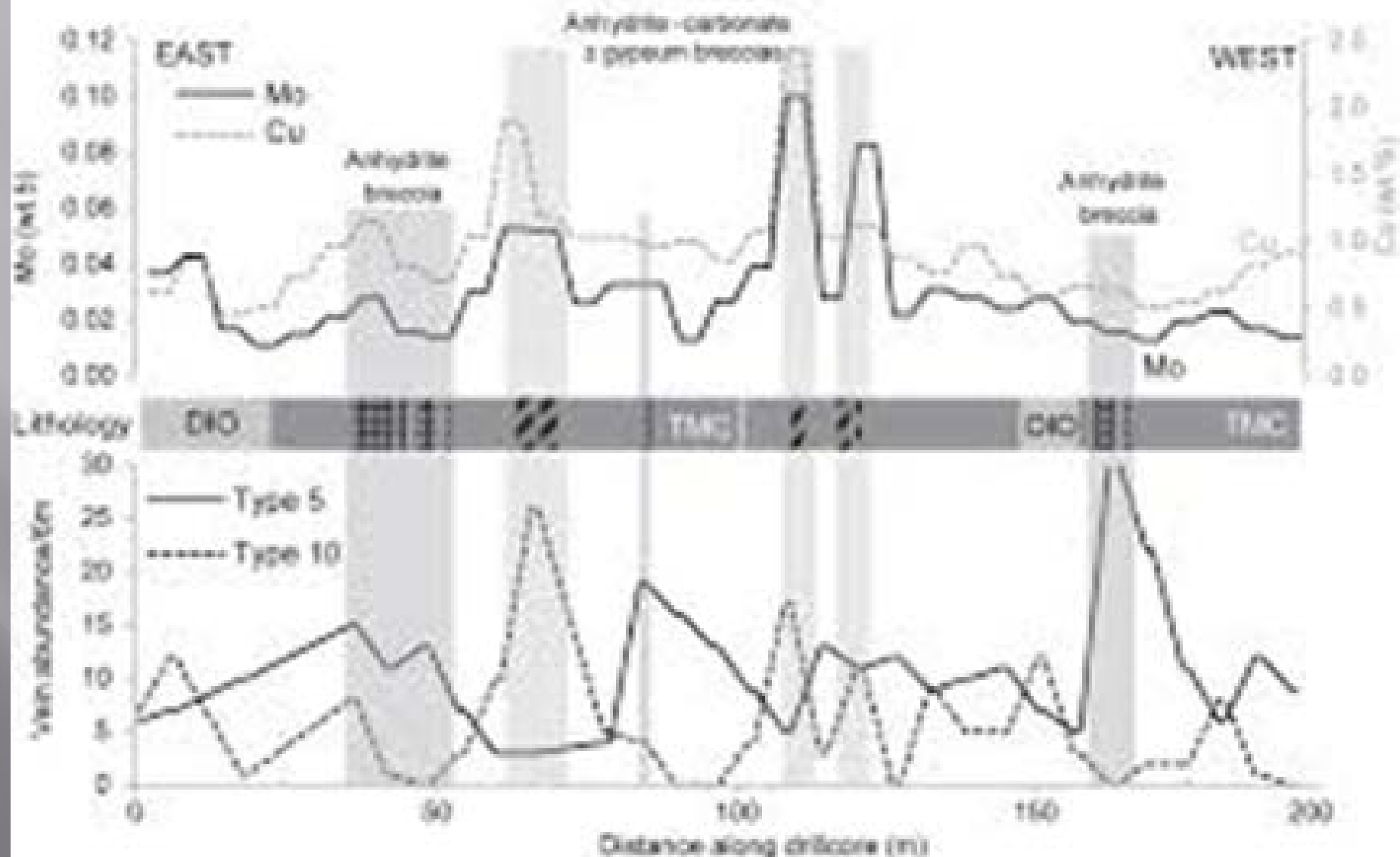


<http://www.johnbetts-fineminerals.com>

Vein	Vein Mineralogy and alteration halos
1	bt-act ±(chl-cpy)
	bt halo
2	mag ±qz-anh-(cpy-py)
	original halo not preserved
3	bt-qz ±anh-(chl-cpy-py-mo)
	qz-plag halo
4a	qz-Kfsp ±anh-(ap-bt)
	bt halo
4b	Kfsp-ep-anh-chl ±qz
	local ep halo
5	anh-qz ±cpy-py-(bo-mo)
	bt halo in the TMC/Kfsp or no halo in felsics
6a	qz-anh-Kfsp ±mo-bo-py
	no halo in TMC/Kfsp halo in felsics
6b	qz-cpy-anh-Kfsp ±mo-bo-py
	no halo in TMC/Kfsp halo in felsics
7a	mo ±(qz-anh)
	no halo
7b	cpy ±qz-anh
	no halo
8	cpy-py-qz-anh-mo
	ser-chl-qz halo
9	tour-cb-anh ±cpy-py-bo-mo
	ser-chl-qz halo
10	cb-anh-gyp ±ten-cpy-py-bo-mo
	ser-chl-qz halo



Transect 2: DDH 22 30



SUMMARY

- Molybdenite is used as a source of molybdenum for industry purposes
- Molybdenite is composed of MoS_2 and is a sulfide mineral
- The Climax mine is the biggest deposit in the US
- Mo is used to make alloys in steel.
- Molybdenite is a hypothermal mineral deposit associated with porphyry deposits in convergent plate boundaries and is associated with other ores like cuprite, malachite, stibnite, quartz, chalcopyrite, gold, azurite, supergene materials and other minerals that form when hot water and other materials precipitate in contact with igneous rocks

GY 302: Crystallography and Mineralogy

Lecture 16: Poster Preparation

Instructor: Dr. Doug Haywick

dhaywick@southalabama.edu

This is a free open access lecture, but not for commercial purposes.

For personal use only.