

Enroll Now for Summer

It is not too late to enroll for the 2009 Summer semester!

Lahne Black is still accepting applications and enrollments for the classes being offered during the Summer Semester (Jun 8th thru Jul 31st) for the 8-week semester.

Courses being offered:

- Introductory Course Sequence (4 hours) consisting of GE275, GE341, GE373, and GE401 (16-weeks runs through Sep)
- GE 101 Quantitative Methods for Military Geological Engineers (8-weeks)
- GE 441 Geotechnical Construction Practice (8-weeks)

Officers are reminded to enroll directly through Lahne to avoid administrative complications. Be sure to check with your Educational Officer for current policies and procedures before attempting to enroll in courses through GoArmyEd. Lahne can help with course numbers once your program has been approved by a TA Counselor, so remember to check with her to ensure you are charged the special Fort Leonard Wood rate.

Program Contacts:

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Student Group Visits Viburnum Trend Region



Did you know that Missouri is host to the largest known lead reserves in the world?

The area referred to as the Southeast Missouri Lead-Zinc District includes St. Francois, Crawford, Dent, Iron, Reynolds, and Washington counties and is the source of 92% of the domestic lead production in the U.S. The first lead was mined in the region in 1720 by French miners and most of the earliest development in the region, such as river port construction and smelting facilities, were constructed to support the mines.



Galena
(PbS)



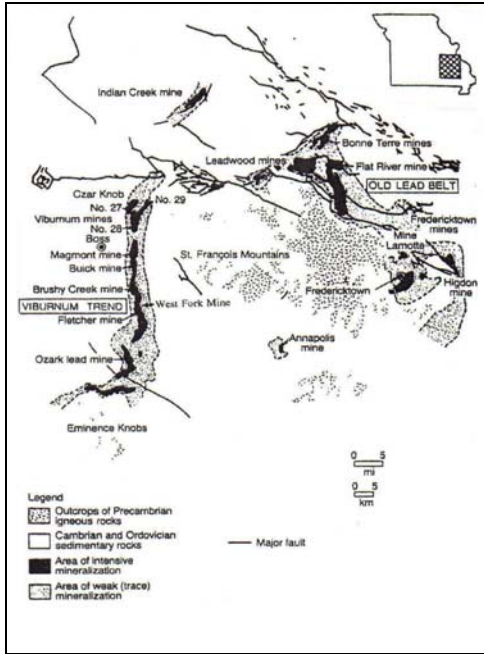
Sphalerite
(ZnS)



Chalcopyrite
(CuFeS₂)

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There are two distinct belts of mineralization: (1) the Old Lead Belt centered on Park Hills which is currently dormant, and (2) the Viburnum Trend which currently hosts 10 active mines owned by the Doe Run Company mine headquartered in St. Louis.

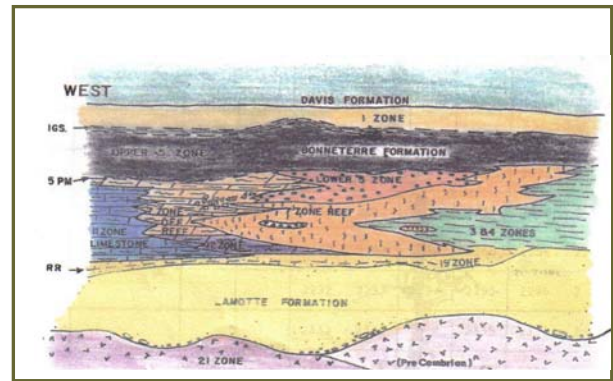


The mines of the Southeast Missouri Lead Belt.

The majority of the ore mined in the region is deposited as sulfides: galena (PbS), sphalerite (ZnS), and Chalcopyrite (CuFeS₂). However, significant quantities of silver and cadmium have also been recovered as part of the smelting process. Gangue minerals such as pyrite, calcite, dolomite, and quartz are liberated from the ore by crushing and milling operations performed onsite prior to sending the commodity to the smelter for final processing.



The active Doe Run mines are located along the 40-mile length of the Viburnum Trend which is a Mississippi Valley Type Lead-Zinc deposit which is hosted by the Upper Cambrian dolomitic carbonate sedimentary rocks of the Bonterre Formation (500 million years old). These sediments covered the Pre-Cambrian granite and volcanic rocks (1.5 million years) of the St. Francois Mountains (eg. Taum Sauk) which served as the floor to the relatively shallow Sauk Sea. Deposition on this floor left remnants of algal and bacterial stromatolite reefs which served to further control the deposition of the ore. In most areas of the Trend, the Bonterre Formation overlies the Lamotte Sandstone Formation in a regular bedding plain; however, there are also several “knobs” of igneous rock which protruded as islands from the Sauk Sea which also impact the spatial distribution of the ore.



Stratigraphy of the Viburnum Trend.

The department has hosted several field trips for AC and RC officers to tour the Doe Run mines where officers are taken 1,000 feet below the surface and given a thorough overview of mining to include control grading of ore, drilling/blasting, and mucking/crushing operations.

If you are going to be in the Fort Leonard Wood Area and would like to attend a field trip, just drop us a line at flwgee@mst.edu.

Meet the Faculty: Dr. Neil Anderson

Dr. Anderson teaches applied geophysics at the Missouri University of Science and Technology and serves as Director of the Geological Engineering Fort Leonard Wood Active and Reserve Component MS Degree programs. He holds a B.S. and M.S. in Geological Engineering from the University of Manitoba and a Ph.D. in Applied Geophysics from the University of Calgary.

Professor Anderson joined the Missouri University of Science and Technology in 1994 and brought with him a wealth of industrial and research experience. His research interests include the application of non-invasive geophysical imaging technologies to archeological, environmental, and structural and geotechnical investigations. He has coauthored over two hundred technical papers, one textbook, two geophysical atlases and numerous industry short-course manuals.

Dr. Anderson is known for creating “real world” experiences for his students by procuring funds for domestic and international research projects. His students have produced and presented numerous reports and technical papers based on a multitude of projects, including: seismic investigations of abandoned underground coal and lead/zinc mines; mapping of subsurface karst features impacting geotechnical designs; roadway and bridge deck integrity analyses; water resource investigations in southern Africa; and archeological investigations in Egypt.



Dr. Neil Anderson seated beside his daughter on train from Cusco to Machu Picchu, March 2009.

In January, Dr. Anderson traveled to Juba and helped the Ministry of Water Resources and Irrigation, Government of Southern Sudan, prepare part of its proposal to the World Bank. In March, he led a small group of MS&T students on an expedition to Machu Picchu; in May, Professor Anderson will teach a short course in Cape Town, South Africa, and participate in water resource exploration projects led by the University of the Western Cape.

Nevertheless, Dr. Anderson can't be accused of being all work and no play. He is an avid jogger, skier, hiker, and scuba diver, and serves as faculty advisor to the MS&T in-line hockey club team. He is also an experienced traveler and has taken students to South America, Africa Europe and Asia.

If you have questions regarding geophysics or the program in general, feel free to drop him an email at nanders@mst.edu and introduce yourself.

*Do you have ideas to
improve this Newsletter or
the Program?*

We'd love to hear from you!

Frequently Asked Questions

1. ***Is it true that MS&T awards graduate credit for completion of CCC or CCC-RC?***

YES. Officers submit their DA Form 1059 to receive 8-semester hours of credit upon completion of the sequence of Introductory Courses (Stage 1).

2. ***Where can I find more information about the program?***

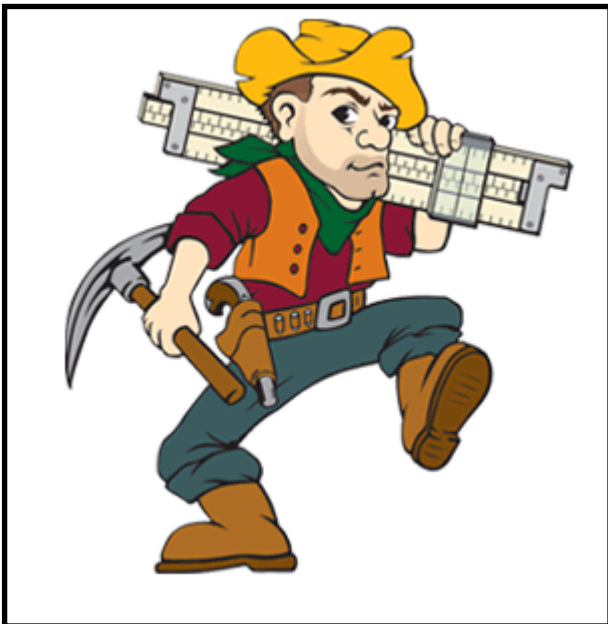
<http://flwgee.mst.edu>

3. ***How do I enroll in classes?***

Please contact Lahne Black by email at lahne@mst.edu or phone at (573) 341-4410 or (800) 441-5218 to complete the application process and to process your enrollments each semester.

4. ***I have a Joe'SS account; can I just register for classes online?***

NO. You will be assessed full distance learning tuition and fees (nearly double) if you don't process your enrollments through Lahne.



5. ***What happens if I get deployed during the middle of the semester and am unable to complete my course requirements?***

If you are unable to complete course requirements within the normal semester, work with your instructor to establish a mutually agreeable completion schedule. You will likely be given a grade of "Incomplete" until you complete course requirements. The instructor can grant up to a 1-year extension at his or her discretion.

Do you have a question not answered here? Please drop us an email at flwgee@mst.edu and ask or leave us your number and the best time to call you.

6. ***Can I apply the GI Bill or Tuition Assistance toward tuition and fees for this program?***

YES. In most cases. For a complete answer to this question, you must coordinate between your Unit Educational Officer and Lahne Black to work out the details.

7. ***If I don't have an engineering or science undergraduate degree, can I still participate in the program?***

YES. Your transcripts will be reviewed and, on a case-by-case basis, those who would benefit from an introduction to engineering mathematics and mechanics will be required to take two bridging courses: (1) GE101 Quantitative Methods for Geological Engineers (2-semester hours), and (2) GE205 Statics and Mechanics of Geological Materials (3-hours).