Date: Wednesday, August 23, 2006
To: MinE 483 Class
From: Dan Alexander
RE: Home Work #1 – Data Required

Project Data - The mapping objectives of this course require that you have a unique data set to begin. If you have an interest in a specific area, mineral or company it may help you choose a project and obtain data. You need to have the following data by the first week of class.

You may work individually or in 2 person teams. Teams share the work and the grade. Faculty will approve the members of each team.

1. Select a specific mineral or coal deposit suitable for a potential mine site and obtain faculty approval for the project,
   a. At least 30 core drill holes or sample points with name, location and structure such as stratigraphy or layer name and elevations of layers/seams, from below the coal up through the immediate roof and main roof. If stratigraphy is available to the surface that is best because it allows you to do cross sections.
   b. Quality data for drillholes including Ash, Sulfur, Btu, Yield, specific gravity for the mining horizon (that part of the seam and roof and floor that will be mined and processed). This data can be provided in several forms, but you must calculate parameters for the coal on an "As Received" basis. That is, the quality you must report is the quality of the coal that the mine sells in the form that it would typically be reported to the customers buying your product.
   c. Average size distribution and washability of raw coal or mineral deposit grade information and plant recovery from the core holes and samples to prepare the plant flow sheet and material balance. This information is also needed to estimate the inplace and recoverable reserves.
2. Gather a set of basic geologic, structural and quality data such as core drillhole records, channel or outcrop sample data, laboratory reports, etc. for the deposit.
   a. At least 30 core drill holes or sample points with name, location and structure such as stratigraphy or layer name and elevations of layers/seams, from below the coal up through the immediate roof and main roof. If stratigraphy is available to the surface that is best because it allows you to do cross sections.
   b. Quality data for drillholes including Ash, Sulfur, Btu, Yield, specific gravity for the mining horizon (that part of the seam and roof and floor that will be mined and processed). This data can be provided in several forms, but you must calculate parameters for the coal on an "As Received" basis. That is, the quality you must report is the quality of the coal that the mine sells in the form that it would typically be reported to the customers buying your product.
   c. Average size distribution and washability of raw coal or mineral deposit grade information and plant recovery from the core holes and samples to prepare the plant flow sheet and material balance. This information is also needed to estimate the inplace and recoverable reserves.
3. Find relevant surface and geologic maps for the area and region of the project.
   a. Digital Topography or Digital Terrain Model (DTM) of the project area.
   b. Planographic and Demographic mapping and data for the project area. Basic Planographic map features can be found on Quadrangle maps. If you have this in digital vector format (lines that can be read by AutoCAD) you can easily use it in your project mapping.