

### Lab: Drilling for Oil

This lab is one of the “virtual labs” developed by Professor Karweit. You can find the program and a brief description at <http://www.jhu.edu/virtlab/virtlab.html> select Drilling for Oil.

### Assignment

You are asked to interpret the underlying stratum for three flat topography problems and one hilly topography problem. Report the cost of your drilling and your results.

### Some objectives

A bit of calculus, if you formally solve the problem. More on constrained optimization. Exposure to Matlab and 3D visualization tools.

### Tools

In addition to Professor Karweit’s applet a Matlab script has been written to aid/help you in your exploration process. This script is available online [www.ce.jhu.edu/whatis2](http://www.ce.jhu.edu/whatis2). To use the file download it to your computer, start Matlab, Use File-Open to open topo.m, key in your data in between data=[ ..... ];, Save the File, Then select the Run button to run topo. (Will go over it in lab as well! – output looks like that below)

