

Magnetic modeling problems #1

1. Suppose a system of east-west *en echelon* mineralized veins ($k=.01$ SI) whose average width is 3-5 meters cuts across some well lithified sedimentary rocks. Twenty to thirty meters of glacial drift obscures the rocks and veins. Use Cooper's software (or MAGCAD if you have Windows XP) or any other 2D magnetic modeling program to address these points:

- Provide good graphs of the expected anomalies for latitudes of 75° N and 15° N.
- What is the maximum station spacing that will still allow the detection of the veins?
- Does the previous answer depend on the inclination?
- What must the precision of the observations be to detect the veins?

2. Use PBLOCK or MAGCAD to develop a graph of anomaly width versus depth of source for a buried block. Make sure you explain a way to measure width consistently.