

## Problem set using RES2DMOD.EXE

The two air-filled tunnels discussed in the previous gravity exercise had these parameters:

### Tunnel #1

radius = 1.0 meter.  
depth = 1.5 meters to center

### Tunnel #2,

radius = 1.0 meter.  
depth = 2.5 meters to center.

Using those parameters and RES2DMOD.EXE:

1. Design Wenner and Dipole-Dipole experiments whose results will adequately image the tunnels. Think about these sub-questions and techniques:

- Test the adequacy of your solution by inverting the model results with RES2DINV.
- How does a-spacing have to increase with depth of target?
- How does the width of the line of electrodes have to increase with depth of source?

2. Choose either the Wenner or Dipole-Dipole results and demonstrate how adding 5% noise when you save a model impacts the final inversion.

Turn in a 2-3 page (not including figures) report outlining the experiments. Make sure to explain and support how you arrived at your experimental parameters.