Cottonwood is a buried landfill near the Santa Cruz River in Tucson. Trenching has allowed approximate boundaries to be placed on the area, making it an excellent location to test the ZETA system. From the IP data a pit like structure is obvious and correlates well with edges from trenching.
The map of the west side investigation of the Los Reales landfill shows trenches that intersect solid waste (grey), trenches that never encountered native soil or waste (black with grey dot), and trenches that hit native soil with no waste (black). The resistivity and IP test line is also located on the map.
The IP data set collected along the research line at Los Reales clearly shows the contact between buried solid waste and no solid waste. Also, variations in the cover soil thickness can be seen in the data.
Prudence
(Survey line and cultural features locations)
The map of Prudence Road landfill shows all the cultural features that may interfere with data collection.
IP and resistivity results along 100S at the Prudence Road landfill. The edge of the buried pit is at approximately station 0. The effects of power line can be seen at station 40.
Values in rounded milliseconds.
Contours: 1.0, 2.0, 3.0, ...
IP data over a 5 ft. diameter, re-enforced, concrete pipe buried 10 feet below the surface.
Values in rounded milliseconds. Contours: 1.0, 2.0, 3.0, ...
Earthen Dam Study

Observed Apparent Resistivity (ohm-m)

2-D Smooth-Model Resistivity (ohm-m)

Interpreted Section

Pre-Dam Topography?

Sand and Gravel Material

Increasingly Clay-rich?

More Clay-rich Material

Vertical Exaggeration: 1.5:1
Raw data, modeled results, and a preliminary interpretation for a line of data collected on an earthen dam. Data were collected to help locate weak areas within the dam. A total of 954 data points were collected by a three-person field crew in about 2.5 hours.