

LANL
TA-49, Water Canyon, Alluvial Wells

Abandonment of the Alpha/Beta/Gamma A Boreholes

Three exploratory boreholes were completed in 1960, in the vicinity of the proposed test site on Frijoles Mesa (now MDA AB), for investigation of geological and hydrological characteristics of the mesa and bordering canyons (see Table 1, and Figure 1). The names of the completed boreholes are Alpha, Beta, and Gamma A. Alpha is located on Frijoles Mesa adjacent to MDA AB, Beta is located in the Water Canyon flood plain, within the TA-15 firing range, and Gamma A is located in the flood plain of Ancho Canyon. No saturated intervals were encountered during drilling of these boreholes.

These boreholes are not practical for moisture monitoring due to their diameter, nor are there any foreseeable future uses for these boreholes. In their current state, the exploratory boreholes are a liability to LANL and should be abandoned for the following reasons:

- Open boreholes provide a conduit to the subsurface
- Two boreholes are located in canyon bottom flood plains
- None of the borehole have encountered saturated zones, nor do any presently contain water
- These boreholes are not required for any anticipated remediation

Before abandoning these boreholes RRES will camera log each hole to ensure that there are no obstructions, and to determine true total depth (TD) to determine the grout volumes required. Each borehole will be grouted from TD to the surface once its integrity is confirmed and the surface casing has been removed.

Table 1. List of historical investigation boreholes at TA-49 and TA-15 to be abandoned.

Borehole ID	Year Installed	Depth (ft)	Diameter (in)	Declination (degrees from horizontal)	Adjacent Waste Disposal Unit	Current Status
Alpha	1960	180	24	Vertical	MDA AB	Open Borehole
Beta	1960	189	24	Vertical	None	Open Borehole
Gamma A	1960	54	4	Vertical	None	Open Borehole

It is anticipated the abandonment activities will not take place until later in FY05 unless we can piggyback the effort with similar week in order to avoid additional mobilization costs. As usual we will keep you updated on the status of the effort.



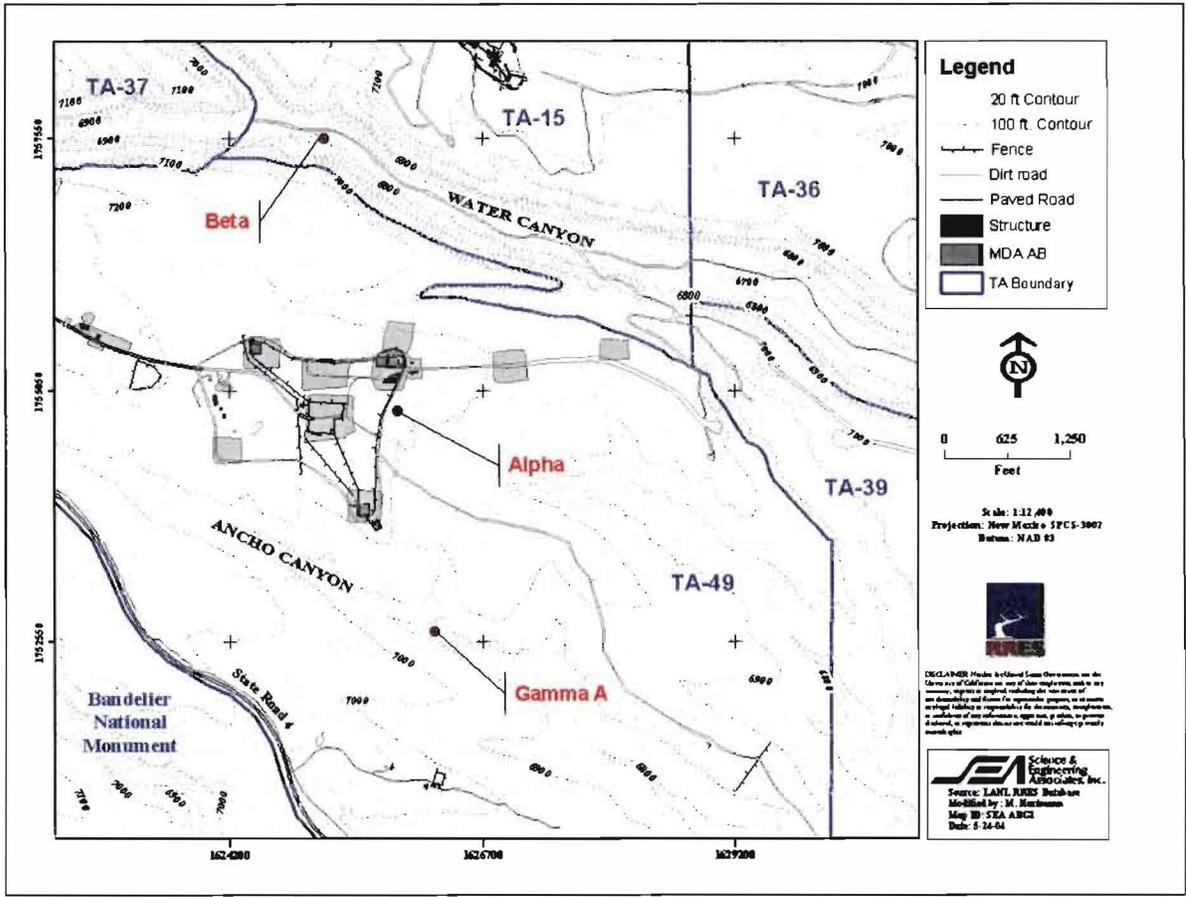


Figure 1. Location of Alpha, Beta, and Gamma A