

# GEOLOGY OF THE PAJARITO PLATEAU

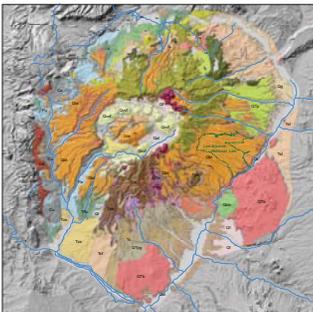
## INTRODUCTION

Los Alamos National Laboratory and adjacent communities of Los Alamos and White Rock are located on the Pajarito Plateau, a high, east-tilted tableland eroded into a series of narrow mesas separated by deep canyons. Mesa-top elevations range from approximately 7,800 ft on the west to about 6,200 ft on the east. The photograph below provides a westward view across the plateau towards the Jemez Mountains. The bowl-like feature in the central part of the Jemez Mountains is the Valles caldera.



## GEOLOGIC SETTING

The Jemez Mountains are a broad volcanic highlands built up over the last 13 million years. During the latter stages of volcanism, cataclysmic eruptions from calderas in the central part of the Jemez Mountains deposited thick blankets of Bandelier Tuff over the area that is now the Pajarito Plateau. Intense heat and hot volcanic gases welded portions of these tuffs into hard, resistant deposits that make up the upper surface of the plateau. Streams flowing eastward across the plateau from the Jemez Mountains to the Rio Grande have cut canyons deep into the tuff, forming the scenic mesas and canyons that characterize the landscape.



LA-UR-10-07048

## ROCK UNITS OF THE PAJARITO PLATEAU

The large colored figure in the center of this panel is a west-to-east geologic cross section across the Pajarito Plateau that shows the distribution of rock units in the subsurface. The line of section A-A' is shown in the location map below.

