MAP SYMBOLS
(additional symbols on envelope)

Strike and dip of fractures or joints
Inclined
Vertical
Sheared or brecciated rock
Volcanic vent; queried where uncertain
Hydrothermal alteration

× 1.43 Sample location and K–Ar age of fresh rock in million years
× 5.66a Sample location and K–Ar age of hydrothermally altered rock in million years

Landslide; arrow indicates direction of movement
Cold spring

Geologic color separations and layout by A. J. Kron
Edited by J. C. Love

INDEX MAP OF NEW MEXICO SHOWING LOCATION OF GEOLOGIC MAP

SCALE: 1:24,000

Base from U.S. Geological Survey
Geology by F. Goff, J. N. Gardner, and G. Valentine, 1980–85

Geology of St. Peter's Dome area, Jemez Mountains, New Mexico

by Fraser Goff, Jamie N. Gardner, and Greg Valentine, 1990

Los Alamos National Laboratory, Los Alamos, New Mexico 87545

INTRODUCTION

St. Peter's Dome, one of several ridges and peaks commonly referred to as the San Miguel Mountains, is an uplifted fault block of volcanic and sedimentary rocks lying southeast of Valles caldera and overlying the western margin of the Rio Grande rift (Fig. 1). Valles caldera represents the culminating volcanic event in the development of the Miocene to Quaternary Jemez volcanic field and is considered to be one of the world's "type" resurgent calderas (Smith and Bailey, 1968; Smith et al., 1970).

STRATIGRAPHY

STRUCTURE

ACKNOWLEDGMENTS—This mapping project was funded by the U.S. Department of Energy, Office of Basic Energy Sciences (1980–1983), and by its Institutional Supporting Research grant (The Earth's Interior) from the Director's Office, Los Alamos National Laboratory (1984–1985).
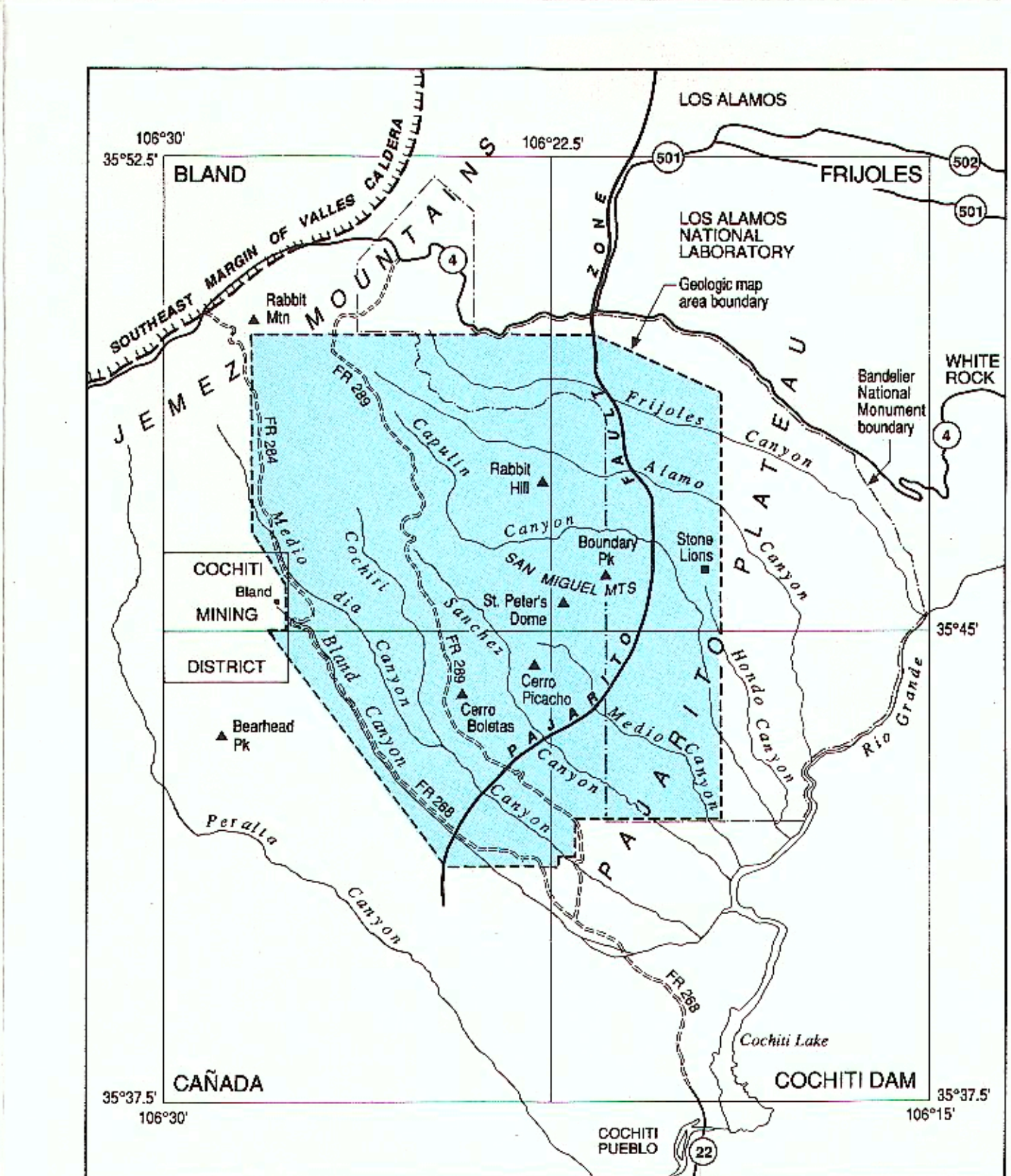

FIGURE 1—Location map of St. Peter's Dome area, New Mexico showing major physiographic features.

(text continued on Sheet 2)