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Introduction

J. Paul Fitzsimmons

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This is one of many related papers that were included in the 1955 NMGS Fall Field Conference Guidebook.

Annual NMGS Fall Field Conference Guidebooks

Every fall since 1950, the New Mexico Geological Society (NMGS) has held an annual [Fall Field Conference](#) that explores some region of New Mexico (or surrounding states). Always well attended, these conferences provide a guidebook to participants. Besides detailed road logs, the guidebooks contain many well written, edited, and peer-reviewed geoscience papers. These books have set the national standard for geologic guidebooks and are an essential geologic reference for anyone working in or around New Mexico.

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NMGS has decided to make peer-reviewed papers from our Fall Field Conference guidebooks available for free download. This is in keeping with our mission of promoting interest, research, and cooperation regarding geology in New Mexico. However, guidebook sales represent a significant proportion of our operating budget. Therefore, only *research papers* are available for download. *Road logs*, *mini-papers*, and other selected content are available only in print for recent guidebooks.

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INTRODUCTION

By J. Paul Fitzsimmons
University of New Mexico

In contrast to the earlier field conferences of the New Mexico Geological Society, this, the sixth annual gathering for the purpose of concentrated field study in some phase of New Mexico geology, will encompass a comparatively small geographic area. The excursions will, in fact, be confined to a part of Sierra County, and, for the first time in this series of events, will radiate from a center, like spokes from a hub, rather than lie end to end like a string of sausages, or like drilling pipe if you prefer. Truth or Consequences will be the center of the wheel and all trips will start from there. Nor are the excursions as long, in miles to be driven, as those of former years.

By confining the conference to this smaller geographic radius, however, the Society has by no means restricted itself to any lack of variety in geological phenomena. Rocks ranging in age from Precambrian to Pleistocene and including sedimentary, igneous, and metamorphic types are exposed, and will be visited. Both large- and small-scale structures are present, from folds and faults to vugs and vesicles. Mineral collectors, fossil collectors, picture collectors, but pray no tax collectors, may have more than one occasion to delight themselves.

If the time of this conference coincide with hunting season or interfere with other scientific meetings, the fault is not entirely that of the Conference Committee. Government regulations made it mandatory to visit the San Andres Mountains--a principal attraction of the conference-- on a holiday. The fact that holidays are somewhat erratically scattered through the calendar was a disturbing thorn in planning this gathering.

The committee hopes that any disadvantages may be more than offset by the lure of forbidden, fringe, and provocative areas. It is no longer an easy task to view the geology of the San Andres Mountains. In the Sierra Cuchillo area one gets his last look at the Precambrian-Paleozoic-Mesozoic section before it disappears beneath the sea of lava to appear no more till it comes to surface again far to the west in Arizona. In the Caballo and Fra Cristobal

Mountains are to be found some of the best examples of overturned folds and of complex faults anywhere in the state. And in these ranges, furthermore, one may get an excellent view of the northward pinch-out of most of the Lower Paleozoic rocks.

Further recommendation seems hardly necessary. Almost every phase of the geology and the geography of the area is covered in one or more of the several articles included in the guidebook. It would be superfluous to dwell upon them at greater length here.

The climate of the area ranges from arid to semi-arid, except in the higher parts of the Black Range at the western border. Because of their narrow ridged crests, other mountain ranges of the area have little terrain at sufficient altitude to affect the climate as does the Black Range on the west and the Sacramento Mountains on the east.

The relief of the area is in the neighborhood of 5,000 feet, ranging from about 4,000 feet above sea-level at the south edge in Tularosa basin and 4,100 feet above sealevel where the Rio Grande leaves the area to nearly 9,000 feet above sealevel at Salinas Peak in the San Andres Mountains. Peaks of the Black Range may exceed 10,000 feet in altitude, but these higher reaches are west of the area of the conference.

The population of the area is concentrated in Truth or Consequences and its environs. Health seekers and the suppliers of their needs constitute a very large proportion of the population of this community. Hunters and fishermen annually make it their headquarters. Elephant Butte and Caballo reservoirs, designed for irrigation purposes, are utilized for their primary end chiefly south of the conference area. Those that live near the lakes or that come to the lakes use them for pleasure boating or for fishing, or for both.

Outside Truth or Consequences, ranching is the principal occupation. Mining and prospecting keep a few busy, but the financial returns are meager.

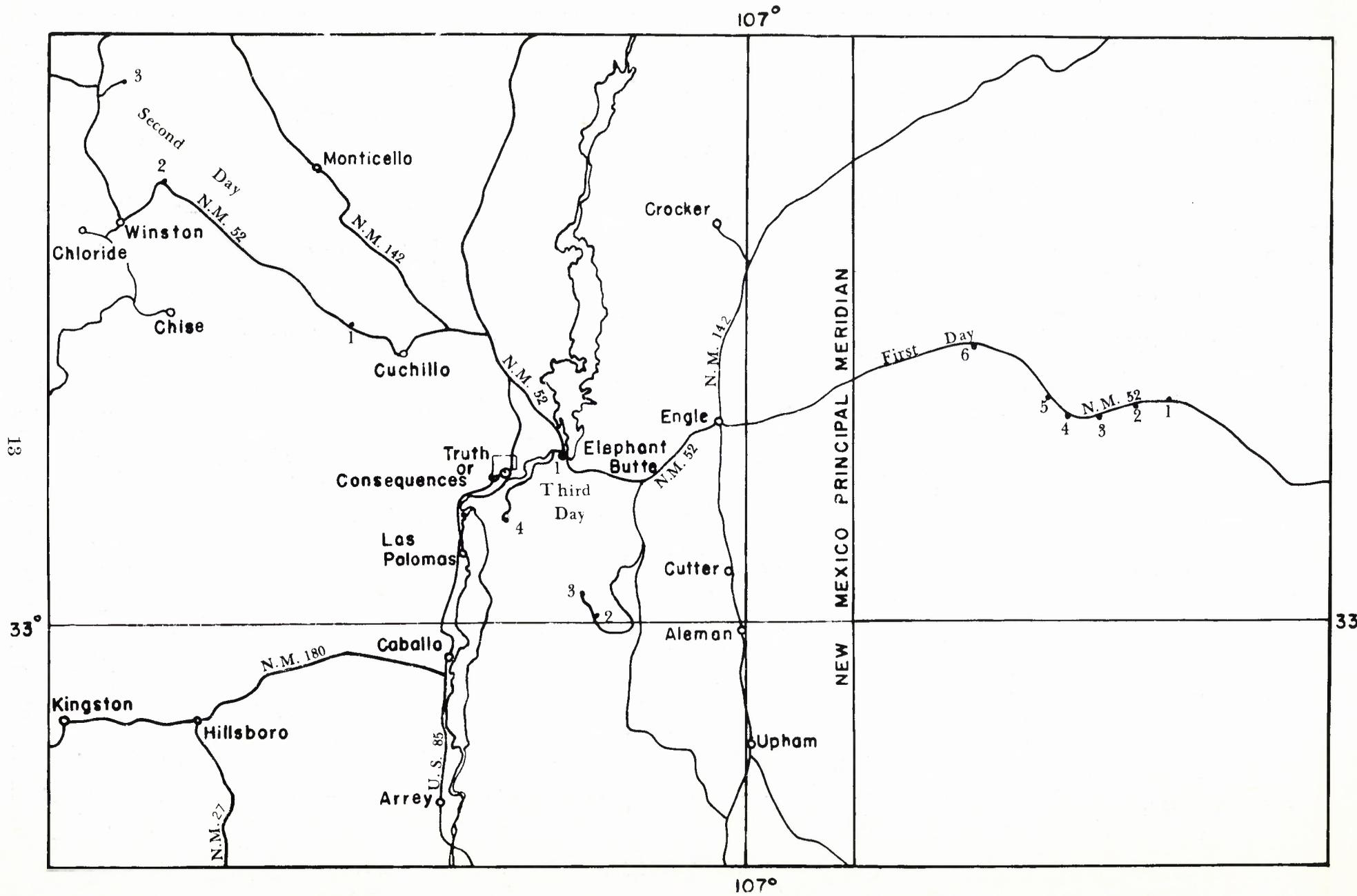
White Sands Proving Grounds occupies most of the western part of the area, the eastern part of Tularosa basin and almost all the San Andres Mountains, but the employees of the various government projects mostly work and live outside the boundaries of the field-trip area.

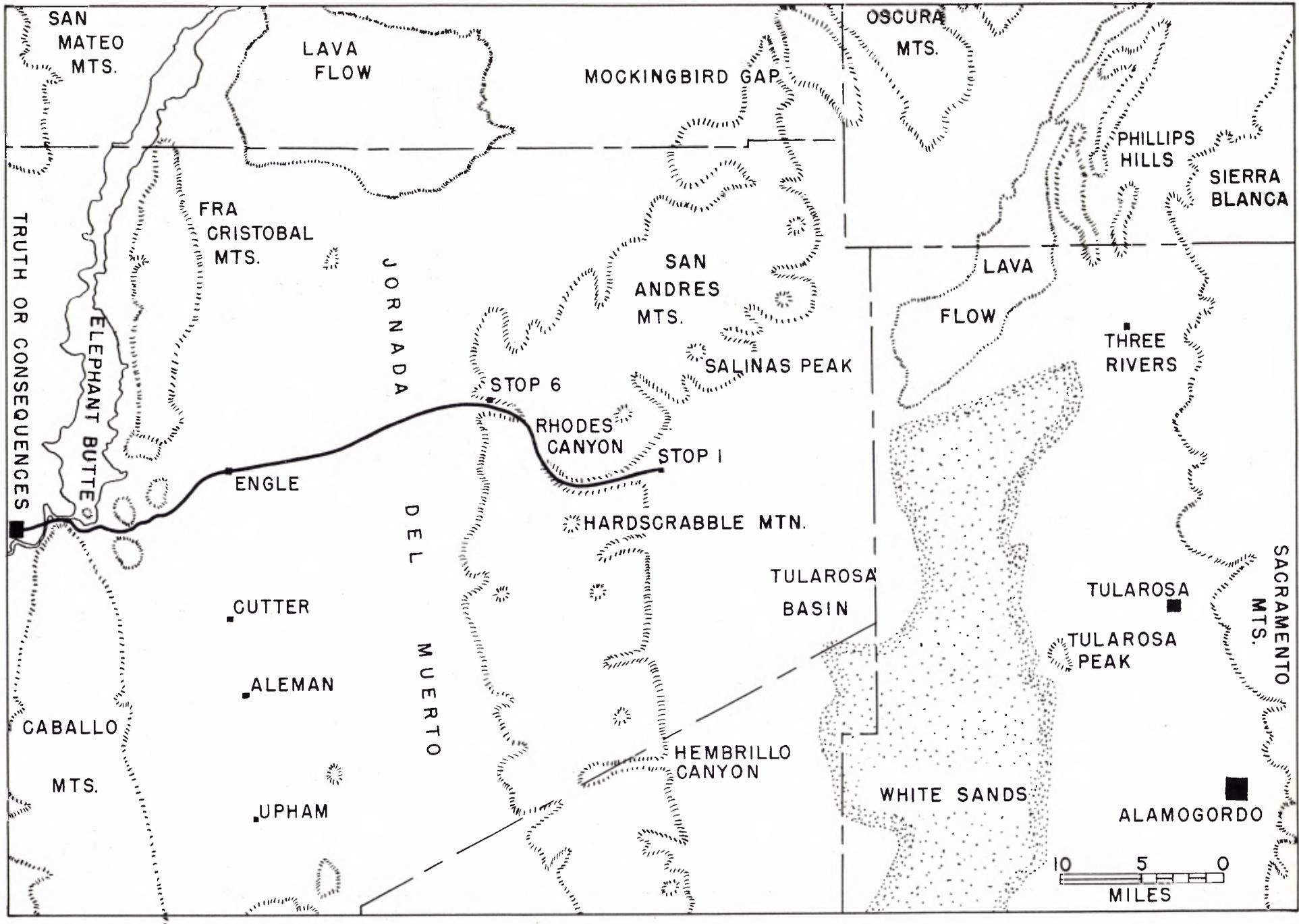
Three parts of the area are to be visited on the three successive days of the conference. The first day will be spent entirely in examining the section of the San Andres Mountains as displayed in Rhodes Pass. Rocks range in age from Precambrian to Recent, but the Paleozoic sequence is best developed and exposed and will be the chief material of discussion.

The second day will take the conferees to the Sierra

Cuchillo-Iron Mountain area where the rocks are principally Paleozoic sediments and Cenozoic volcanics and sediments. Metamorphic rocks and various ore deposits are also highlights of this area. On the third and last day of the conference, the area about Elephant Butte dam and the northern end of the Caballo Mountains will be visited. Again rocks ranging in age from Precambrian to Recent will be encountered. The Paleozoic and the Mesozoic sections are especially well developed and well exposed here. General discussion of any feature is invited.

WELCOME to the FIELD CONFERENCE!





I-1 ROUTE MAP - FIRST DAY