Field Guide
to
Selected Cauldrons
and Mining Districts
of the
Datil-Mogollon Volcanic Field
New Mexico

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FOREWORD

This volume has been prepared for the spring meeting of the New Mexico Geological Society, May 17-20, 1978. Previous spring meetings of the Society have generally consisted of a technical program, banquet, and business meeting, occasionally accompanied by a one-day field trip. In departing from tradition, our purpose is not to compete with the fall field conference but to make available new data on the Datil-Mogollon volcanic field and its mineral resources. Over the past decade, large areas of volcanic terrane in southwestern New Mexico have been mapped by faculty and students from several universities and by geologists of the U.S. Geological Survey and the New Mexico Bureau of Mines and Mineral Resources. With this effort has come the recognition of more than 20 cauldrons and the realization that much (but not all) of the middle and late Cenozoic mineralization is related to intrusions and hydrothermal systems along the ring fracture zones of cauldrons.

The trip is essentially a short course in volcanic geology with emphasis on ash-flow tuffs, cauldrons, and mineralization. The road logs and papers contain new data on the Socorro, Magdalena, Iron Mountain, Cuchillo Negro, Hillsboro, Organ, Gila and Mogollon districts. The article on the Cuchillo Range by R. H. Jahns and others is the first paper on that area since 1955; the article by W. R. Seager is the first published work on the Organ district since 1935. Several of the road logs were initially prepared and distributed as xerox copies for field trip no. 4 of the Rocky Mountain Section, Geological Society of America, Annual Meeting in Albuquerque, May 19-24, 1976. These logs have since been revised and new data added. New Mexico Geological Society Special Publication No. 5 (Elston and Northrop, editors, 1976) entitled “Cenozoic Volcanism in Southwestern New Mexico” also covers the Datil-Mogollon volcanic field and contains a glossary of stratigraphic terms. U.S. Geological Survey Miscellaneous Investigations Map I-886 (Ratte and Gaskill, 1975) entitled “Reconnaissance Geologic Map of the Gila Wilderness Study Area” also provides some very useful coverage. Enjoy your trip!

C. E. CHAPIN
W. E. ELSTON
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Route map of Field Trip

Datil - Mogollon Volcanic Field

May 18-20, 1978