Back Matter

(Usually includes a stratigraphic column and/or correlation chart.)

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This is a section from the 2022 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.

Free Downloads

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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Quaternary terrace stratigraphy near Socorro

Slightly modified from Sion et al. (2020) based on mapping by Koning et al. (Socorro 100K compilation sheet)

- Tio Bartolo surface(s), 640 to 500 ka
- Valle de La Parida surface (~135 ka)
- Loma Parda surface (~70 ka)
- La Joyita Fm.
- Bowling Green Fm.
- Jaral Largo Fm.
- Cañada Mariana surface (~27-29 ka)
- Matanza Fm.
- Holocene valley fill
- Sierra Ladrones Formation

Las Cañas geomorphic surface

Height above Rio Grande floodplain (m)
Stratigraphic columns for the Socorro area
by Dan J. Koning, Richard M. Chamberlin, & Steve M. Cather

**Socorro Region: East (Joyita Hills & Quebradas region)**

**Early Eocene**
- La Jencia Tuff (29.00 Ma)
- LPBA
- Vicks Peak Tuff (28.77 Ma)
- LPBA
- La Jara Peak Basaltic Andesite (LPBA), defined per Chapin and Seager (1975)
- Lemitar Tuff (28.24 Ma)
- tuff of Luis Lopez Fm. (upper?)
- LPBA
- Hells Mesa Tuff (32.35 Ma)
- basaltic conglomerate
- LPBA
- tuff of Arroyo Veranito (34.37 Ma; Chamberlin et al., this vol.)
- Local intermediate lava flows (plagioclase-pyroxene phyric)
- lower Spears Group
- gradation with Baca Fm.
- Baca Fm.
- Crevasse Canyon Fm.
- Mulatto Tongue, Mancos Shale
- Gallup SS
- D Cross Tongue of Mancos Shale
- Tres Hermanos Sandstone

**Middle Eocene**

**Late Eocene**

**Late Cretaceous**

**Triassic Late**

**Permian**

**Pennsylvanian**

**Missourian**

**Virgilian**

**Leonian**

**Gray Mesa Fm.**

**Arroyo del Alamillo Fm.**

**Los Vallos Fm.**

** Torres Mbr.**

**Joyita Mbr.**

**Cañon de Esposno Mbr.**

**Scholle Mbr.**

**Lemitar Tuff (28.24 Ma)**

**Vicks Peak Tuff (28.77 Ma)**

**La Jencia Tuff (29.00 Ma)**

**Hells Mesa Tuff (32.35 Ma)**

**Basaltic conglomerate**

**Local intermediate lava flows (plagioclase-pyroxene phyric)**

**Lower Spears Group**

**Baca Fm.**

**Crevasse Canyon Fm.**

**Mulatto Tongue, Mancos Shale**

**Gallup SS**

**D Cross Tongue of Mancos Shale**

**Tres Hermanos Sandstone**

**South Canyon Tuff (27.67 Ma)**

**LPBA**

**Vicks Peak Tuff (28.77 Ma)**

**LPBA**

**La Jara Peak Basaltic Andesite (LPBA), defined per Chapin and Seager (1975)**

**Lemitar Tuff (28.24 Ma)**

**Hells Mesa Tuff (32.35 Ma)**

**basaltic conglomerate**

**Local intermediate lava flows (plagioclase-pyroxene phyric)**

**lower Spears Group**

**Baca Fm.**

**Crevasse Canyon Fm.**

**Mulatto Tongue, Mancos Shale**

**Gallup SS**

**D Cross Tongue of Mancos Shale**

**Tres Hermanos Sandstone**

**Proterozoic**

**Tajo granite**

**South Canyon Tuff (27.67 Ma)**

**LPBA**

**Vicks Peak Tuff (28.77 Ma)**

**LPBA**

**La Jara Peak Basaltic Andesite (LPBA), defined per Chapin and Seager (1975)**

**Lemitar Tuff (28.24 Ma)**

**Hells Mesa Tuff (32.35 Ma)**

**basaltic conglomerate**

**Local intermediate lava flows (plagioclase-pyroxene phyric)**

**lower Spears Group**

**Baca Fm.**

**Crevasse Canyon Fm.**

**Mulatto Tongue, Mancos Shale**

**Gallup SS**

**D Cross Tongue of Mancos Shale**

**Tres Hermanos Sandstone**

**Proterozoic**

**Tajo granite**
**Socorro Region: West**

**Santa Fe Group strata**

Las Cañas geomorphic surface

**Pre-Santa Fe Group rocks**

South Canyon Tuff (27.67 Ma)

La Jara Peak Basaltic Andesite (LPBA)

Lemitar Tuff (28.24 Ma)

LPBA

Vicks Peak Tuff (28.77 Ma)

Sawmill Canyon Fm. LPBA

La Jencia Tuff (29.00 Ma)

**Notes:**

* Ages of ignimbrites is from Cather et al. (NMBGMR Memoir 51, in press)