



Supplemental road log 4: From US-64 up Ponil Canyon to the north Ponil K-T boundary site

Charles L. Pillmore

1990, pp. 107. <https://doi.org/10.56577/FFC-41.107>

in:

Tectonic Development of the Southern Sangre de Cristo Mountains, New Mexico, Bauer, P. W.; Lucas, S. G.; Mawer, C. K.; McIntosh, W. C.; [eds.], New Mexico Geological Society 41st Annual Fall Field Conference Guidebook, 450 p. <https://doi.org/10.56577/FFC-41>

This is one of many related papers that were included in the 1990 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.

Copyright Information

Publications of the New Mexico Geological Society, printed and electronic, are protected by the copyright laws of the United States. No material from the NMGS website, or printed and electronic publications, may be reprinted or redistributed without NMGS permission. Contact us for permission to reprint portions of any of our publications.

One printed copy of any materials from the NMGS website or our print and electronic publications may be made for individual use without our permission. Teachers and students may make unlimited copies for educational use. Any other use of these materials requires explicit permission.

This page is intentionally left blank to maintain order of facing pages.

- 16.9 Milepost 259. **0.1**
 17.0 Wide turnout to right. Interbedded sandstone and shale of Flechado (Sandia) or Porvenir Formations exposed in hills to right and ahead. Outcrops ahead are a monotonous sequence of sandstone, shale and minor limestones of prograding deltas and foreshore muds along the western shoreline of the Taos trough (Casey, 1980a, b). **0.2**
 17.2 Las Petacas picnic grounds to the left. **0.3**
 17.5 Bold channel sandstone in slope above road. **0.2**
 17.7 Shale outcrop to right. **0.2**
 17.9 Milepost 258. **0.4**

- 18.3 La Vinetaria picnic grounds. Outcrop ahead has sandstone and shale with minor limestone or calcareous zones in the shale. **0.25**
 18.55 Crossbedded channel sandstone exposed in roadcut to right. **0.05**
 18.6 El Nogal picnic ground to left. **0.1**
 18.7 Leaving Carson National Forest. **0.2**
 18.9 **Junction** with NM-585 at left. The fault marking the east side of the Rio Grande rift lies several hundred yards ahead. Continue straight ahead to go to Taos or turn left to take the bypass around town.
End of Supplemental Road Log 3.

SUPPLEMENTAL ROAD LOG 4, FROM US-64 UP PONIL CANYON TO THE NORTH PONIL K-T BOUNDARY SITE

CHARLES L. PILLMORE

Distance: 17 mi
Stops: 1

The North Ponil K-T boundary site is on Philmont Scout Ranch private property. Special permission is required prior to taking this trip.

Mileage

- 0.0 From mile 104.5 of Day 1 road log, just east of Cimarron on US-64, **turn north** up Ponil Canyon. **2.7**
 2.7 **Chase Ranch**, prominent historical landmark in the region. In 1869, Manley Chase purchased "about a thousand acres" in Ponil Valley from Lucien Maxwell for \$2.50/acre (Armstrong, 1981). He paid for the land by rounding up wild horses valued at \$10.00 each. He started the first four rooms of the present ranch house in 1871. Additions were made on the house at various times since. Manley Chase died in 1915. The ranch is presently owned and operated by his great granddaughter, Gretchen Sammis. **1.1**
 3.8 At 9:00, prospect in Cimarron coal bed between the upper and lower tongues of the Trinidad Sandstone. **0.4**
 4.2 Entrance to Chase Canyon. Note old coal mine workings in Cimarron coal bed in south wall of canyon near entrance. **0.6**
 4.8 Cimarron coal bed, 29 in. thick, exposed in roadcut. Upper bed of the Trinidad Sandstone containing *Ophiomorpha* overlies coal bed. Vermejo Formation overlies

upper tongue of Trinidad Sandstone as we travel up section. **0.4**

- 5.2 Roadcut exposes typical gray mudstone, carbonaceous siltstone and shale and sandstones of the Vermejo Formation. **0.6**
 5.8 **Cattleguard** on fence of Philmont Scout Ranch. Ahead are cliffs of the barren zone. K-T boundary is at base of the sandstone sequence. **0.2**
 6.0 Junction of North Ponil Canyon. **Locked gate**. Entrance to Ponil Canyon part of Philmont Scout Ranch. Raton Formation conglomerate forms ledges about 40 ft above valley floor on ridge to the east. In this area the ledges are formed by fine-grained to granule sandstone. As we proceed up North Ponil Creek, sandstone of the lower coal zone of the Raton Formation crops out along road and in roadcuts. Road follows old Ponil Canyon Railroad grade. **2.2**
 8.2 Thick channel sandstones of the Raton Formation barren zone can be seen on the valley walls, dipping gently north. **0.3**
 8.5 North Ponil K-T boundary site in stream bank at 9:00. K-T boundary claystone appears as thin white claystone layer overlain by thin coal bed in carbonaceous sequence. The following is a generalized section: (1) 3.2 ft, siltstone; (2) 0.98 ft, mudstone; (3) 0.68 ft, coal; (4) 0.2 in., shale; (5) 0.03–0.07 in., K-T boundary claystone—light to medium gray, some iron stains, conchoidal fracture, weathers distinctive white to pinkish gray; (6) 1.2 ft, shale—basal 2 cm jarosite stained; (7) 2.8 ft, mudstone and sandstone.

Return to Ponil gate and return to highway.
End of Supplemental Road Log 4.