



## ***Diamond Reminiscences: 75 Years Of NMGS Fall Field Conferences***

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## **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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# DIAMOND REMINISCENCES:

## 75 YEARS OF NMGS FALL FIELD CONFERENCES

### INTRODUCTION

Bonnie Frey (Fig. 1)

A couple of years ago, the New Mexico Geological Society (NMGS) Executive Committee realized that we were approaching the society's 75th Fall Field Conference (FFC). I perused the guidebooks of the earlier milestones, noting the reminiscence articles in the 1999 and 1974, and volunteered to compile some for this guidebook. After all, for one chick with an English degree and 10 years working in newspapers, what's not to love about society history and memoirs?

Now, I know at this point a few of you bright readers are wondering, "What scientist can't do the math?" Because if 1974 was the 25th FFC, and 1999 was the 50th FFC, then 2024 would have been the 75th. I thought so too, until after several reminders from Adam Read, I realized that Shari Kelly and I postponed the Mt. Taylor trip, originally slated for 2020, not once, but twice, due to, you guessed it—COVID. The Mt. Taylor trip was held May 2022, 2½ years after the 2019 trip to Clayton.

Having established that the 2025 Fall Field Conference is indeed the Diamond Anniversary of our field conferences, I next contemplated how one introduces the reminiscences of our illustrious writers. On reviewing Edward Beaumont's introduction in the 1999 guidebook, I realized the best way was, in and of itself, a reminiscence.

My first field conference was 22 years ago, the geology of the Zuni Plateau. I'll never forget the seemingly endless knowledge of the trip leaders (Spencer Lucas, Bill Berglof, Steve Semken, and Andrew Heckert); the cushy buses; the obviously drunk man who showed up in the open door of the motel room I shared with Gina Rone in Gallup (which still sets us off in stitches); and the highway routes that led us through the Navajo Nation—an introduction to the landscape that has

become so important to my career. Since then, I've missed two trips, because apparently life is too busy to attend them all. After all, I co-led the 2016 Belen trip and needed the break, or so I thought.

Then COVID happened, and although it gave Shari, Fraser Goff, our other Mt. Taylor field trip leaders, and me more time to plan the FFC in one of my favorite landscapes in New Mexico, the forced hiatus created a hole for so many of us—the annual communion with other earth-science-minded folk while exploring the fantastic geology of New Mexico. Now, in 2025, after three more field conferences with increasing attendance numbers, I believe we are fully back. In these three years, I've been privileged to be awarded an honorary membership and to hold office on the society's executive committee. To end my reflection, I want to give a shout out to Shannon Williams, whose invitation to help lead the 2016 Belen field conference has led to nearly 10 years of service to my favorite geological organization.

What follows are the memories of several other current and former leaders of the society, beginning with Barry Kues, who I think gives an excellent review of the impact of the field conferences. We follow with stories and impressions from Jennifer Lindline, Kelsey McNamara and Matt Zimmerer, Jim Fassett, Shari and Rick Kelley, Mary Dowse, John Shomaker, and John Hawley. I hope our combined stories can inspire the next generation of geoscientists and geology fans to continue the legacy that is the illustrious New Mexico Geological Society.

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### NMGS FIELD CONFERENCES AND GUIDEBOOKS—REMINISCENCES AND REFLECTIONS

Barry Kues (Fig. 2)

The first NMGS field conference was held on November 3 to November 5, 1950, and surveyed the northern San Juan Basin of New Mexico and Colorado. The 195 participants received a guidebook (cost \$5) of 152 pages, including road logs (for a total of 304 miles and 17 stops) and 24 articles. Since then, NMGS has conducted Fall Field Conferences with accompanying guidebooks each year (except for 2020 because of the COVID pandemic), a span of 75 years. No other state geological society or survey has a record of field conferences that even approaches this. These conferences have explored every part of New Mexico, and their guidebooks, taken together, represent an indispensable record of all aspects of the state's geology, ranging from summary and overview papers to much original research, as well as roadside guides to the geological features along most of New Mexico's highways and a considerable number of back roads. Organization of each field conference, and production of the guidebooks, represents an enormous amount of voluntary labor by hundreds of individuals through



Fig. 1. Bonnie Frey (right) with Susan Lucas Kamat (left), the chair of the NMGS scholarship committee, during the Raton-Clayton FFC in 2019. Bonnie co-led two Fall Field Conferences and two spring meetings and is vice president of the NMGS Executive Committee. She received an NMGS honorary membership in 2022. She is the associate director of laboratories of the New Mexico Bureau of Geology and Mineral Resources. *Photo by Cynthia Connolly*

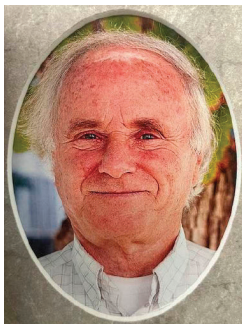


Fig. 2. Barry S. Kues is an emeritus professor of the Department of Earth & Planetary Sciences, University of New Mexico. He served on the NMGS Executive Committee from 2008–2012, co-led two field conferences in the Jemez Region, and was managing editor for several guidebooks. He was awarded an honorary membership in 1993.

the years—a donation of time, effort, and expertise that is remarkable, and must be in part due to the influence of New Mexico’s wonderful geological record on those who study it, as well as to the enlightened attitude of institutions within the state that employ geologists (New Mexico Bureau of Geology and Mineral Resources, universities and colleges, private industry, and federal and state offices), which have consistently supported this effort.

I first became aware of the NMGS guidebooks even before I came to New Mexico. Early in 1974, having been invited to interview for a faculty position in the University of New Mexico Department of Geology, I thought it would be a good idea to find out a little about New Mexico geology, of which I then knew virtually nothing. I browsed the Indiana University geology library, found a dozen or so guidebooks, and spent an afternoon going through them. When I got the job, then-chair Lee Woodward suggested I join NMGS, and I attended my first field conference that fall. Two years later, Rod Ewing and I were recruited by Woodward to coedit the 1976 guidebook (Vermejo Park). Through the years I have attended more than 40 conferences, coedited 10 guidebooks, and co-organized two field conferences. Like many others, I found the time spent eminently worthwhile, in support of endeavors that are uniquely valuable not only to New Mexico’s geological community, but to anyone, anywhere, who is interested in learning about New Mexico’s geological record.

I have too many memories of individual field conferences to even begin to recount them in the space allotted. In general, I think that these conferences have been so successful and long-enduring for several reasons. In bringing together geoscientists from around the state, the field conferences foster a sense of collegiality and community, and facilitate the exchange of information among those working on all of the various aspects of New Mexico’s geological record. They bring participants into parts of the state where they otherwise never would have ventured, guided in the field by experts actively studying those areas. These excursions have tremendously broadened my knowledge of the state’s geology, and have done so doubtless for others. As a paleontologist, learning about the spectacular volcanic record of New Mexico, its Precambrian and tectonic history, the geomorphic development of the state’s landscapes, the geology of obscure mountain ranges and varied mineral deposits—fields far from my own and all major subjects of particular field conferences—has been intellectually exciting and highly rewarding.

The field conferences have always welcomed a diverse

group of participants. Numerous undergraduate and graduate students have always been involved, supported by scholarships from funds donated by many NMGS members, allowing them invaluable insights into how geological studies are accomplished and encouraging their interest in the geosciences as a career. Many students I first encountered during field conferences went on to become professional geoscientists, some of them eventually organizing conferences and lecturing on local geology themselves to new generations of geoscientists.

The conferences have also been enriched by significant attendance by people (some year after year) who are not geologists but who have an interest in the state’s natural history and enjoy the friendly informality, impressive destinations, and interesting people with whom they are able to interact. One is especially memorable: Lucille Pipkin, who arrived at conferences in a big Cadillac, collected the autographs of each year’s guidebook editors, and had a wonderful time. She later established scholarships and donated the proceeds from several producing oil wells to NMGS.

And finally, the field conferences have just been downright fun. From the preconference party, through the banquets, barbecues, lunches, and well-stocked snack and beverage trucks (although beer stopped being dispensed around 1990), the pleasures of comparing notes, rumors, and insights with colleagues and friends, the occasional stops for fossil and mineral collecting, the often spectacular scenery, and sometimes spirited discussions/arguments on the outcrops, NMGS field conferences are among the most enjoyable 3–4 day experiences any New Mexico geoscientist has during the course of a year.

Seventy-five years after the first NMGS field conference, these annual conferences and the accompanying guidebooks have become an important multigenerational institution for New Mexico’s geological community, so engrained in our consciousness and expectations that to go a year without them is almost unthinkable. So, I’ll conclude with a profound thank you to all who have contributed to the planning, organizing, and conducting the annual field conferences, to the editing, creating of road logs, and contributing of papers to the guidebooks that accompany them, and to those in future years who will continue this unique and invaluable service to New Mexico’s geoscientists as well as to the larger science of geology.

## CELEBRATING 75 YEARS OF NEW MEXICO GEOLOGICAL SOCIETY FALL FIELD CONFERENCES

Jennifer Lindline (Fig. 3)

As a newly minted PhD recipient and eager academician, it was easy to accept the offer of assistant professor of geology at New Mexico Highlands University in 2000. It was not so easy for this East Coast transplant to build field experiences for courses and initiate research projects in my new home. Having earned my geology chops in the Pennsylvania Piedmont, the geology of New Mexico was unfamiliar. My graduate mentor, Weecha Crawford, advised me to look in the New Mexico Geological Society’s Fall Field Conference guidebooks for support.



I quickly purchased and poured through the 1976, 1990, and 1995 guidebooks that covered the geology of the Las Vegas, Sangre de Cristo Mountains, and Santa Fe regions. I doggedly put together my course field trips—outings to Mora and Wagon Mound to study volcanic landforms and features, tours of the Enchanted Circle to explore its magmatic and mining history, and excursions through the Mesozoic-Paleozoic-Proterozoic roadcuts to learn the stratigraphy and structures.

My respect for the society and its celebrated guidebooks deepened that October when I attended my first Fall Field Conference: *Southwest Passage—A Trip Through the Phanerozoic* (2000). My mind was blown by the authoritative guidance of the field-trip leaders, the logistical coordination of each day's tour, and the camaraderie of all involved. The long and winding caravan of SUVs, pickup trucks, and university vans that traversed unimproved roads and navigated sandy arroyos was an impressive site. Outcrops of magmatic enclaves, miarolitic cavities, and minette pillows put an ear-to-ear smile on this granite geologist's face. I became a card-carrying member of the society and an annual pilgrim to the Fall Field Conference.

The following years took me and my Highlands students to the Llano Estacado and White Sands area where I continued to grow in my geology knowledge and professional network. It was along an exposure of the Bliss Formation where 2002 President Maureen Wilkes invited me to serve on the society's Executive Committee. I humbly said yes and excitedly joined the electorate. The next six years found me serving the society in ranked capacity, taking notes as secretary, balancing books as treasurer, coordinating scholarships as vice president, leading meetings as president, and providing counsel as past president.

Those years are particularly memorable to me because, as my student cohort was building, so was my family. My daughter Frances was born in July 2003 and accompanied me on the Zuni Plateau (2003), Taos Region (2004), and Chama Basin (2005) Fall Field Conferences. My daughter Tara joined our



Fig. 3. Jennifer Lindline is a professor of geology in the Natural Resources Management Department at Highlands University. Besides running the 2015 Fall Field Conference, she served on the NMGS Executive Committee from 2003–2007. For many years, she organized her students to be flaggers for the Fall Field Conference routes. Jennifer is shown here on the Tusas/Ojo Caliente Field Conference in 2011 pointing out the younging direction. *Photo by Laura Crossey*

family in July 2006 and also our outing on the Caves and Karst Country conference that year (Fig. 4), along with many that followed. My girls came outfitted with hand lenses around their necks and field books in their pouches. I have cherished memories of them examining the Sunset Crater cinders, skipping Petrified Forest's trails, and taking notes during Karl Karlstrom's lecture on the Grand Canyon history during 2013's Route 66 conference.

Other standout Fall Field Conference moments include journeying into the 34 Ma Mogollon supervolcano along the Catwalk Trail on the 2008 Gila Wilderness conference, exploring the Kokopelli cave house on the Ojo Alamo Sandstone bluffs during the 2010 Four Corners Country conference, and enjoying lunch in the yellow flower-strewn Rio Bonito valley during the 2014 Sacramento Mountain conference. I can still see the spectacular fall colors and feel the crisp autumn air during the 2017 Ouray conference's Molas Lake-Animas River preconference hike. I remember well viewing the assortment of mantle xenoliths on Mount Taylor in 2013, along with losing the caravan on the same trip. I fondly remember the honking horn of Mark Mansell as he alerted me of the leaking oil pan in my van—a low clearance casualty after the last stop on Day 2 of the 2011 Tusas Mountain conference. All but two students jumped into the drink truck with Mark and headed back to Espanola where they were supposed to inform my colleague, Mike Petronis, of our roadside dilemma. The message did not get through and we remained stranded on the side of the road long into the night and long after the banquet. I also happily remember the many years of Highlands student road flagging theatrics that earned them the name, “the flamboyant flaggers.”

My most prized remembrance is that of leading the 2015 Fall Field Conference to the Las Vegas region (Fig. 5). There was a mountain of work involved, from conference preplanning, proposal writing, trip logging, picture taking, and paper writing. Researching the cultural and historical aspects of the area and culling together the results of 15 years of student-involved research brought many wearisome days but also



Fig. 4. Jennifer Lindline shown here (front, far left) with her Highlands colleague Michael Petronis (back, far right) and their student crew on the 2006 field conference (Caves and Karst of Southeastern New Mexico). Upper row, to the right of Mike: Rhonda Trujillo, Joey Gallegos, Justin Johns-Kaysing, and Louis Garcia. Bottom row, to the right of Jennifer: Celina McFadden, Joel Lowry, and Roberto Trevizo.



Fig. 5. Jennifer Lindline leading the 2015 Las Vegas field conference with her daughter Tara standing to her left. Mike Petronis is pointing at the poster.

immeasurable fulfillment. Sharing the diverse and exceptional geology of the region, from Proterozoic crystalline basement through Phanerozoic stratigraphy and Miocene magmatism was a humbling experience. I will forever appreciate the trust of the executive team, support of my co-leaders, and assistance from my students. Highlighting water resources issues was important then and remains imperative now in the aftermath of the 2022 Hermits Peak/Calf Canyon fire. The spectacular views of the Sangre de Cristo Mountains are forever altered, and the pristine quality of the Gallinas Watershed is indefinitely fouled. Perhaps the research my students and I are conducting on the impacts of the fire on regional watersheds will be material for a future conference. In the meantime, I will relish the satisfaction of contributing to the Fall Field Conference legacy with the 2015 guidebook.

## SHE WAS CHECKING OUT MUDSTONES, AND I WAS CHECKING OUT HER

Kelsey McNamara and Matt Zimmerer (Fig. 6)

This is the story of Matt Zimmerer and Kelsey McNamara, who first met on the 2010 Four Corners NMGS Fall Field Conference:

**Kelsey:** I was a young and reckless grad student at University of New Mexico, so, luckily, I was traveling with Kevin Hobbs, a fellow (and more responsible) grad student, who did a good job of keeping me from partying my face off. I noticed Matt Z and a whole bunch of male grad students also on the fieldtrip. I mentioned to Kevin that “there’s a lot of good-looking dudes on this trip!” And he answered, “Yeah, that Matt Z is pretty good-lookin’.” To this day, I still think Kevin has a crush on Matt Z.

**Matt Z:** I love an NMGS Fall Field Conference as much as anyone, but sometimes at the end of the day you get a little bored. Nothing was truer for a volcanologist than the last stop

featuring mudstones of the San Juan Basin. But out of the corner of my eye, I spotted a fellow geologist wearing the dirtiest hole-filled Grateful Dead t-shirt I’ve ever seen. Fate works in mysterious ways; little did I know she would be my future wife. That night, we sat at the same table, and both won the Wellnitz awards. After the conference, I needed a way to stay in touch with my future wife. So, I emailed her photo of a dog that was on the trip, who preferred to eat turds instead of looking at rocks. To my surprise, my future wife loves potty humor. What more could I do to stay in touch? I was getting ready to leave for Antarctica, so I knew I needed to act fast. I invited myself to a night of hanging out with UNM geologists at Marble Brewing, and invited her to New Zealand. She met me on the South Island after fieldwork, and we went out on the equivalent of 76 dates over the next three weeks.

Matt and Kelsey dated for the next five years, got engaged in 2015, and finally married in 2023. It only took 13.5 years to get married, which is not even a blink in geologic time, and two years shorter than John Hawley’s longest presentation.



Fig. 6. Kelsey McNamara and Matt Zimmerer in 2023, not on an NMGS field conference. Kelsey is the mineral museum curator and X-ray diffraction (XRD) lab manager at the NMBGMR. Matt is the geologic mapping program manager at the NMBGMR. Matt co-led the 2017 Fall Field Conference in Ouray, Colorado, and the 2019 conference in the Raton-Clayton area.

## MY HISTORY WITH THE NEW MEXICO GEOLOGICAL SOCIETY—1961–PRESENT

Jim Fassett (Fig. 7)

I arrived in Farmington, New Mexico, in June 1961, having spent my first year with the U.S. Geological Survey in its Washington, D.C. headquarters office sitting behind a desk. I had spent that first year constantly bugging my boss about wanting to do fieldwork and telling him that I would take the first field-office assignment that came open. Farmington was the result. Tom Stipp was the regional geologist in Roswell at that time—overseeing the USGS district office in Farmington. Tom, of course, wanted me to come to Roswell to get acquainted, and during our conversations about my duties and work in Farmington, he abruptly interrupted that conversation stating that I must do two things immediately: one, join



the NMGS, and two, join the Geological Society of America, which I did as soon as I got back to Farmington. Tom, one of the founders of the NMGS, also told me that he wanted me to attend the NMGS field conference that year (*Albuquerque Country*, 1961) and to continue attending every NMGS field conference for the foreseeable future, saying there was no better way for a new geologist to understand the geology of New Mexico than to participate in those field conferences. I happily agreed and still do so. Tom's advice proved to be perfect and my general understanding of the geology of New Mexico was consequently greatly enhanced over the next few years. In addition, I became acutely aware that the most knowledgeable geologists in New Mexico at that time did not always agree on the interpretation of the geology at some of the field conference stops, as evidenced by the **VIGOROUS** verbal jousting that took place at some of them. Those verbal battles often became the legendary highlights of many of the NMGS field conferences. (One of those, having to do with Paleocene dinosaurs, more recently took place between myself and Barry Kues on the 2010 field conference at the Ojo Alamo Sandstone outcrop on State Road 371 just south of Farmington! I think Barry and I are still good friends?)

My first years in Farmington as the district geologist were focused on the Fruitland Formation's coal resources in the San Juan Basin. My first project was sampling subsurface Fruitland coal beds from gas wells as the drill bit penetrated them and coal cuttings subsequently appeared on the well's shale shaker. (For some reason, most of these wells drilled through the Fruitland around 2 or 3 a.m. My memories of sitting in the doghouse bleary-eyed watching the Kelly turn, and abruptly falling rapidly through the softer coal beds, are still etched permanently on my brain!) The resulting analyses of Fruitland coal samples from 55 wells spread across the central San Juan Basin provided a database that allowed us to create the first subsurface thermal-maturity map for a Western Interior coal basin. Working with the thousands of available geophysical logs from gas wells in the basin, we were able to accurately measure coal-bed thicknesses and extent across the basin, and our studies were ultimately published as USGS Professional Paper 676, coauthored by myself and my USGS colleague Jim Hinds. During those studies, I became aware of a widespread subsurface marker bed that I named the Huerfanito Bentonite Bed, and that geochronologic marker subsequently became the backbone of my further studies of the stratigraphy of the time-transgressive, energy-rich Cretaceous rocks in the subsurface of the San Juan Basin. (The Huerfanito Bed at that time was only known on geophysical logs in the subsurface of the San Juan Basin, but it was subsequently identified and dated at a surface outcrop near Regina, New Mexico; Fassett et al., 1997)

In 1968, I published my first NMGS publication on the geology of the Gasbuggy drill core in the NMGS 19th Field Conference Guidebook. (I had been asked to describe the first core of the Gasbuggy 1 drill hole as it was being cored.) Project Gasbuggy was designed to detonate a nuclear explosion in a drill hole in the northeast San Juan Basin opposite the Pictured Cliffs Sandstone to see if that "frac job" would appreciably

increase the permeability of the unit and thus enhance its gas production. Needless to say, the Pictured Cliffs Sandstone was quite fractured, and its gas production greatly increased, but the produced gas was found to be too radioactive to be used as a fuel. And, thankfully, the use of nuclear devices to enhance methane production was abandoned.

Following this beginning, I have published more than 150 peer-reviewed papers including 10 NMGS guidebook papers and road logs and abstracts for papers presented at multiple NMGS spring meetings. I served as secretary, vice president, and president of the NMGS in 1974–76 and chaired and was senior editor of the 1977 and 2010 Fall Field Conference Guidebooks. In 2011, I was made an honorary member of the NMGS, and in 2014, I authored profiles of five of my notable USGS colleagues in NMGS Special Publication 12. I treasure my 64-year-long (and continuing) membership in the NMGS and look forward to a few more.



Fig. 7. James Fassett in 2012 with hadrosaur femur at the Silver Family Geology Museum at UNM. The femur is from a locality along the San Juan River where Jim worked. Jim retired from the USGS in 2000. Since then, he has worked as an independent research geologist based in Santa Fe, New Mexico. Besides his many years of service to NMGS, his work in the San Juan Basin has contributed significantly to this, the 2025 NMGS Fall Field Conference.

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## MEMORIES OF NMGS FALL FIELD CONFERENCE TRIPS IN THE LATE 1970S FROM A STUDENT PERSPECTIVE

Shari and Rick Kelley (Figs. 8, 9, and 10)

Rick and I were undergraduate students at New Mexico State University (NMSU) in 1977 and 1978. We were dating at the time, so we were hanging out together. The 1977 Fall Field Conference (FFC) was in the San Juan Basin, and it was led by James Fassett, then employed by the USGS. We started in Farmington, and we traveled down to Bisti on dirt roads in a caravan of many dozens of individual vehicles, which kicked up quite a lot of dust. We both have memories of looking back up the road when we got to one of the stops to see the many cars and the considerable amount of dust trailing off to the east on the wind. A World War II veteran standing nearby commented,



Fig. 8. Shari Alexander (later Kelley) and Rick Kelley in 1977. Shari is a senior geophysicist and field geologist at NMBGMR, where she runs the geothermal program. She co-led several field conferences, including the 2007 Jemez conference and the 2022 Mt. Taylor conference, hosted several spring conferences, and served on NMGS Executive Committee from 2006 to 2009. She became an honorary member in 2010. Rick Kelley worked at Los Alamos National Laboratories. Since retiring, he has worked on several GIS projects for the NMBGMR, was a contributing editor and road log organizer for the NMGS 2022 Mt. Taylor guidebook, and facilitated annual donations from the Los Alamos Geological Society to NMGS scholarships.

“This reminds me of Rommel’s troops traveling across North Africa.” The next memorable event during that trip was camping on Red Mountain southeast of Chaco National Monument (as it was called in 1977; Fig. 9). Overall camping was fun, except for the wind, which caused our tents to flap noisily, keeping us awake. During the second day, we traveled to El Vado, traveling through Star Lake, Torreon, La Ventana, Cuba, and Llaves. In El Vado, we stayed overnight at a rustic lodge called Zeke’s Lake Shore Inn. Interestingly, parts of the 1977 second-day road log are covered during this NMGS trip in 2025 and are included on the recent geologic map of the Llaves 15-minute quadrangle. Who knew back in 1977 that, starting in 2023, I would be part of a team who would map the Llaves quadrangle? I wish that I had paid better attention to the discussions at the stops during the latter part of the second day in 1977! The third day took us up through Dulce and to Chromo, before we wound our way to Ignacio, then down to Navajo Dam, and eventually back to Farmington. The most memorable moment on that day was seeing oil seeping from vesicles in a sill near Dulce.

The 1978 FFC was a joint meeting between NMGS and the Arizona Geological Society. For the most part, the Arizona team wrote the road logs and ran the trip. The trip began in Lordsburg, New Mexico, moved south to the San Bernardino volcanic field in Arizona. The first day ended in Douglas, Arizona. The most memorable stop of the day was at the San Bernardino volcanic field, where we collected large xenocrysts of clear labradorite and black clinopyroxene, as well as olivine and chrome-diopside mantle xenoliths. During the second day, we traveled through Tombstone and Huachuca and eventually ended up in Tucson. The stop at the north end of the Huachuca Mountains generated a spirited discussion about the geologic structures in the area. Were the structures the result of basement-cored uplift or were they the result of thin-skinned folding of sedimentary rocks above a decollement on top of the basement? The discussion could have been interesting, but it quickly devolved into yelling and presenting granular details that few of us students from New Mexico could understand. Let’s just say that the lack of professional behavior during this interaction left a negative impression on us as students. We visited several sites near Tucson on the third day. The arguments about interpretations of the rocks, this time in the vicinity of



Fig. 9. Shari Alexander (later Kelley) and Bruce Stewart camping on Red Mountain, southeast of Chaco Canyon, in 1977.



the Colossal Cave parking lot, continued, and we did not have a chance to go into the cave. We then drove to the Saguaro National Monument (as it was called in 1978) where we went into the visitor center and took a two-mile hike to see the rocks. It was a pleasant hike, ending the trip on a high note (Fig. 10).

When Rick and I graduated from NMSU, we moved to Dallas to attend graduate school at Southern Methodist University and begin our careers. We missed all the FFC trips between 1979 and 1994. We finally returned to New Mexico in 1995, and we resumed attending FFC trips.



Fig. 10. Shari Alexander (later Kelley) at Saguaro National Monument in 1978. Check out the ring!

## WHAT GOES AROUND COMES AROUND

Mary E. Dowse (Fig. 11)

I began teaching geology at Western New Mexico University (WNMU) in August 1985 and knew that the best way to connect with the state's geologic community was to attend the Fall Field Conference based in Santa Fe that year. It was a challenge to walk into the icebreaker where it turned out I knew one person, Frank Kottlowski, who immediately came over to greet me. My real hero was Shari Kelley, who, when she boarded the bus, sat with me and introduced me to many of the members and made me feel welcome. I don't remember much about the geology. What I do remember is people asking me if I played the bagpipes, perhaps a requirement to replace Jack Cunningham (Fig. 12) at WNMU.



Fig. 11 Mary Dowse, during the 2014 Sacramento Fall Field Conference, practicing to become the next queen—heh-hem—president of the NMGS Executive Committee. Mary retired from WNMU in 2016. She served on the NMGS Executive Committee from 2012 to 2016 and has herself welcomed, encouraged, and been a role model to new members of NMGS. She was awarded an honorary membership in 2019.



Fig. 12. John Cunningham playing the bagpipes at the 1999 FFC. Jack taught at ENMU in 1963 and at WNMU from 1964 to 1994. He passed away in 2019. Also pictured leaning on bus are Paul Bauer (sunglasses) and David Welch. Gina Rone is seated by the bus doors. Photo credit: Bill Hiss

## REMEMBERING SOME NMGS FIELD CONFERENCES

John Shomaker (Fig. 13)

The field conferences have served two very important, but very different, purposes for me. One was the opportunity to enjoy the scenery and the geology, and the company of friends and acquaintances, particularly in the days before Schlumberger's lawyers (I assume they were to blame) ended the limitless free beer. The other purpose was to have the latest geological thinking on some region, by the people actively working there—academics, government and industry geologists, and





Fig. 13. John Shomaker photographed in 2013. John has been into New Mexico hydrogeology for 59 years, first with the USGS and NMBGMR, and then with John Shomaker & Associates since 1973. In NMGS, he has been FFC registration chair (1966), guidebook editor and co-editor (1968, 1969), president (1972), and on the NMGS Foundation Board since 2007. He was awarded an honorary membership in 1999.

even hobbyists, brought together for ready reference. A lot of great work by industry geologists would not have been published without the NMGS guidebooks. I can recall very many happy moments when I found what I needed right there in one of the guidebooks, but lots of education, and better stories, came from the field trips themselves.

I learned a lot from my colleagues, even before a trip started. For example: you don't really have to travel the field-conference route to write the road log. Fred Trauger and I laid out part of a road log on Interstate 40, before the new interstate opened, by plotting the route from maps borrowed from the Highway Department onto the topo sheets (1967 or 1968). And if you do go around the route, it needn't all be in daylight. Larry Werts, Kay Molenaar, and I did the full 1968 trip without stopping (except for gas and snacks) to get the odometer readings. I learned that enough geologists can push start a Greyhound-size Chihuahuenses bus without a working starting motor. The driver had forgotten to back it up a hill in Nuevo Casas Grandes (1972), at the end of the previous day's travels. That was the trip with one night spent two or three to a bed, in frigid motel rooms, with duvets that had the insulating properties of a swamp-cooler pad.

The field conferences were a good venue for airing geological disagreements, although I don't remember hearing consensus very often. It was after a lively discussion (in 1961, I think) that Vin Kelley said to Charlie Read, "God help you, Charlie, if I have to take that microphone away."

I always preferred the motley assortment of vehicles in a long caravan, over the luxury of riding a bus, although each had its disadvantages. I once wished I had paid more attention in algebra class to word problems ("a train leaves City A, traveling east at 76 mph, while..."). Bill Speer was driving, in our caravan on the wide-open eastern plains (1972), when the beer from the previous stops began to assert itself. He thought through the problem, and decided we could slow down, let the caravan ahead of us get well out of sight, then race ahead and have time to stop and... Of course, just as we hopped out, the part of the caravan behind us caught up. For the next attempt, we raced ahead until the caravan behind us was out of sight, turned onto the next track to the left, and raced even faster until they were out of sight again. You've guessed how that worked out. By that year, Fred Trauger had developed the "portable bush," but only for women. The advantage of a bus, with an on-board loo, seems evident unless you remember the time the loo overflowed on a long downhill grade (1969).

Somewhere east of Las Cruces (1975), the truck in front of

me stopped suddenly, and the driver hurried to pick up a dead rabbit in the road and throw it into his camper. Turns out, herpetology enthusiasts sometimes bring their pets along and are always watching for food for them. I wouldn't have witnessed that from a bus.

The Ghost Ranch trip (1974) seemed particularly memorable. During our dinner (well supported by Schlumberger's wine), an airplane buzzed the dining hall and scared us silly, but we went back to eating. At the second, far louder buzz, someone remembered arranging to go down to the airstrip and pick up Bruce Black, who had flown his airplane from Farmington. After dinner, Ed Beaumont, always in the habit of throwing himself violently into chairs and beds, picked the wrong cot in his cabin and almost killed Clay Smith.

Both Frank Kottowski, long-time director of the (then) Bureau of Mines and Mineral Resources, and Sam Friedman, his counterpart at the Oklahoma Geological Survey, tended to speak largely in puns. At the end of a long day exchanging puns on a field-conference bus, Sam said, "Frank, this has been a pun-ishing trip."

## REMINISCENCES ABOUT THE NEW MEXICO GEOLOGICAL SOCIETY, ITS FALL FIELD CONFERENCES, AND THEIR LASTING RELEVANCE TO THE GEOLOGY OF THE NEW MEXICO REGION

John Hawley (Fig. 14)

The New Mexico Geological Society (NMGS), and especially its Fall Field Conference guidebook series, has been a source of personal and professional enrichment for more than six decades. Between 1965 and 2000, I was especially privileged to have been able to serve the society in a number of leadership roles, most notably as its treasurer in 1965 and



Fig. 14. John Hawley at his 92nd birthday party last October in a selfie taken by Stacy Timmons. John W. Hawley is an emeritus senior environmental geologist with NMBGMR. He continues to contribute as a storyteller, jokester, and fine interpreter of hydrogeologic systems. Among his achievements and accolades, his Technical Completion Report with the New Mexico Water Resources Research Institute describing the hydrogeologic framework of the Mesillas Basin will be published this fall.



1966, and its president in 1969. This marked the critical period when the society transitioned from a loosely structured entity, with the treasurer as its only “fiscally-responsible” office, to a formally organized corporate body.

That said, I believe that all society members (present and past) considered that any activity related to guidebook preparation is of the highest importance. In my case, these “labors of love” have included service as field conference chair or co-chair (1965, 1969, and 1993), guidebook co-editor (1993), and road logging committee chair or co-chair (1965, 1975, 1980, and 1993). I personally regard road logging for our truly unique type of field trips as a truly mind-expanding experience. But one can still get carried away in this type of endeavor. As my long-time colleague and friend, David W. Love has noted, “Don’t let Quaternary geologists and geomorphologists do road logging, because the entire landscape is an outcrop.”

With regards to the chances for the success of any given field conference, always be prepared for a “Murphy’s Law” event. Personal recollections include:

1. Double-booking of preserved motel/hotel room for distinguished guests during a local football-game weekend (Silver City, 1965),
2. Temporary abandonment of a flagman in the middle of “nowhere” (Road Forks, Hildalgo County, 1965),
3. Near on-the-outcrop fisticuffs between two very distinguished geologists, one of whom was allegedly inebriated (near Eagle Nest, 1966),
4. Absence of adequate motel accommodations in Casa Grandes, Chihuahua, Mexico (1969),
5. Disappearance of at least 10 cases of wine from a hallway adjacent to the conference banquet room in a Ciudad Chihuahua Hotel, which “mysteriously” coincided with the absence of any customs inspection at the Aduna south of the International Boundary (1969), and
6. Numerous toilet malfunctions on the five Chihuahuaenses, Inc., buses that coincided with the consumption of 25 cases of cerveza per bus (1969).

As you can tell, the 1969 borderland trip was one of the most memorable for me. In addition to being NMGS president, I was a general chair of the trip. The following excerpt provides a great synopsis of what it meant to lead such a trip.

## TWO NOTABLE QUOTES, AND ONE “CANDID” PHOTOGRAPH FROM THE 1969 GUIDEBOOK

Bill (William E.) King and John Hawley (Fig. 14)

### Some Comments by the General Chairmen

Whether it will become apparent or not in the next three Days, this Field Conference has been in preparation for over two years. Many problems not common to field trips in the United States have had to be solved. The cooperation of the Instituto de Geología [UAM], Petróleos Mexicanos and Secretaria de Recursos Hidráulicos, as well as the aid of many individual Mexicans, has been invaluable.

The Conference will be beneficial to geologists of both nations in the understanding of the geology of the Border Region. It is our hope also that many lasting friendships will be fostered.

May we ask each of you to do in Mexico as the Mexicans do . . . relax. There will be malfunctions during the Conference, there is no doubt of that, but please accept these minor difficulties in good spirits. As a matter of fact, if you do not have a sense of humor, you probably should not be on this Conference. . . . (Fig. 15)

Bienvenidos á Chihuahua y feliz viaje!



Fig. 15. Photo published in the 1969 guidebook of “three sweaty geologists at play in the Rancho Ojo Caliente warm-springs public bath house (two pesos per person).” Left to right, Bill King (NMGS president 1968 and 1988), Jorge Tovar (PEMEX, a Mexican petroleum company), and “El Hombre sin Nombre,” believed to be Dr. John Hawley. The springs are about 23 km east of Buenaventura on the Rio Santa Maria and 30 km west of Ricardo Flores Magón on the Rio Carmen. Photo by Trasquilero Vastoprado-M.

## IN MEMORIAM

Robert Hernon and William Jones (Fig. 16, USGS-Denver) were killed in a backroad auto collision on June 29 while preparing road logs for the 16th Field Conference Guidebook.

Robert E. Murphy (Mobil Oil Company-Roswell) passed away on the first night of the 20th NMGS Field Conference, and two days before he was to receive a NMGS honorary membership.

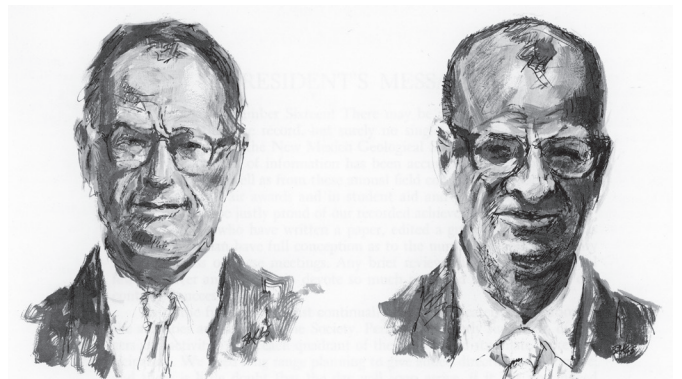


Fig. 16. These drawings were included in the 16th NMGS guidebook (1965) in remembrance of Robert Hernon and William Jones, who were killed in a car accident on June 29, 1965, while on a trip preparing road logs for the field conference. Sketches by Robert A. Keller.

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