

Eddie Collins: Images, Stories, and Impressions of a Texas Geologist after Four Decades at the Bureau of Economic Geology

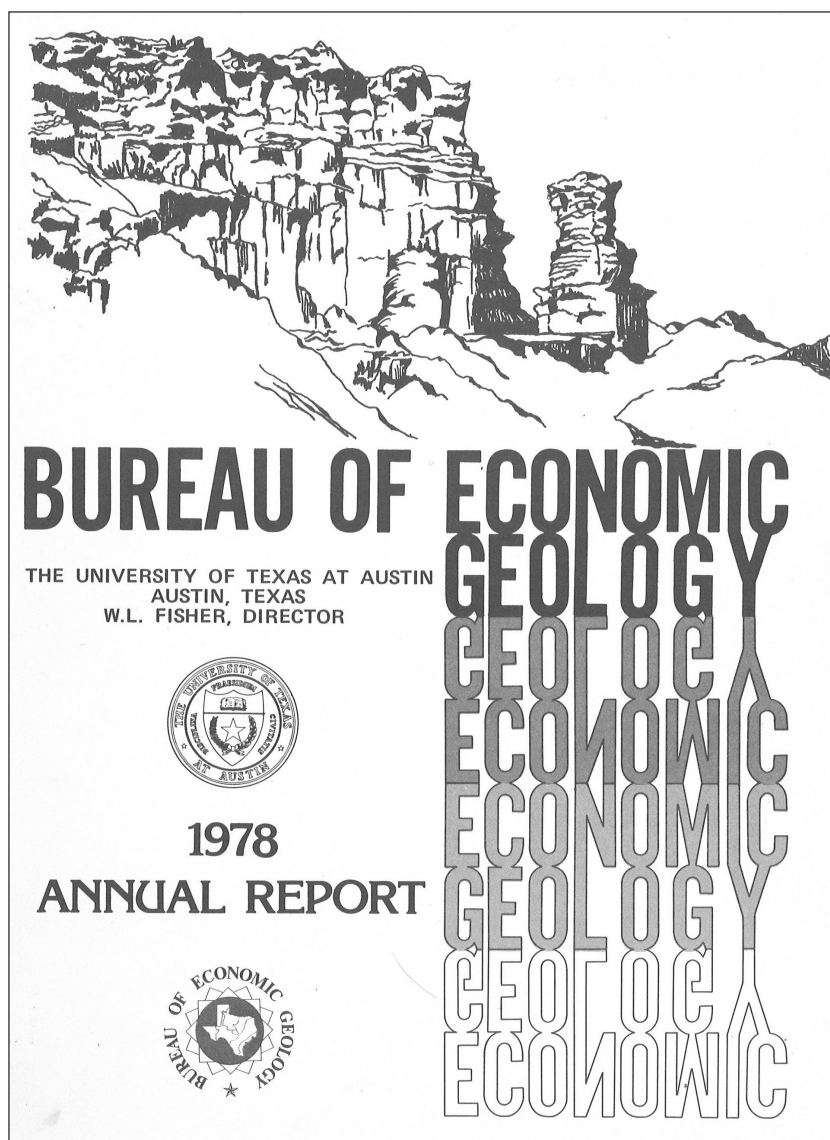
April 1978 to July 2018



Compiled by Jeffrey G. Paine from contributions by Chock Woodruff, Chris Henry, Sue Hovorka, Lisa Orr, Bill Mullican, Steve Seni, Marie Collins, Patricia Dickerson, Susie Doenges, David Stephens, Doug Ratcliff, Cathy Brown, Amanda Masterson, David Hobday, Jay Raney, Lucie Costard, Tiffany Caudle, Robert Mace, Jamie Coggin, and Jason Suarez

Cover: Eddie Collins observing rill and cattle path on a ridge on the Fort Hancock Formation near Alamo Arroyo, Hudspeth County, Texas. Photograph by Jay Raney.

Edward W. Collins Arrives at the Bureau



Edward W. Collins

Edward W. Collins joined the Bureau staff as a research scientist associate in April 1978. Since that time, he has been investigating the surface geology of the East Texas area for the East Texas nuclear waste isolation project.

Collins received a B.A. degree in geology from Trinity University in 1975 and an M.S. degree in geology from Stephen F. Austin State University in 1978. He is a member of the Geological Society of America and a junior member of the American Association of Petroleum Geologists.

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from the 1978 Bureau of Economic Geology Annual Report

Eddie Collins: Geologist with Great Acuity in the Field

by Chock Woodruff

I have known Eddie ever since he came to the Bureau in 1978. I have long admired his work, and I have great respect for the breadth of his knowledge on the geology of Texas and beyond. His prowess as a field geologist is especially noteworthy. We have worked together on numerous field trips for the Austin Geological Society (AGS), and we have coauthored several geologic maps for the Bureau. These coauthored maps are only a scant few of Eddie's overall contribution to geologic mapping across the state.

I have observed Eddie's abilities in surmounting the usual difficulties with field geology (paucity of outcrops, facies changes, nomenclature problems, human disturbance of the ground surface, and the like). Eddie has developed a keen eye for "seeing through" the morass of uncertainty that commonly presents itself in the field. Part of the value of this acuity relates to his engaging the outcrop with aggressive physicality. An excellent example of this is seen in his contribution to the 2007 AGS Guidebook, "Reimers Ranch and Westcave Preserve—Landscapes, Water, and Lower Cretaceous Stratigraphy of the Pedernales Watershed, Western Travis County, Texas" (coordinated by Brian Hunt, Eddie, and me). One of the stops for this field excursion was the west side of Hammett's Crossing of the Pedernales River. This is the putative type section of the Hammett Shale, but the outcrop from river level up to somewhat more than 20 ft consists of red conglomerate and sandstone, with interbedded mudstone and local lignite—a section that, presumably, is Sycamore Sand. Above this well-exposed layer the steep slope is mostly covered by soil containing large blocks of Cow Creek Limestone float. In short, the Hammett Shale is not evident at its own type section! Various workers (Virgil Barnes, F.L. Stricklin, David Amsbury, Keith Young, and others) had published their observations on this outcrop, but nowhere was the problem of the "missing" Hammett Shale well addressed. Earlier workers noted an oyster bed marking the base of the Hammett, and a discontinuous oyster layer is locally visible near the top of the well-exposed terrigenous section, so at least the base of the Hammett was presumed to be present. "Presuming" was not good enough for Eddie! Excavation of the slope above the oyster bed was difficult, if not dangerous, owing to the steep slope containing possible unstable limestone boulders. Given this condition, Eddie took a shovel and went to the other side of the river and walked up the (entirely covered) slope along the county road until reaching what he estimated to be the correct elevation. There, he dug. And there, he exhumed Hammett Shale! Although it was impossible to excavate the complete thickness of the Hammett, owing to boulder float, we used a Brunton hand level to confirm consistent elevations at the contact between the Hammett and the underlying Sycamore on the two sides of the river. The enigma of the missing Hammett was solved by Eddie and his way of engaging the outcrop. This is typical of Eddie's way of doing field work.

The Great Trinity River Canoe Excursion, 1979

by Dave Hobday

Eddie and I were looking for any evidence of surface displacement around salt domes in East Texas and we paddled down the Trinity River to examine the terrace gravels. We did find small-scale faulting in Pleistocene sands and gravels, which suggested that the salt was not entirely stable and therefore not necessarily an ideal storage site for nuclear waste. We stayed in some really crummy motels and put up with hordes of water moccasins, chiggers, poison ivy, and other hazards. More snakes than I have seen in Africa and Australia combined.

In trying to date the gravels we pulled out some rat's teeth, which some zoologist examined. Eddie found that highly amusing.



Eddie at the career halfway point: 20 years at the Bureau recognized at the 1998 Staff Service Awards along with Bill White, Tucker Hentz, Kerza Prewitt, James Doss, and Susan Lloyd.

Bureau Staff Photographs



2009 photograph of Bureau staff who had been employed at the Bureau when the new building opened at the Balcones Research Center (now the J. J. Pickle Research Campus) in 1984. Photograph by David Stephens.

Janis, Nacogdoches, and Flat Tires

by Chris Henry

Eddie has had an interesting, unique, and somewhat weird life. He grew up in Port Arthur or Beaumont or one of those strange little places in southeast Texas. As a child, Eddie's baby sitter was Janis Joplin, who used to sing lullabies to get Eddie to go to sleep. "I want you to come on, come on, come on and take it. Take it! Take another little piece of my heart now, baby! Oh, oh, break it! Break another little piece of my heart now, darling, yeah, yeah, yeah!"

After that, Eddie went to Stephen F Austin in Nacogdoches, Texas. He worked at a local fast food place to support himself in college. One day, a nameless geologist who used to work at BEG in the 1980s, came into town, stopped at the fast food place, and asked "How do you pronounce and spell this place?" Eddie replied D A I R Y Q U E E N, with just the right East Texas accent.

Eddie has done a lot of field work with BEG. Long ago, the famous Tommy Glimp, good old boy from Oatmeal, Texas, used to be in charge of the motor pool and servicing vehicles, making sure they were ready for serious field work in the outback of West Texas. Tommy's servicing approach was to look at every vehicle from a distance and, as long as it wasn't falling over, pronounce it ready to go. So Eddie took one of these ready to go vehicles out to Culberson County, northeast of Van Horn, Texas. One day he was about 50 miles from Van Horn and more than 20 miles from the nearest paved road, ranch house, or any other meager sign of civilization. Uh-oh, a flat tire on one of the four essentially bald tires. No problem, just change it and get on with things. Uh-oh, no jack, no lug wrench, no nothing in the way of tools. Uh-oh, a long way from nowhere, in the middle of summer, 100°, no shade, no nothing. Did Eddie make it? Stay tuned.

All of these are absolutely true facts.



Pranks at Bureau South

by Lisa Orr

Eddie was always surprising me with pranks when we had adjoining offices in the Lavaca BEG. My desk faced the window and I had a lovely view of the capitol. One day I looked up to enjoy the view and there on my bookshelf was a big bottle of whiskey and, I think, an empty glass laying on its side!

After all his years at the Bureau, he sure deserves a break and a happy retirement!

Notes on the Long Story of Eddie Collins

by Sue Hovorka

I've always had to look up to Eddie. When I started work at the Bureau he was a Research Scientist Associate with a real office (one of those nice ones that used to be sales offices at Bureau South) and I was a grubby, always tired and disheveled Graduate Research Assistant, who sat in the "bull pen" former furniture display areas. We were both working on the High Level Nuclear Waste project, and in the old days this involved marking a sea level datum and taping paper logs on rolls of paper and sending them to Miller Blueprint to be reduced to manageable size. Eddie did real interpretation while I did extensive ripping and taping. Some days the bull pen crew would take to fencing with the long straight edges and Eddie would have to come out and make us settle down and do some work.

Next I worked with Eddie on a structural and stratigraphic interpretation of the Edwards aquifer. I was posting the picks from a large number of logs from the Edwards Aquifer Authority and Eddie was doing the real interpretation. It was my project but Eddie had the expertise on Balcones fault zone structure. We all know that Eddie can be a world class joker and tease but when you have real trouble, like many dozens of mispicks and mislocated wells, he is kind. He also held the strong cards of doing a good interpretation, which was hugely valuable when the project got to fencing with the Edwards Aquifer politics of San Antonio.

My kids fully engaged the joker part of Eddie though. He has brothers and nephews and approaches children as boys. My little kids were girls, and they were someplace between being enchanted and annoyed at being adopted as Eddie's nephews. When they were at the office "helping Mom" on the weekend and I was not supervising them properly, they would slither to his work area and leave him items and notes, some endearing and some...not so.

Eddie is a great buddy and a generous and sympathetic listener. It is a good thing that Big Brother is not very good at watching because the number of tales of workplace angst poured out over Chuy's specials never got back to whoever was on the wrong end of the rant.

Editing, Mapping, and Dogs

by Susie Doenges

My thoughts on Eddie are that he was smart enough to realize he would need editing help for the rest of his life, so he married an editor. He and Marie celebrated their twentieth anniversary a couple years ago.

I would like to call attention to Eddie's extraordinary contribution to mapping Texas. On the personal side, he's a generous, kind friend. He's also a dog-whisperer, and if I were ever reincarnated as a Border Collie, I'd want to be dropped off on the Collins' doorstep.



Eddie's first "sort of" date with his future wife Marie (a former Bureau editor), Steve Seni, Kitty Milliken, Katy Milliken, and Marie's dog Alex during a 1992 canoe trip on the Guadalupe River. Alex joined Eddie and Marie in their canoe. Photograph by Marie Collins.



One of Marie's favorite photographs of Eddie and Marie's wedding, with Alex enjoying the yellow roses around his neck and hamming it up for the photographer. November 30, 1996.



A common occurrence in the field with Eddie: even unfamiliar dogs know a friend when they see one. Field work near Driscoll, Texas for the TCEQ Petronila Creek project, June 2004. Photograph by Jeff Paine.

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Doll
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Woodbridge, Va.
\$65,000



Chesley Sullenberger, 58
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Danville, Calif.
\$100,000



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Midland, Ga.
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\$10,700



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Baseball player
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\$34 million



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Charleston, W.Va.
\$2.2 million



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Charlotte, N.C.
\$53,700



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Singer
Los Angeles, Calif.
\$2.25 million



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Chicago, Ill.
\$177,400



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Gonzales, Tex.
\$39,300



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Austin, Tex.
\$100,000



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Library messenger
Evansville, Ind.
\$19,700



Susan Molesner, 44
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Lenore, Idaho
\$30,000



Alvaro de Molina, 51
CEO, GMAC
Charlotte, N.C.
\$11.6 million



Michael Bloomberg, 67
Mayor of New York City
New York, N.Y.
\$1



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Janesville, Wis.
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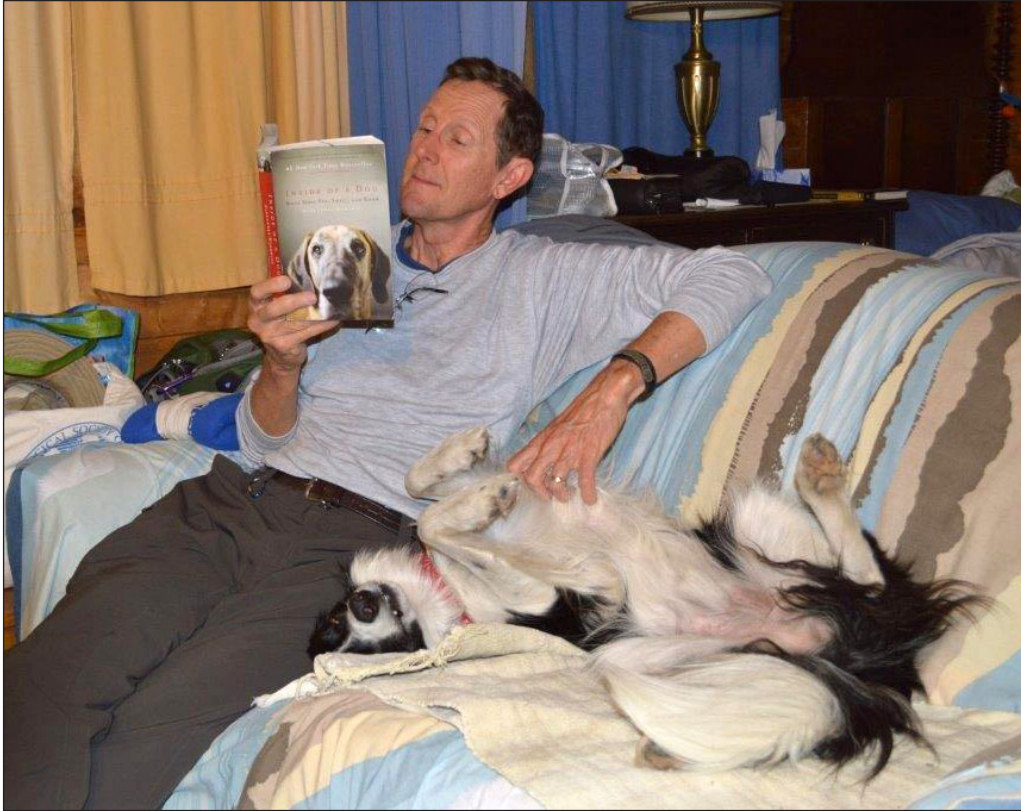


Laurie Metoyer, 37
MRI technician
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\$48,000

What People Earn

OUR ANNUAL REPORT

Eddie is widely recognized for his dog whispering abilities. Graphic by David Stephens, 2009.



The “dog whisperer” reading to Gabe. Photograph by Marie Collins.



It’s not just dogs that are drawn to Eddie. These curious cows visited us during our STATEMAP field work on Powderhorn Ranch, Calhoun County, Texas in January 2017. Photograph by Jeff Paine.

Low-Level Radioactive Waste Disposal Project, 1980s to 1990s



Eddie and Missy Jackson preparing for a geological reconnaissance flight, El Paso airport. Photograph by Jay Raney.



Eddie observing geological features during an overflight for the Low Level Radioactive Waste Disposal Project east of El Paso, Texas. Photograph by Jay Raney.

Chicken and Coyotes in the Chihuahan Desert

William F. Mullican

During the mid-1980s, Eddie and I spent so much time in Ft. Hancock doing field work for the Low Level Radioactive Waste Disposal Authority, that we were almost voting residents of the Ft. Hancock Motel. As a result, there was one café, Angie's. While we both had a strong constitution at that point in our careers, there was a limit to the number of consecutive meals one could eat at Angie's. So, one night, while I was running a 24 hour pump test, we decided to buy some chicken and have a cookout in the middle of the Chihuahuan Desert during the pump test. Well, as the sun was setting, and our creosote fire was cooking our chicken on the campfire, Eddie saw that we had a visitor. A coyote had come for dinner. Our main question was how many friends he had brought with him. It has been several years since that cookout, so my memory is a bit foggy, but as I recall, we ate chicken that night that might not have been fully cooked.



Eddie (right), Bill Mullican (middle), and James Doss (left) augering a borehole near Fort Hancock for the Low Level Radioactive Waste Disposal project, February 1986.



Eddie doing field work in 1993 with Jay Raney in the Quitman Mountains, Hudspeth County, Texas. Jay thinks Eddie was either writing notes in his field notebook -- or perhaps jotting down a couple of stanzas for a poem to Marie. Photograph by Jay Raney.



Eddie and Rip Langford conducting field studies for the Low Level Radioactive Waste Disposal Project near Sierra Blanca, Texas. Photograph by Jay Raney.



Eddie examining a trench across a fault for the Low Level Radioactive Waste Disposal Project near Sierra Blanca, Texas. Photograph by Jay Raney.



Eddie conducting field studies in the Franklin Mountains near El Paso, Texas for the Low Level Radioactive Waste Disposal Project. Photograph by Jay Raney.

Changing a Flat Tire

by Jay Raney

One of the realities of doing field work is that sooner or later the field vehicle will suffer a flat tire, and both Eddie and I had changed our share of flats. When working by ourselves we were each reasonably proficient at this task; when we worked together to change a flat something always went wrong. After a couple of times when we'd combined our mechanical expertise to make an inefficient hash of this simple operation, it became a joke. Had there been YouTube videos of us working together to change a tire in the field, they would have gone viral, at least among geologists.

Not long after one of these incidents we contacted the sheriff of Hudspeth County, Sheriff Love, to ask permission to drill a test well for our hydrogeologic studies on property on the edge of the Eagle Mountains south of Sierra Blanca where he grazed some of his cattle. He said he'd consider it, but first he wanted to drive out with us to see exactly where we wanted to site the well. The next day we set off with Sheriff Love, a large, soft-spoken man, in a Bureau truck. We drove down a gravel road, turned east up a rocky track through the desert scrub, and passed through a rickety gate to his pasture.

About halfway to the proposed drill site we got a flat, the right-rear tire rapidly deflated. Eddie and I looked at each other with wry smiles and set about changing the tire watched over by Sheriff Love. With hardly a word we pulled out the spare, jacked up the truck, replaced the flat with the spare, and tightened the lug nuts, all in about five minutes. "Looks to me like you boys should be a pit crew at the Indy 500," drawled the sheriff. Eddie and I just smiled.

The good news is that the well was drilled. The Bureau got the information we needed, and Sheriff Love got a new water source for his cows. The bad news is that as the drill rig drove off site, it tore down the gate to the sheriff's pasture.

It was always a good week for me at the Bureau when Eddie allowed me to escape the office and join him in the field. Thanks for this, Eddie, it helped keep me a little bit sane. I hope you will enjoy your retirement as much as I am enjoying mine.



Eddie changing a flat tire on a Bureau vehicle under Pat Dickerson's watchful eye during field work in the Big Bend area, Texas.

Superconducting Super Collider Project, Late 1980s to 1993



Eddie and Ed Garner wading in Waxahachie Creek for the Superconducting Super Collider (SSC) Project near Waxahachie, Texas. Photograph by Jay Raney.



Eddie and Ed Garner conducting field studies for the SSC Project near Waxahachie, Texas. Photograph by Jay Raney.

Eddie: Classic Geologist

by Robert Mace

I worked with Eddie many years ago on the Superconducting Super Collider as well as other projects. When I think of a classic geologist scrawling on maps and scrabbling across outcrops, I think of Eddie. Then, as now, Eddie was a joy to work with, and he always produced solid scientific work. He also provided me an early lesson in management when I found myself as an accidental young manager late in my tenure at the Bureau. I forget the particulars, but I said something along the lines of “You need to improve your attitude.” Eddie showed me that you don’t improve someone’s attitude by pointing out they need to improve their attitude. I know that Eddie’s attitude will surely improve in retirement by spending more time with his wife and pooches. I’m looking forward to seeing him more in the neighborhood!



Promotion!



1986 Bureau research staff promotions. Eddie was promoted from Research Scientist Associate to Research Associate. Eddie is flanked by Jon Price (left) and Noel Tyler (right). Photograph from Bureau archives.

Many, Many Field Trips! Two Examples . . .



Field-trip organizers Eddie and Chock Woodruff with Ed Garner's wife Cheryl and granddaughter Hope at Mt. Bonnell during a field trip in memory of Ed Garner, September 1999. Photograph by Doug Ratcliff.

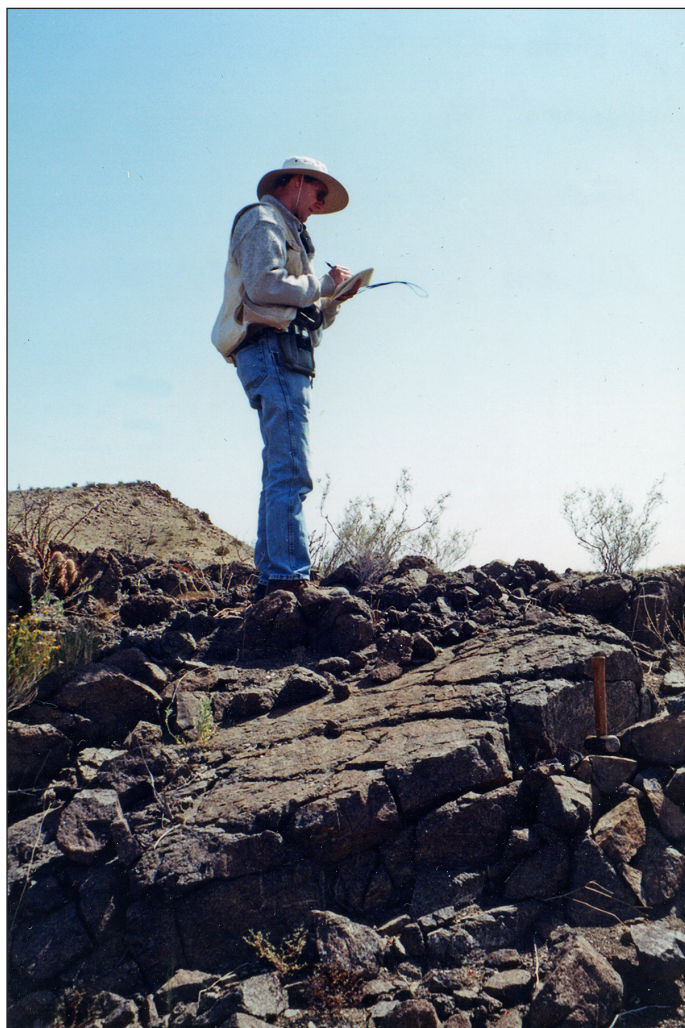


Eddie and Chock Woodruff back at the Mt. Bonnell summit to present Austin geology during a 2013 South-Central Geological Society of America field trip they co-led with Raymond Slade. Photograph by Tiffany Caudle.

Geologic Field Mapping in Big Bend National Park, 2003 to 2009

by Patricia Dickerson

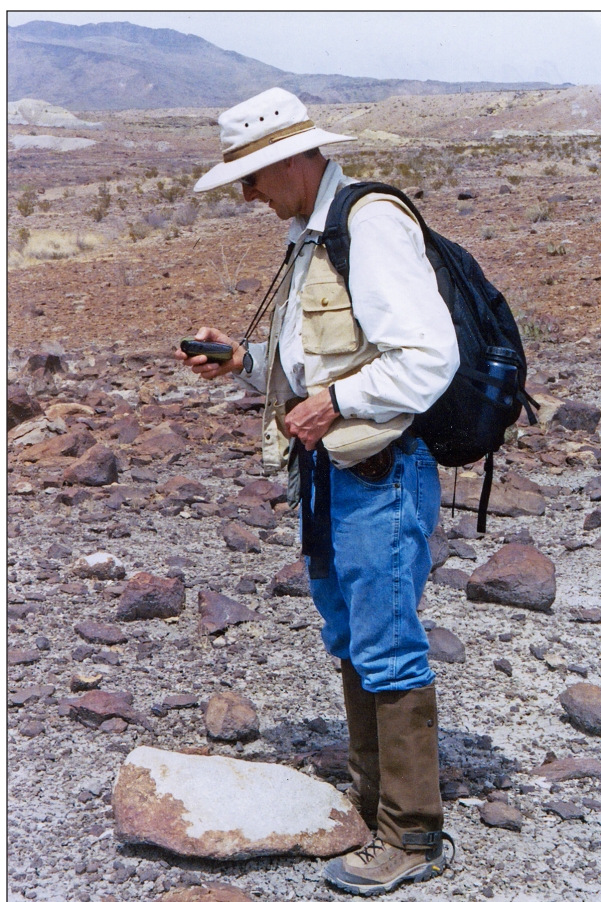
Eddie Collins, Bill Muehlberger, and I would be off early in a cloud of whale smoke (Bill's phrasing) and would pause in Fredericksburg for a break and a German bakery bite. By then we'd have taken a stab at most of the world's pressing problems. In two or three field sessions per year, our intrepid trio covered 128+ square miles: from canyon bottom on the Rio (~1900 ft) to the crest of Chilicotal Mt. (4,108 ft); from a 46.7-Ma gabbro intrusion to yesterday's river sands. The mapping, sampling, field photography and 'scope work were all melded in Eddie's masterful GIS creations. Whether debating faulting at the break-away scarp of a Chilicotal Mt. landslide or ogling a jaguarundi padding across the River Road, we shared scores of ideas, observations, stories, and laughs. We also shared strongly mixed feelings when our maps were published (Glenn Spring and Mariscal Mt. quads). It was so satisfying to see the final products, but we cannot cross paths today without wishing that the project could go on and on . . .



Field work with Eddie at a gabbro sill, northern Mariscal Mountain quadrangle, May 2003. Photograph by Pat Dickerson.



Eddie at our field office at the Chisos Mining Co. Motel in Study Butte, Texas, during Big Bend National Park project mapping in May 2006. Photograph by Pat Dickerson.



Big Bend National Park field work with Eddie in Juniper Draw, southeastern Glenn Spring quadrangle, May 2006. Photograph by Pat Dickerson.



Eddie and Bill Muehlberger at the Mariscal mercury mine during Big Bend National Park geologic mapping. Photograph by Pat Dickerson.



Eddie Collins and Bill Muehlberger at junked vehicle during Big Bend National Park geologic mapping in the Glenn Spring area. Photograph by Pat Dickerson.



Big Bend National Park field work with Eddie at a solution collapse structure, eastern Mariscal Mountain area, June 2008. Photograph by Pat Dickerson.



Big Bend National Park field work with Eddie on western Mariscal Mountain quadrangle. Photograph by Pat Dickerson.



Big Bend National Park field work with Eddie at rhyolite and gabbro exposures, western Mariscal Mountain area, February 2009. Photograph by Pat Dickerson.

Eddie Collins: Thoughts on the Last 20 Years at the Bureau

by Jeffrey G. Paine

I have had the great honor and privilege of working with Eddie extensively over the last 20 years, and will greatly miss our daily interactions when he retires at the end of July 2018. He's truly one of the Bureau giants and has quietly and consistently compiled an enviable professional record that includes numerous Bureau publications, nearly innumerable geologic maps, journal articles, field guides, contract reports, conference abstracts, and much more. Our formal collaboration began in 1999 with STATEMAP geologic mapping of the Prairie Valley School quadrangle on the Red River (not that far downstream from Bill's Catfish!), and has continued uninterrupted since. As the long-serving director of the STATEMAP program, he has generously included me in coastal mapping projects where our combined efforts have produced detailed geologic maps of the Quaternary coastal plain strata surrounding the bays of the middle Texas coast. Many of the photographs in the following pages come from excursions to those field areas. We've also worked together on many other projects, mostly related to the Bureau's role as the state geological survey. Those include studies focused on geologic hazards such as the Wink, Daisetta, and Alice sinkholes; oilfield-related impacts and salinization studies such as the Hemphill County blowout, Wendkirk Oil Field salinization on the Colorado River, and TCEQ-sponsored investigations of salinity on the Colorado River upstream from Austin and Petronila Creek near Corpus Christi; USGS-sponsored sinkhole mapping along Seco Creek west of San Antonio; and ground-water exploration near El Paso. There are many more.

Almost all of our work together has included a heavy measure of field work. Eddie is a tremendously talented field geologist, and I treasure the time we've spent together in the field over the last 20 years. Field work is always an opportunity to learn something new (and avoid office drudgery), and we almost always did just that. I know we both feel fortunate to have had opportunities to visit places and see things that most people never get to see, including the spectacular Wink sinkholes, the Daisetta sinkhole, generally off-limits parts of the Aransas National Wildlife Refuge, Fennessey Ranch, the Welder Wildlife Refuge, the Nueces Delta Preserve, and Powderhorn Ranch. Powderhorn Ranch on Matagorda Bay is especially notable, given its recent acquisition for the state and the plans to convert this more than 17,000-acre parcel to a state park and wildlife management area. I will also greatly miss the talk of dinner (and pie!) that begins every field day around 10 a.m. and often ends, for recent trips anyway, at Texas Traditions in Port Lavaca. Eddie's first task upon entering the door is always to scope out the pie display case to determine which pie is likely to be the freshest! He applies the same level of quality analysis to this that he does to Bureau intrigue and geologic problems.

I'll also miss the daily ambles around the Pickle Campus and the occasional lunch with Eddie and other Bureau colleagues at places like Chuy's, Hoover's, and Central Market. Let's hope the lunches continue, and that Eddie's retirement offers him an opportunity to continue to be involved in the geologic activities he enjoys so much.

Best wishes on your retirement, Eddie! You've moved the Bureau forward. We'll miss you.

STATEMAP Mapping near the Red River, 1999



STATEMAP field work with Eddie at an outcrop of Nocona Formation mudstone and sandstone, Prairie Valley School quadrangle, March 1999. Photograph by Jeff Paine.



STATEMAP field work with Eddie at a jointed Nocona Formation sandstone exposure, Prairie Valley School quadrangle, March 1999. Photograph by Jeff Paine.

UT Charter School Site, 2003



Investigating shallow void spaces with Eddie prior to construction at the UT Charter School site in east Austin, May 2003. Photograph by Jeff Paine.



Investigating shallow void spaces with Eddie and visiting Turkish scholar Yahya Ciftci prior to construction at the UT Charter School site in east Austin, May 2003. Photograph by Jeff Paine.

TCEQ Colorado River Salinity Project, 2004 to 2005



Eddie looking for the “poney,” who apparently is back with “new ruels” on a bridge over the Colorado River, October 2004. Photograph by Jeff Paine.



A wildly inaccurate statement encountered while doing field work with Eddie on the Colorado River salinity project, October 2004. Photograph by Jeff Paine.

Wendkirk Oil Field Salinization Project, 2006



Eddie reviewing time-domain EM data over a salinity plume in the Wendkirk Oil Field adjacent to the Colorado River, Coke County, Texas, November 2006. Photograph by Jeff Paine.



Eddie advising collaborating field staff on aerial photographic interpretation, Wendkirk Oil Field, Coke County, Texas, November 2006. Photograph by Jeff Paine.

Daisetta Sinkhole, 2008



Eddie at the emergency Command Post (with water and snacks, but “No Press”) adjacent to the sinkhole on the highway through Daisetta, Texas, May 2008. Photograph by Jeff Paine.



Eddie approaching the edge of a newly formed sinkhole in Daisetta, Texas, May 2008. Concentric ground fissures surround the collapsed area. There were alligators in the water! Photograph by Jeff Paine.

Microgravity Survey at the Wink Sinkholes, 2008



Eddie walking across compression ridges on a rapidly subsiding county road in the Wink Sink area, Winkler County, Texas, July 2008. Photograph by Jeff Paine.



In good field form: Eddie fully protected from the sun, rattlesnakes, and 110-degree heat at the Wink sinkholes, July 2008. Photograph by Jeff Paine.

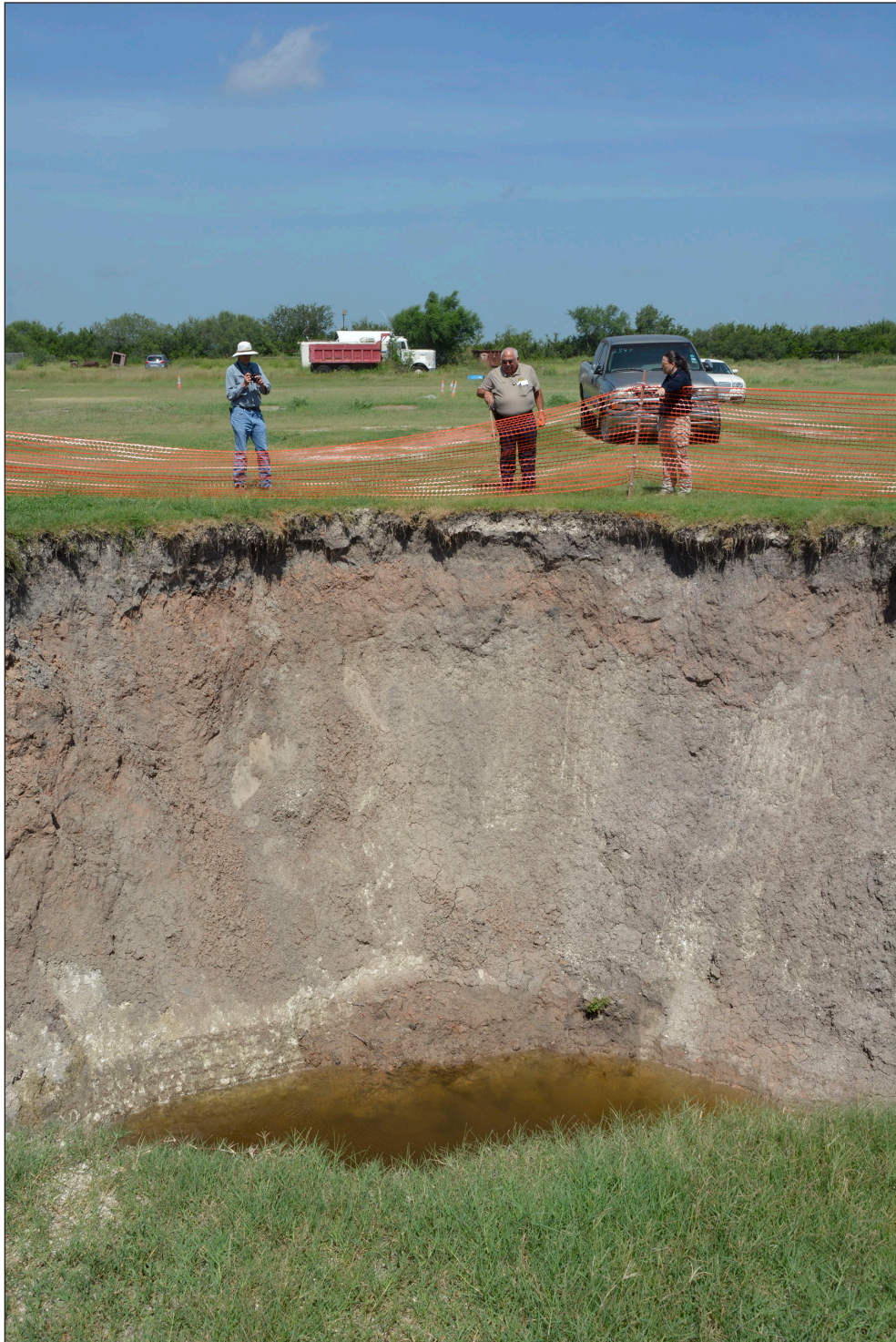
Hemphill County Well Blowout, 2011

Eddie at the edge of a blowout adjacent to a hydraulically fractured well in Hemphill County, Texas panhandle, May 2011. Photograph by Jeff Paine.



Proof that dinosaurs still roam the earth, at least south of Canadian, Texas, May 2011. Photograph by Jeff Paine.

Alice Sinkhole, 2016



Eddie examining a large sinkhole that collapsed in an old oil field south of Alice, Texas, June 2016. Photograph by Jeff Paine.

STATEMAP Mapping, Middle Texas Coast, 2011 to 2018



Eddie cresting the dune ridge during STATEMAP field work in the Colorado River delta area, Matagorda Peninsula, September 2011. View toward the Gulf of Mexico. Photograph by Jeff Paine.



Eddie examining eolian features on a wind-tidal flat on the Nueces River delta during STATEMAP field work near Corpus Christi, Texas, May 2012. Photograph by Jeff Paine.



Eddie describing Beaumont Formation core samples acquired during STATEMAP field work in the Nueces River delta area, July 2012. Photograph by Jeff Paine.



Field work is potentially hazardous, especially while intently writing field notes along the Nueces River near Corpus Christi, Texas, May 2012. Thankfully, Eddie survived this bold and vicious attack by an alligator gar. Photograph by Jeff Paine.



Those alligators are sometimes hard to see in the tall grass! Eddie is taking no chances during STATEMAP field work in the Guadalupe River delta area, middle Texas coast, May 2013. Photograph by Jeff Paine.



Eddie wading through floodwaters during STATEMAP field work in the Guadalupe River delta area, middle Texas coast, May 2013. Photograph by Jeff Paine.



Eddie and Lucie Costard breaking for lunch at the Welder Wildlife Refuge during STATEMAP field work in the Copano Bay area, middle Texas coast, January 2015. Photograph by Jeff Paine.



Eddie railing against the geophysical gods during STATEMAP field work in the Copano Bay area, middle Texas coast, January 2015. Photograph by Jeff Paine.



Eddie admiring the wildflowers during STATEMAP field work at Powderhorn Ranch, Matagorda Bay area, November 2015. Photograph by Jeff Paine.



Two Texas visionaries: Eddie and French explorer René-Robert Cavelier, Sieur de La Salle during STATEMAP field work near Indianola, Texas, November 2015. Photograph by Jeff Paine.



Eddie examining piping features in Ingleside sand exposures along the Matagorda Bay shoreline during STATEMAP field work at Powderhorn Ranch, November 2015. Photograph by Jeff Paine.



Eddie measuring water depth before borehole logging in shallow water wells during STATEMAP field work on Powderhorn Ranch, Matagorda Bay area, November 2015. Photograph by Jeff Paine.



Bovine friends curious about our logging activities at Powderhorn Ranch, Matagorda Bay area, February 2016. Photograph by Jeff Paine.



Eddie examining Ingleside barrier deposits while under heavy mosquito attack during STATEMAP field work along the St. Charles Bay shoreline, Aransas National Wildlife Refuge, April 2016. Photograph by Jeff Paine.



Eddie doing whatever it takes to enjoy lunch despite adverse conditions on Aransas Bay at Goose Island State Park during STATEMAP field work, February 2016. Photograph by Jeff Paine.



Eddie and Pat Mickler during borehole logging of a shallow water well on West Ranch near the Lavaca River, December 2016. Photograph by Jeff Paine.



Eddie and Jeff Paine at the Placedo Sand Pit during STATEMAP field work near Port Lavaca, Texas, February 2018. This visit to the pit in the Beaumont Formation yielded a Pleistocene mammoth bone. Photography by Lucie Costard.



Eddie using his “dog whispering” skills to calm a dolphin outside Cathy’s Restaurant in Port O’Connor, February 2018. Photograph by Lucie Costard.



Eddie feeding some lively ducks on the shores of Powderhorn Lake during STATEMAP field work on Powderhorn Ranch, Matagorda Bay area, April 2018. Photograph by Jeff Paine.



Eddie surveying storm debris from Hurricane Harvey during STATEMAP field work on Powderhorn Ranch, Matagorda Bay shoreline, April 2018. Photograph by Jeff Paine.



Eddie getting a good view of Lavaca Bay during STATEMAP field work near Port Lavaca, December 2016. Of course, he had to toss the pesky children overboard first. Photograph by Jeff Paine.



Eddie and Lucie Costard taking a lunch break in the screened-in porch at the restored concrete ranch house at Powderhorn Ranch overlooking Matagorda Bay during STATEMAP field work, April 2018. Photograph by Jeff Paine.

In Closing . . .

Those of us who have worked with Eddie over his 40 years at the Bureau will miss the daily doses of Eddie's humor, generosity, good-heartedness, dry wit, and knowledge of Texas geology that is as deep as it is broad. Happy retirement, Eddie!



Eddie during a thoughtful moment on the Aransas National Wildlife Refuge at Powderhorn Lake, surely contemplating the many high points in his long and productive career and preparing to set down his well-worn rock hammer for those who will follow. Photograph by Jeff Paine in January 2017.

... And Now, Have Another Piece of Pie and Celebrate!



Eddie enjoying the end of another long field day at Texas Traditions in Port Lavaca, Texas, April 2018. Note the pie display case in the background and the double serving on his plate! Photograph by Lucie Costard.