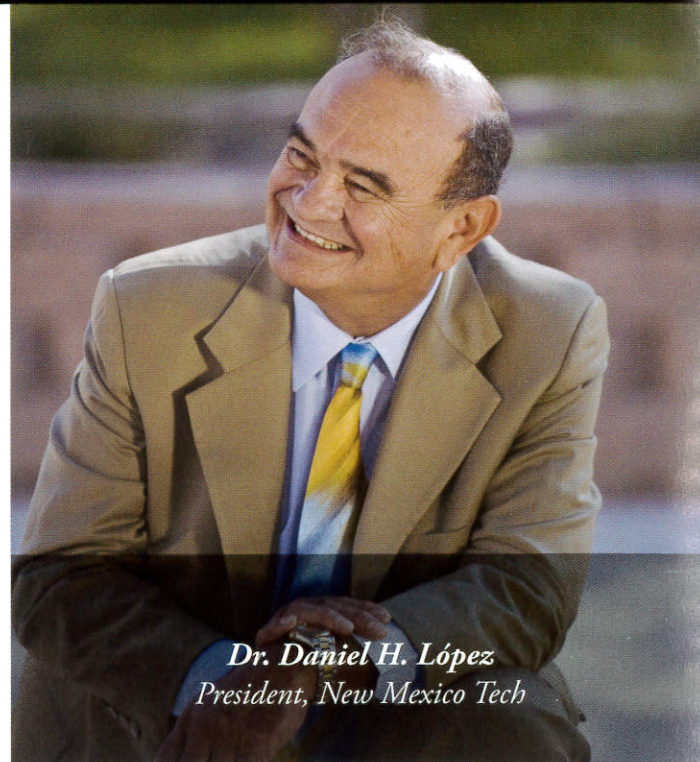


**Dr. Laurence H. Lattman:** A renowned geologist, educator, and administrator, he received his Bachelor of Chemical Engineering degree from City College of New York in 1948, and his master's and doctorate in geology from McMicken College in 1951 and 1953 respectively. Dr. Lattman began his career as an instructor in geology at the U of Cincinnati in 1952, then at the U of Michigan. From 1953 to 1957, Dr. Lattman instructed students at Penn State as an assistant, associate and eventually full professor of Geology. In 1970, Dr. Lattman moved back to the U of Cincinnati to head the Geology Department. In 1975, Dr. Lattman received national recognition when he became Dean of two separate colleges at the U of Utah; the Dean of the College of Mines and Minerals and Dean of the College of Engineering. In 1983, as Tech President, Dr. Lattman reversed waning student enrollment, he also established the greatest growth for research and research facilities in the university's hundred-year history.

## A word from the President



**Dr. Laurence H. Lattman**  
President Emeritus, New Mexico Tech  
**Dr. Daniel H. López**  
President, New Mexico Tech



**Dr. Daniel H. López**  
President, New Mexico Tech

Dear New Mexico Tech alumni,

We begin another school year at New Mexico Tech with many challenges and many successes. We recently refurbished the Athletic Field and have begun construction of a new 150-bed dormitory on the south side of the field. By the fall 2013 semester, we expect to accommodate all student requests for on-campus housing.

For the third straight year, New Mexico Tech's incoming class is record size. Having more than 450 new students on campus creates some challenges, but these are good challenges to have.

Our next big challenge is securing funding to construct a new \$24 million home for the Bureau of Geology and Mineral Resources. We – and the other universities in New Mexico – are relying on a General Obligation Bond, which will be on the ballot for the November general election. The bond, if approved by the citizens of New Mexico, will provide \$18 million for the project. The Bureau is a state-funded agency that is firmly integrated into the education mission of the university. Their facility is aging and these facilities present certain

health and safety issues that we urgently need to address.

This marks the first year since 2007 that Tech has seen an increase in funding from the State of New Mexico. We hope that the economic downturn has been reversed and that we will see another increase during the 2013 legislative session. Tech employees suffered through three years without raises until this year. We relaxed the hiring freeze, but we still are understaffed in many areas and I hope we can secure a large enough budget during the next cycle to alleviate the pressure on our excellent faculty.

As always, I encourage you to visit our campus and re-connect with friends, colleagues and your former instructors. You should feel free to stop by my office as well. I always welcome visits from Tech graduates!

Sincerely,

**Dr. Daniel H. López**  
President, New Mexico Tech



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# inside GOLD PAN

## ALUMNI MAGAZINE

### Greetings!



*Colleen Guengerich*

Letter from the Director  
*Office for Advancement*  
September, 2012

Dear Techies,

Welcome to another great issue of Gold Pan! Here at the Office for Advancement and Alumni Relations, we have lots of new initiatives on tap this year.

We brought a consulting firm on board this past spring to assist us in assessing where we are and to help us plan moving forward. CCS Consulting has conducted over 50 interviews with alumni, donors, administration, staff and faculty to get a better sense of how Tech is viewed, what we do well and what we can improve.

As private fundraising has not been a part of Tech culture in the past, and given the economic situation and the federal and state budget cuts, it is becoming more and more essential that New Mexico Tech work to improve this facet of the university.

As such, you should anticipate more outreach from our office. It's not just about money; there are many different ways that alumni can give back to the university. Alumni in specific geographic areas can form chapters. These chapters can support local students, recruit, help recent grads that move into the area. Alumni can also mentor prospective students, recent grads and can attend career fairs as representatives of their companies. You can also come to campus and give lectures or seminars.

Larger universities across the nation have fostered a culture of giving and successfully developed an external support structure to further education and research at their institutions. We hope to do the same at Tech through a new capital campaign that we will slowly unveil over the next year or two.

We hope you have fond memories of Tech and are willing to help support the university in whatever way possible!

Colleen Guengerich  
*Director of Advancement and Alumni Relations*

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*New Mexico Tech is an equal opportunity/affirmative action institution.*

# letters

**paul e. shoemaker**

*President, NMTAA  
Physics, 1971*

Academic year 2012-2013 is now underway. New Mexico Tech has another year of record-setting enrollment; the entering class of freshmen will number around 350, and total enrollment (graduate + undergraduate) is more than 2100. Great news for Tech, but still a little shocking for alumni like me who remember summer sessions at Tech when the students attending classes could get together and fit in a phone booth, with room left over for the roulette wheel from 49ers.

Tech's physical, teaching, and research resources will be stretched pretty thin by this burgeoning enrollment. It wouldn't be surprising if your favorite former professor tracks you down and asks if you want to serve as an adjunct faculty member, guest speaker at a symposium, or a reviewer at design competitions. If you have ideas about how to help



*Paul E. Shoemaker*

Tech sustain its excellence in teaching and research, call your favorite former professor and share your thoughts with him or her.

Please also consider nominating your fellow alumni to receive the New Mexico Tech Alumni Association's Distinguished Alumni Achievement Award and the Distinguished Service Award, both of which are awarded at graduation in May 2013. These awards recognize alumni or friends of New Mexico Tech for their extraordinary professional distinction and meritorious contributions.

Submit suggestions for these nominations to me at the following e-mail

address: [shoemaker.1937@gmail.com](mailto:shoemaker.1937@gmail.com).

And here is some reasonably late-breaking news. The Alumni Association Board of Directors received paperwork from the New Mexico Public Regulation Commission on June 7, 2012, officially recognizing the organization as a non-profit corporation. I am deeply grateful to Brett Wendt and Geza Keller, both long-time members of the Board of Directors, for the dedication, persistence, and generosity that made this incorporation possible.

Now the REALLY hard work starts: realizing the potential of the NMTAA, first and foremost for the benefit of the university and the support we can provide to Tech, but also for the alumni of Tech and the opportunity to serve their needs and to assist (even lead) community-building efforts among Tech's graduates.

Those of you planning to return to Tech for the

49ers events (October 18-21) will have a chance to attend the annual general meeting of the Alumni Association. It is planned to take place in MSEC 103 from 1 to 3 p.m. Saturday, Oct. 20. More details about the business to be done there will be made available with the help of Tech's Office of Advancement and will be posted on the Alumni and Friends page within Tech's web site.

Celebrate this exciting new chapter in the life of your Alumni Association, but most of all, celebrate New Mexico Tech's continued success in science, engineering, research, and teaching.

---

### **Letters to the Editor:**

*Questions? Compliments?*

*Concerns? Corrections?*

*Make yourself heard! email*

*LaVern: [lrobinson@](mailto:lrobinson@admin.nmt.edu)*

*admin.nmt.edu. This is*

*your magazine; we want to*

*hear from you!*

---

## physicist building next generation of x-ray telescope at NASA

*By Thomas Guengerich  
New Mexico Tech  
& Susan Hendrix, Janet Anderson/  
NASA*

As a high school student in Houston, Jessica Gaskin knew she wanted to study astrophysics in college. She did her research and found a small research school in Socorro, N.M., that offered a specialty in astronomy within the Physics Department.

In 1995, she left Socorro with her bachelor's degree. Little did she know that 17 years later, she would be working at NASA building a balloon-borne X-ray telescope to study the sun and distant nebula.

Gaskin earned her master's at Case Western University in Cleveland, Ohio, then completed her doctorate at the University of Alabama-Huntsville, which is also the home to Marshall Space Flight Center. Dr. Gaskin did a post-doc at NASA and then completed the career entry track.

Since 2005, she has been a research astronomer in the X-ray Astronomy Group.

She and a colleague, Steve Christe of Goddard Space Flight Center, are the two principal investigators on a newly funded project to build and launch an X-ray telescope. And they have just 15 months to get airborne.

### HEROES

Call Jessica Gaskin and Steve Christe "heroes," and they'll laugh. But these enterprising NASA researchers – Gaskin at

the Marshall Space Flight Center, and Christe at the Goddard Space Flight Center – are leading a heroic undertaking. They're co-principal investigators on a new project to prepare, modify, test and launch a sophisticated, balloon-borne X-ray telescope designed to expand knowledge in not just one field of extraplanetary science, but two. Few members of the team have participated in a flight mission.

Cue the "Mission: Impossible" theme? Not a chance. NASA has so much faith in the team's "High Energy Replicated Optics to Explore the Sun" project, or HEROES, that it recently was selected for the agency's prestigious Hands-On Project Experience (HOPE) training award.

One of only two projects selected for the 2012 HOPE award, HEROES is a joint effort between Marshall and Goddard science teams to fly a powerful X-ray telescope on a two-day mission in Earth's stratosphere,



*Jessica Gaskin, Marshall Space Flight Center*

# research

Physics

some 25 miles up. It's slated to launch in the fall of 2013, from the Fort Sumner, N.M., test site managed by the Columbia Scientific Balloon Facility of Palestine, Texas.

Gaskin said the HOPE Award aims to give NASA civilian employees initial experience in flight missions and project leadership.

"This project is both training and a science mission," Gaskin said. "I've been the P.I. on instrumentation projects, but not on flight missions. The idea is to get P.I. experience to move up and to also re-purpose HERO to look at astrophysical objects and the sun."

The original project was High Energy Replicated Optics, or HERO. The new project adds the "to Examine the Sun," making the new iteration, HEROES.

"HERO in the past has observed astrophysical objects, but now we're testing out new technology on the payload for our next mission," Gaskin said. "We'll

be doing direct imaging and spectroscopy using these very special optics that we make at Marshall Space Flight Center."

In its previous incarnation, HERO mainly examined distant stars. Gaskin's



*A balloon-borne gondola bearing NASA's original HERO science mission lands safely in a Kansas field.*

task is to repurpose the instrument with solar sensors to look at the sun. Her team will also be adding a new alignment system to allow scientists to point the telescope with a high degree of precision.

"We need to know where on the sun we are looking," she said. "That's not very common. We are developing the software that accompanies that. The alignment system will monitor the absolute

position of the optics to the detectors and the camera relative to the optics."

The mission flight will only last about two days, but Gaskin and her NASA colleagues will gather enough data to keep them

busy for years.

"If we can image parts of a solar flare and understand the acceleration processes inside a flare, that would be amazing," she said. That would be the big 'Aha' moment. We want to resolve the different parts of a flare – the footpads and the arc – to distinguish where the acceleration regions are."

*hands-on project experience*  
First presented in 2009,

the Hands-On Project Experience honor is designed to promote achievement and accelerate career advancement among scientists and engineers with no previous flight-project experience, as they take a mission from concept to launch to post-flight analysis over the course of a year. Eligibility extends to any NASA civil-service researchers developing in-house payloads that can be flown aboard available, low-cost NASA and commercial vehicles.

"The engineering data and scientific findings from these projects inform a variety of other NASA activities," said John Grunsfeld, associate administrator for NASA's Science Mission Directorate in Washington, D.C. "But the most valuable aspect of the HOPE awards is as an accelerated learning opportunity for promising NASA team members – enhancing their technical, project and leadership skills to continue our mission well into the 21st century."

The awards are presented by the NASA Academy

of Program/Project & Engineering Leadership, in partnership with NASA's Science Mission Directorate, Office of the Chief Engineer and Office of the Chief Technologist in Washington.

Despite flight inexperience and a tight timeline, the HEROES team benefits from standing on very strong shoulders. The Marshall and Goddard centers have more than 35 years of experience in flying high-altitude test balloons, plus decades more in scientific research and vehicle development, integration, testing and launch. The HOPE award provides direct access to that experience. As part of the award, the 17-member HEROES team will be mentored throughout the project by seasoned science, engineering and flight projects personnel on a nearly one-to-one basis.

"Because there is little or no flight experience among the team members, our mentors, and the support of our centers, are critical," Gaskin said. "This is a full-time, integrated learning

process, but we're treating it like we would any NASA flight opportunity. We're following NASA mission policy directives, we've got formal reviews and documentation deadlines, we're developing education outreach components – the works."

### two missions in one

HEROES' name is a bit deceptive; it doesn't quite cover the breadth of the project's goals. During the day, the balloon-lofted payload will indeed explore the sun, studying powerful solar flares to give NASA solar scientists new insight into the way our star's magnetic energy functions.

At night, however, the telescope's eye will turn outward to other stars and celestial phenomena such as the Crab Nebula – targets of keen interest to NASA astrophysicists studying the origins of the cosmos and the lifecycle of stars and galaxies like our own.

The Crab Nebula was first observed in 1054 A.D. when a massive star went supernova. At the center of



*"High Energy Replicated Optics to Explore the Sun" (HEROES), is a scientific balloon built to soar to an altitude of about 25 miles.*

the nebula is a pulsar – or neutron star – that emits regular X-ray, gamma ray and microwave bursts. In the 1960s, scientists pinpointed the position of the Nebula by examining its X-ray emissions as the moon occulted the nebula. During the same era, X-ray emissions from the



*The Crab Nebula is a supernova remnant and pulsar wind nebula in the constellation of Taurus.*

Crab Pulsar were used to study the Sun's corona. In 2003 and 2004, scientists used the Chandra X-Ray Telescope to study the atmosphere of Saturn's moon Titan when Titan occulted the Crab Pulsar's X-ray bursts.

Such studies provided the foundation for the new project, which builds on Marshall's successful High Energy Replicated Optics telescope, or HERO, first flown to the upper atmosphere in 2001 to detect distant X-ray sources in space. HEROES will significantly update the original with a number of robust modifications, most notably an innovative

targeting technology dubbed the Solar Aspect System. Gaskin has experience working with HEROES. She did her dissertation using data gathered from the original mission.

Developed at the Goddard Space Flight Center, this sophisticated pointing technology will enable scientists to aim HEROES with a high degree of precision, targeting specific points on the sun to obtain high-resolution images and spectroscopic data. The goal? To hone in on low-energy X-rays signifying the start of particle acceleration in the solar corona – the trigger for the process that culminates in the massive outbursts of energy we see



Steve Christe of Goddard Space Flight Center

as solar flares. “We’re asking a very basic question here: How does

energy get released in the solar corona?” Christe says. “It’s our goal to add to our understanding of how the sun works, so we’re going where the action is.”

When that solar action wanes at sunset, HEROES will use its star camera to target and document additional X-ray sources overnight, gazing deep into distant galaxies, and studying the spatial and spectral emissions of the Crab, a pulsar wind nebula caused by a supernova first detected from Earth in 1054.

### where heliophysics and astrophysics meet

Gaskin and Christe are proud of the dual purpose of their project, which unites NASA’s heliophysics and astrophysics divisions – separate sciences often pursuing similar goals.

“We see a lot of the same processes everywhere we look in space, from the sun to the farthest points in the known universe,” Christe said. “The sun is the perfect laboratory to study so many of the processes we see in action

around the cosmos. At the same time, studying the birth, life and death of stars millions of light-years away helps us better understand the lifecycle and behavior of our own turbulent star.”

Gaskin agrees. “By successfully integrating our science goals and working together to develop and fly the instrument that will achieve them, we hope to demonstrate how NASA can cut costs, combine resources and dramatically improve the return on its investment across all the sciences,” she says.

The co-investigators hope the team’s efforts eventually will lead to a larger-scale flight experiment – one lasting weeks instead of days – but right now they’re staying focused on the tasks at hand.

The newly assembled team is setting up shop in the high-bay facility in Building 4649 at Marshall. They’re unpacking equipment, getting to know one another and their mentors, and assessing

mission requirements and specifications for HEROES’ first major milestone: a System Requirements Review set for August. Gaskin, managing the work at Marshall, communicates regularly by phone and email with Christe, who is overseeing the Solar Aspect System testing at Goddard.



Jessica Gaskin of Marshall Space Flight Center

The team’s energy is palpable, and no wonder. “It’s exciting to put together a project with such a relatively small price tag and such big ambitions,” Gaskin said. “It’s an opportunity to deliver big science on a budget.”

Then she and her partner get back to heroic business.

# memories of a miner-II

the torch is passed — enter Earl DeBrine and the era of the techie

By Robert Eveleth and Paul Harden

*Editor’s Note: Gold Pan is pleased to present the second part of its two-part series profiling the history of the historic Capitol Bar. Let us allow our illustrious authors to continue their well-told tale.*

## part II

By the late 1950s, major changes loomed on the horizon for the Coronado Tavern and the Capitol Bar.

All the proprietors had been in the bar business for 20-30 years and either wanted to retire or at least move on to other things.

In 1958-1959, the Coronado was leased to Kippie Olguin, who operated the business until the Piccininnis decided to liquidate. That is also the approximate time Willie Emillio decided to venture into the manganese mining business.

When the Coronado closed its doors, Kippie

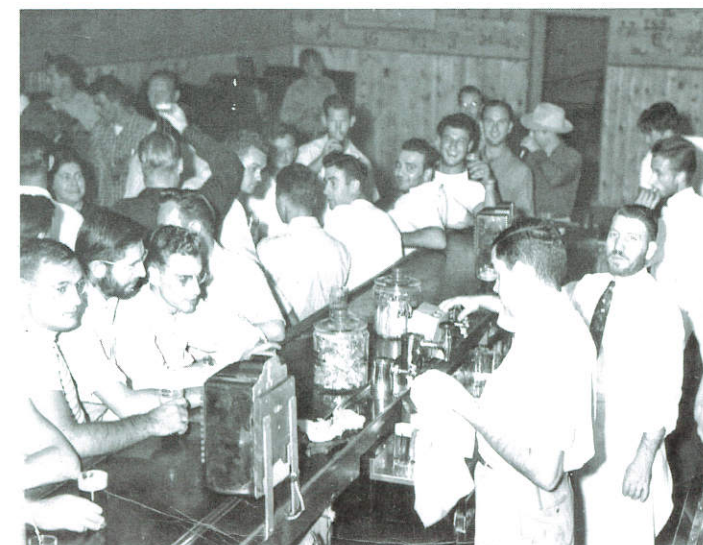


Courtesy of Socorro County Historical Society

*A view of the east side of the Socorro Plaza during the Prohibition years. The Masonic Building and the Hilton Drug Store are on the left; Grimes Grocery Store is in the center; Green’s Pool Hall is the building on the right.*

simply moved around the corner and leased the Capitol. Willie Emillio did not do well in the manganese business. He ultimately found renewed and lasting success with Socorro’s Pepsi-Cola distributorship.

Willie Emillio never forgot



his many years in the bar business, however, and often recalled the many very special friendships that developed during those years, both with Socorro’s citizens, and especially with the School of Mines engineering and geology students.

The latter held him in such high esteem that they made Willie an honorary member of the New Mexico School of Mines Alumni Association – an accolade bestowed on perhaps less than two dozen people. Upon his death, in January 1998, Willie left a bequest to the school to establish the William M. Emillio Scholarship fund.

Kippie Olguin maintained his lease at the Capitol until late 1963, at which time he relinquished it to Earl DeBrine and his brother-in-law Raymond Gallegos.

On July 14, 1964, one of the authors, Robert Eveleth, went to work for

DeBrine and Gallegos and spent an enjoyable four years practicing the ancient and honorable art of mixology. During this time, the proprietors decided that Giovanni Biavaschi's vast and essentially unused basement constituted an undeveloped "gold mine."

The place was given a good scrubbing, the stone walls varnished, attractive light fixtures installed and comfortable custom-made cushions placed on the stone piers around the walls. A storage area on the south side was framed off from the rest of the basement by a gypsum dry wall, and the north face of that wall presented an artistic opportunity: The services of a Santa Fe artist were acquired and he spent the better part of a month laying out and painting an attractive mural.

The final improvement occurred when the proprietors installed a "dumb-waiter" hoist facility at the east end of the bar. This enabled trays of drinks to be raised and lowered without having

to negotiate the steep basement stairs.

The remodeled basement now needed a name, so the proprietors held a contest. The prize was to be a rare and valuable demijohn (gallon-size) of spirits selected from the upper echelon of the distiller's art.

Rolls of tickets were rounded up and one could submit as many suggestions as he or she pleased. A large pickle jar sat on the back bar and



Courtesy of Robert Eveleth  
*The one-time stucco finish is shown in this photo of the Capitol Bar and Café during the 49ers celebration.*

was soon filled, almost to overflowing, when the great judgment day arrived. It should be pointed out that DeBrine and Gallegos were very much into the political scene at the time,

and the winning name, "The Caucus Room," submitted by Ila Mae and George Hildebrand, reflected that interest. When Gallegos dropped out of the partnership, in 1965, DeBrine went it alone for the duration.

*the debrine years:  
a continuing legacy*

For years, Willie Emillio was reluctant to give up ownership of his beloved Capitol Bar. He finally relented on June 30, 1980, at which time Emerlinda "Mernie" and Earl DeBrine became the new owners.

With deed in hand, Earl DeBrine decided to remove and replace the old stucco facing, which due to its age, was cracking and chipping. Upon removal, he discovered that Biavaschi's stone and brick facing was actually more to his liking than the stucco, and the old "Capitol Bar" sign painted above the doors was still serviceable.

Another bonus was the "Wines & Liquors" sign on the corner brickwork,



Courtesy of Earl Jr. and Joanna DeBrine  
*Newlyweds Earl DeBrine and Emerlinda "Mernie" Gallegos DeBrine about 1955 enjoying a night out at the Coronado Tavern. In 1980, Earl and Mernie DeBrine bought the Capitol Bar.*

dating back to the Green Front days. Earl DeBrine added the porch to further enhance the bar's territorial appearance.

Socorro lost a good friend when Earl DeBrine died suddenly and unexpectedly, in February 1987. The family bravely moved on with the sons and daughters assuming the managerial reins.

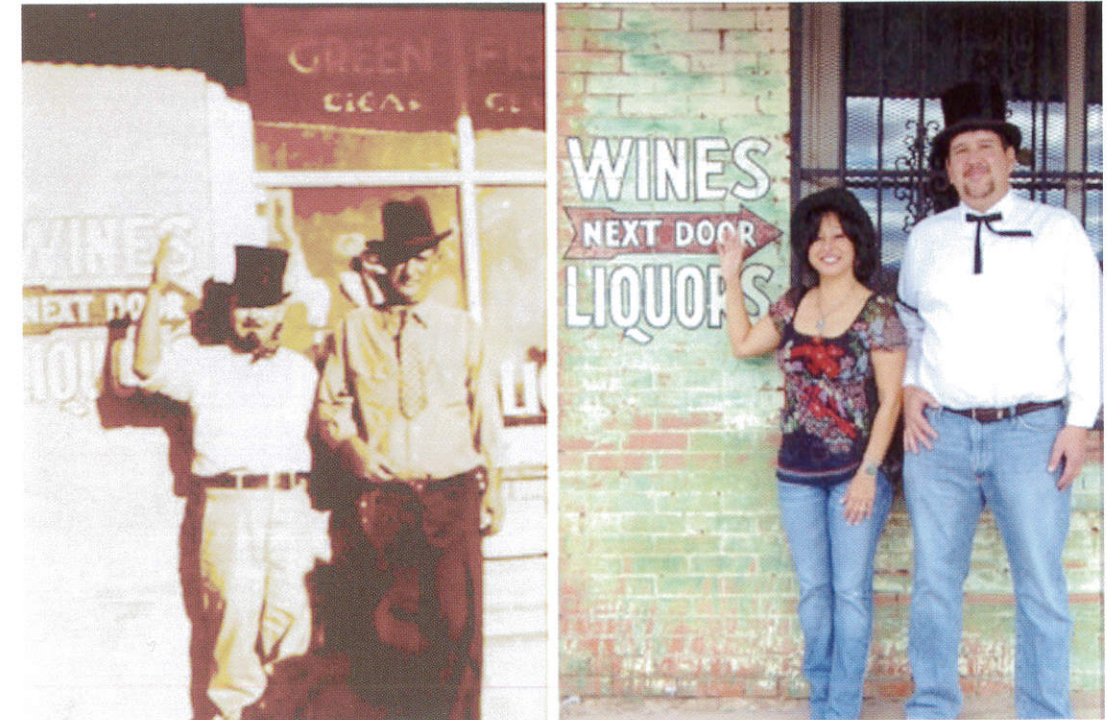
*fire strikes again*

Several years after the death of Earl Debrine, tragedy struck again, in

1993, during a severe autumn thunderstorm. One of the authors, Paul Harden, was working next door at his print shop that evening when the lightning, wind and sheets of rain started.

Following several very close lightning strikes, the smell of smoke filled the air. Venturing out into the heavy rain to investigate, Harden saw flames shooting into the street from the front door of the Capitol Bar.

Oddly, like the fire in 1940, this was also late on a Sunday night. Harden called in the alarm, and the Socorro Fire Department responded immediately, fighting the fire into the wee hours of the night in the pouring rain.



Left photo courtesy Robert Eveleth; right by Paul Harden  
*One of the few photos of the Green Front bar (left) with owner Fred Emillio standing on the right in the 1930s. Right photo shows current owners Joanna and Earl DeBrine, Jr. posing beside the historic "Wines & Liquors" sign – still on the corner of today's Capitol Bar.*

The interior of the building was badly damaged, but the early detection by Harden saved

the bulk of the building. Biavaschi's saloon building, "built for the ages," again lived up to its promise.

Following the fire, the DeBrine family and friends were inspecting the burned building, trying to grasp the extent of the disaster. When Fire Chief Bob Brunson entered the building, they asked when the firemen would be done so they could secure the building. Brunson informed them all the

firefighters were gone and the trucks back at the station.

"Then who is that man in the second story?" they asked, pointing to a man walking along the rafters – only pant legs and shoes were visible.

Moments later, the man disappeared and his footsteps went silent. They recognized the jeans and shoes as those typically worn by former owner



*The Vigilante Band returns to Socorro every year to play three nights during 49ers. The band started when members were Tech students in the 1970s.*

Earl DeBrine. Was it Earl, inspecting his beloved Capitol Bar and ensuring everyone was safe? Only the century old bricks of the Capitol Bar know for sure.

The Cap was rebuilt with the DeBrine family going to great efforts to preserve as much of the ambiance of the original bar as possible – preserving

Socorro's only remaining Territorial saloon.

The DeBrines have also preserved the long-standing tradition of hosting live entertainment on weekends and during special events such as the annual 49ers weekend, SocorroFest and others.

Many notable (as well as a few less notable) artists

have performed over the years. Among them are the well-known Vigilante Band, who returned last year for their reunion, and Dr. Rock's Dixieland Jazz Band for Mardi Gras weekend. Among the lesser-known was one of the authors, Robert Eveleth's, own bluegrass combo, the "Not Broke Just Badly Bent" band.



*The author's (Robert Eveleth) bluegrass band, "Not Broke Just Badly Bent," provided the entertainment many a Friday night at the Capitol during the late 1980s/early 90s. The sketch artists always had difficulty with our name!*

epilogue

Socorro of the 21st century is vastly changed from its predecessor of the 1880s. The earlier version claimed well over a dozen bars and saloons in the Plaza area alone, while today there are a mere three throughout town: the El Camino Restaurant and Matador Lounge, Bodega Burger Co. & Lounge (formerly Ranchers Steakhouse and Road Runner Lounge) and the Capitol Bar.



All provide a wide variety of entertainment, but the Cap is the granddaddy of them all. It is the only Socorro saloon that can claim a Territorial pedigree. Times change, and the name may have changed, but Giovanni Biavaschi's saloon remains. Willie Emillio once wrote: "Through the years, both lean and prosperous, the Capitol Bar has survived.

... Today it is simply all things to all people. It is an extension of the friendly Plaza on which it

sits. From the (old-timers) who think of it as the Green Front to long-haired college kids from nearly every state in the Union, the Capitol Bar (continues to be one of Socorro's favorite places."

The authors, during their quieter moments, imagine they can hear the jolly, rotund Biavaschi letting out with a giant belly laugh. His contemporaries built their premises from milled lumber and framed adobe, and all were lost either to fire or the simple ravages of time.



and joy to hard times and financial missteps, we imagine he is still laughing.

And the last laugh is always the best.

*Some of the references used in this article: "The Smallest Bottler," by Willie Emillio (Pepsi Cola World, 1975); numerous issues of El Defensor Chieftain and Socorro County Courthouse records; Phyllis Reiche, the DeBrine family, Sarah Green-Padilla, and Max Torres for photographs and information; posthumously to Willie Emillio for preserving much of the Capitol Bar's early history; and interviews and field work by the authors. All images are from the authors' collections unless otherwise noted.*

honoring late  
new mexico tech professor  
and researcher, c.b. moore

The Lightning Protection Institute recently donated \$20,000 to New Mexico Tech in honor of the late Charles B. Moore, one of the early researchers at Langmuir Laboratory for Atmospheric Research, New Mexico Tech's lightning lab in the Magdalena Mountains.

The donation was used to establish a special fund – named the Charles B. Moore Fund for Langmuir Laboratory – for the benefit of atmospheric research at Langmuir Laboratory. During its first year, the fund was used to purchase a digital oscilloscope for constructing and maintaining equipment to study triggered lightning at the lab.

“We’re grateful for the donation that allows researchers to continue to explore the mysteries associated with lightning and Earth’s atmosphere in the memory of C.B.

Moore, who I had the great pleasure of knowing and working with for many years,” said Dr. Bill Winn, Director of Langmuir Lab.

Moore, who died in March 2010, made tremendous contributions to the understanding of thunderstorms and lightning as Professor of Atmospheric Physics and Chairman of Langmuir Lab from 1968 to 1986.

The Lightning Protection Institute is a non-profit organization dedicated to ensuring that today’s lightning protection systems are of the best possible quality – in design, materials and installation – to protect lives and property from the effects of one of nature’s most visible and exciting phenomena – lightning.

The main laboratory building, which sits atop South Baldy Peak, was built in 1962 and 1963 during the presidency of Dr. E.J. Workman. An annex and balloon hangar, the latter to support Moore’s research, were built later.



*C.B. Moore is loading a rocket to measure electric field strength in a thunderstorm.*

One of the practical applications of Moore’s research was the discovery that lightning rods with tips rounded to between one-half and one inch in diameter were more likely to be struck by lightning than the sharply pointed tips used since the days of Ben Franklin.

This discovery is significant because lightning rods that are more likely to be hit and to carry the current harmlessly to the ground, do a better job of protecting surrounding objects.

As a result of Moore’s research, most of the lightning rods manufactured in the United States today are blunt-tipped rather than pointed.

Moore took a long and circuitous route to the heights of his profession, managing to bypass a Ph.D. along the way until 2003, when New Mexico Tech awarded him an honorary doctorate.



*The Langmuir Laboratory for Atmospheric Research atop South Baldy, where Charlie Moore conducted much of his pioneering research.*

He was widely known and respected by his fellow scientists who bestowed upon him numerous awards, including the Otto C. Winzen Lifetime Achievement Award of the American Institute of Aeronautics and Astronautics in 1997.

Members of the American Geophysical Union elected Moore a Fellow of their organization in 2005. It is one of the few honors that AGU confers. Moore was given his certificate and award on May 25,

2005, during the annual AGU Joint Assembly in New Orleans, a trip he thoroughly enjoyed with his wife, Wilma; three months later, the city was attacked by Hurricane Katrina.

He also is a fellow in the

Royal Meteorological Society, the American Meteorological Society, and the American Association for the Advancement of Science.

In 1984, he was recipient of New Mexico Tech’s first Distinguished Research Award.

Although Moore retired in 1985, he remained active and productive in research until his final few years, when he was sidelined by Alzheimer’s disease.

“The groundwork laid by Charlie Moore continues to build, and the new program that bears his name lays testament to his achievements,” Winn said.

“I invite *Gold Pan* readers to visit <http://goo.gl/99gWp> for an extended tribute to Moore written by Dr. Paul Krehbiel and myself.”



# calendar of events

## alumni receptions

Check [www.nmt.edu/advancement](http://www.nmt.edu/advancement) for alumni reception event details

### ALUMNI RECEPTION SCHEDULE FOR 2013

#### JANUARY

15/16 Roswell, Hobbs, Artesia, Carlsbad  
29 Santa Fe

#### FEBRUARY

24 Denver (SME)  
→ Dallas  
→ Seattle, Oakland  
→ San Jose

#### MARCH

→ Las Cruces  
→ Phoenix  
→ Houston  
26/27 Dallas/Fort Worth

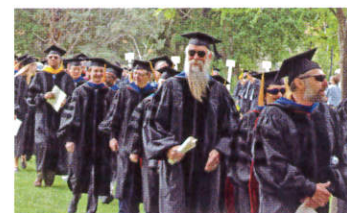
#### APRIL

8 Rochester/St. Paul/Minneapolis  
8 Oklahoma City

#### MAY

9 Socorro, NM  
11 GRADUATION

→ Dates to be announced.



#### OCTOBER:



##### October 6:

- Oktoberfest
- Chile Proppers Model Aircraft Fly -In



- Very Large Array Guided Tour
- Guided Night Sky



- Stargazing
- Trinity Site OPEN to the Public



October 6-7:  
Golf Week Junior Tour

October 8-13:  
National Wildlife Refuge Week

October 10-13:  
19<sup>th</sup> Annual Enchanted Skies Star Party

October 11-12:  
Northern New Mexico Seniors

October 11-13:  
Alamo Indian Days



October 12-13:  
10<sup>th</sup> Annual SOCORROFEST



October 13:  
Sevilleta & LaJoya Open House

October 19-21:  
90<sup>th</sup> Annual 49ers Celebration



October 26:  
Hamfest  
W5AQA/KC5ORO

#### NOVEMBER:

November 1:  
3rd Anniversary of the Alamo Gallery & Gifts



November 3:  
Very Large Array Tour

November 13-18:  
25<sup>th</sup> Annual Festival of the Cranes



November 17:  
Celebracion de Otono

#### DECEMBER:



December 1:  
• Candy Cane Light Parade 6:00pm  
• Luminarias on the Plaza and Beyond Art Stroll



December 7:  
Last day of Classes  
Check [www.socorro-nm.com](http://www.socorro-nm.com) for city events details.

Every year New Mexico Tech recognizes and celebrates graduates from 50 years ago called the "Golden Reunion."



L-R: Vice President of Administration and Finance, Lonnie Marquez, Ann Shoemaker, Paul Shoemaker, President of NMTAA

Over the past several years we have had 10 to 12 people reunite with their old classmates, some of whom they have not seen for decades. The reunion includes a sit-down dinner with family,



Class of '61 participating in Tech's Commencement Ceremony



friends, and current Tech administration, followed by walking the line for graduation then a farewell breakfast. This year we will be celebrating the Class of 1963.

Currently Tech's records show that there are 29 people from the Class of 1963 on our mailing list. We will be sending more information such as Save-The-Date cards and schedule of events as the event nears. We will also have a website dedicated to



John Dowdle & Ron Brimball

the class of 1963 where we will post names of people whom we are missing contact information.

For more information about the event you can contact Michael Olguin Jr. at [molguin@admin.nmt.edu](mailto:molguin@admin.nmt.edu) or (575) 835-5616.

## net community

The New Mexico Tech Alumni Website is now live. Tech alumni will find some useful features and easy navigation around the redesigned site. Here are some quick highlights of the new website features:

- Alumni Directory: Thinking of an old classmate? You can find your classmates and friends online. You can also put your information in the alumni directory to allow other people to search for you. You can put as much or as little information as you like.
- Easy access to the giving page. This is a secure site that allows you to donate easily and freely from the comfort of your home with just a click of the mouse.
- Where does your money go? This section will highlight students who are currently receiving endowed scholarships so you can see where and who is benefiting from your generosity.
- The events calendar will allow you to see where we will be holding alumni receptions across the country. You will also be able to see what events are going on around campus.
- You can link up to our alumni interaction Facebook page. Here we will have discussions, news, and contests allowing alumni to interact with each other in real time.

The website is [www.nmt.edu/advancement](http://www.nmt.edu/advancement). See you there!

# how we got here

the presidents' series: laurence lattman

the president's series:  
the lattman years —  
financial stability and  
diversification

By Valerie Kimble

Dr. Laurence H. Lattman, the geologist who succeeded New Mexico Tech interim-President Dr. Charles Holmes as President in 1983, broke the string of physicists serving as chief executives at Tech, thereby ending 37 consecutive years of administration by scientists in that field.

This line of physicists-as-presidents was started by Dr. E.J. Workman (1946-1965) and continued through the tenures of Dr. Stirling Colgate (1965-1975), Dr. Kenneth Ford (1975-1982) and Holmes (1982-1983).

Lattman also ushered in what might be called the era of political sentience at New Mexico Tech, in recognizing the need for state-supported colleges and universities to get up close and personal with their elected representatives at both the state and federal levels.

The interaction among lawmakers and officials in academia had become more vital as institutions of higher learning grew and diversified, and it became necessary to remind those who divvied up the dollars about the unique aspects of each college and university.

"As a university president, you can't just sit in your office and wait for things to materialize," Lattman said. He worked closely



Denny Peterson and  
Congressman Joe Skeen

with Denny Peterson, and with Dr. Daniel H. López, then Vice President for Institutional Development, in developing legislative contacts.

Tech, Lattman said, had little trouble convincing the powers-that-be of its commitment to providing a quality education and in expanding research opportunities to the

undergraduate level.

"I tried, all through the 10 years I was at Tech, to keep nourishing the balance between research and teaching, which is the hallmark of Tech and the basis for its excellence and in getting the student involved early," said Lattman.

It is a formula from which New Mexico Tech has benefited ever since.

Key to the academic program of his administration was the outstanding support of several colleagues. These were academic vice president Dr. Carl Popp, and several research vice presidents – Drs. Marx Brook, Fred Kuellmer and Alan Gutjahr. Clearly, any such effort could succeed only with the help of an outstanding faculty,



Dr. Fred Kuellmer

Lattman said.

in the beginning

Laurence Harold Lattman was born on Park Avenue in midtown Manhattan, New York City, the only son of a medical doctor and his wife and the



Midtown Manhattan, 1925

middle child between two sisters.

The Park Avenue of his youth was a block from Harlem, and nowhere near the 740 Park Avenue address of glitterati such as Jacqueline Kennedy Onassis or the Rockefellers.

Young Larry got in trouble in the first grade, and the reputation followed him all the way through PS6, from where he graduated with honors in science. When his younger sister, Pixie, enrolled in the same school, she was identified as a sibling of Larry

Lattman with this caveat: "but she is a *nice girl*."

Lattman went on to study chemical engineering at City College of New York until 1943 when he dropped his student deferment with only one year left, to enlist in the U.S. Army.

The decision was prophetic. Lattman was later assigned to the Army Specialized Training Program (ASTP) at the University of Cincinnati to train in mechanical engineering, before being transferred to Oak Ridge, Tenn., to work on the mass spectrographic enrichment of uranium.

Those who know the couple can picture the following scene unfolding in the Student Union Building at Cincinnati: Hanna and a friend are rehearsing a play in German in a club room where the soldier went to listen to classical music. He corrected the friend's pronunciation of a particular word, and Hanna corrected *his*. "I took two years of German

in high school," Lattman tells Hanna. "I was *born* in Germany," Hanna retorts. He was intrigued, always a good start to any relationship. To wit: On April 12 of this



Larry and Hanna Lattman

year, Hanna and Larry celebrated 66 years of marriage.

Meanwhile, Lattman returned to City College of New York after the war and completed his degree in chemical engineering in 1948, the same year Hanna became a U.S. citizen.

He worked in the field of his major course of study for a year before giving up a \$50 per week salary to return to college under the G.I. Bill to study geology. Ironically, the couple was told that the best place for graduate study in geomorphology, Lattman's

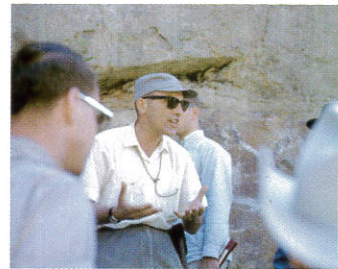
area of interest, was at the University of Cincinnati, so they returned there in 1949.

It took him one year to earn a baccalaureate degree in geology and another year for his master's degree. By 1952, Lattman had completed coursework for a doctorate, but had not written his dissertation, when he accepted a job as an instructor at the University of Michigan. He was awarded a Ph.D. in geology in 1953.

On the recommendation of his major professor at Cincinnati, Lattman joined the Pittsburgh office of Gulf Oil in July 1953; he transferred to the New York office in 1956, concentrating on South America oil and gas resources.

### the move to academe and a fulbright to moscow

By this time, the family – including daughter Barbara and son Martin – was living in Suffern, N.Y., requiring Hanna to load the two pajama-clad children into the car early in the morning to drive



her husband to the railroad station for his commute to the city.

The situation was hardly ideal, and Lattman decided to find a job in academia. A call to his geomorphology colleague, John Miller, at Penn State proved that once again, the Fates were on his side: Miller informed Lattman that his job would be



Larry Lattman lectures his class at a roadcut

opening at Penn State in the next hour, and advised him to call the department chair there in two hours.

This he did. Lattman rose from an assistant professor at Penn State in 1957 to a full professor in 1964, earning a reputation as an excellent teacher. He remained at Penn State

until 1970.

"His students loved him," said Hanna.

Indeed: an introductory-level geology class he taught outgrew its classroom and moved into 1,000-seat Schwab Auditorium – and then into two back-to-back classes in Schwab. In numerical terms, Lattman started with 24 students that first semester; over the next 13 years, he taught over 25,000.

Lattman is lauded for his public speaking skills and for injecting just the right note of humor into lectures. It can be a tricky business, but the man



He would tell students he belonged to "The New Jersey Haters Society" and that their motto was: "And the sea retreated in disgust." At Dr. Lattman's last lecture student Ken Walters played an elaborate practical joke on the popular professor.

is blessed with uncanny timing and tone, and a keen understanding of audience.

To wit: On the first day of his introductory Geoscience 20 class in Schwab, he would heartily announce: "Welcome to the biosciences!" and watch the students scramble to attention. Lattman moved into administration in 1970 by returning to his alma mater, Cincinnati, as head of the Department of Geology. He was acceptable both to those faculty members more interested in research and those more interested in teaching.

Four years later, Lattman was offered a Fulbright appointment at Moscow State University to teach a course in geologic interpretation of satellite imaging.

"I wasn't really very interested in going to Russia, but was urged to in the name of détente," he said. Lattman went with the understanding that he'd be able to visit Middle Asia, an area difficult for

most tourists to see.

Two months later, his hosts reneged on that promise. Lattman dug in his heels, refused to continue teaching the course, and told the vice rector he was going home.

Three days passed.

Lattman's assigned classroom was without its visiting professor. The next day, a visa was issued to Lattman granting him permission to visit a region few outsiders had access to; only then did he return to teach his class.

Lattman closed out his Fulbright year in Moscow at a final dinner where his hosts raised their glasses in toast after toast, one of which was in gratitude that Henry Kissinger, and not Laurence Lattman, was U.S. Secretary of State.

Communism presented the theory that Russia was a classless society – but not at Moscow State University. Lattman recalled a door across from his room that he never saw opened except for one



time, during an official visit from Sargent Shriver. Inside the room lavishly furnished with Oriental carpets sat a fair-skinned male and female student, studying. This room, boasted the Russian guide, is a typical dormitory for our students.

Shriver and Lattman shared a brief exchange acknowledging the artifice. In actuality, eight students shared a single bathroom (Lattman had one to himself).

History also was subject to Soviet revision. Lattman recalls a photo of early leaders of the Bolshevik Revolution prominently displayed on a table. A potted plant was added to the photo to obscure the

image of Leon Trotsky. Hanna was prohibited from joining her husband, but booked a tour of her own; together they visited Moscow museums and watched a performance of the world famous Bolshoi Ballet.

Another story apropos to conditions in Soviet Russia found Lattman on a train to Kiev, Ukraine, where he bunked with three Russians and their bottles of vodka. The train was scheduled to arrive in Kiev at 9 o'clock.

According to his watch, the train was 15 minutes late; but disembarking from the train, the station clock did indeed read 9 o'clock. It turns out that the clock *always* read 9 o'clock.

**One footnote:** The Grand Hotel in Kiev does not serve *chicken kiev*.

**the university of utah**  
Meanwhile, in 1974, a search committee for the College of Mines at the University of Utah tracked Lattman down to Moscow to offer him the deanship there, after his return to the U.S.

"I had never even been to Salt Lake City," Lattman said. Nonetheless, he flew there with Hanna for a final interview, and once again took a job he did not actually seek.



He already was familiar with the area, having conducted geomorphology research in Nevada, and found Salt Lake City to be "beautiful."

In 1978, the U.S. Bureau of Mines moved to the university's research park,

vacating five buildings located between the College of Engineering and the College of Mines. The five buildings were to be split between the two colleges.

The academic vice president did not want the two colleges squabbling over the buildings.

By coincidence, the engineering dean resigned at this time, and suggested peace could be maintained if Lattman was made dean

of both separate colleges. This duo-role would serve him well a few years down the line.

"I took both jobs, but was not getting a combined salary," said Lattman. "But I did ask for, and received, a reserved parking space between the two colleges." He served as dean of both colleges until 1983.

In addition to his secretary at the College of Mines, Lattman inherited a marvel of a secretary (this was before the term administrative assistant) actually named Marvel at the College of Engineering.

It was Hanna who wisely suggested that she join her husband and both secretaries for a get-acquainted lunch. Lattman laughs, recalling an image from that lunch, of dining with three women "who could have reduced me to a pile of ashes" in a state at one time known for the practice of polygamy.

Actually, he did request an additional compensation for serving in the dual

role: he wanted to have a financial officer to oversee both colleges. That man was Denny Peterson. Some months later, in 1982, Lattman got a call from New Mexico Tech President Dr. Kenneth W. Ford, who was looking to replace Steve Mitchell as Vice President for Administration and Finance.

Ford asked for recommendations.

Lattman didn't want to lose his excellent, hand-picked financial officer, but he knew the job

was an opportunity for Peterson to ascend the administrative ladder of higher education, and wished Godspeed to Peterson.

Not long after Peterson left Utah to become the chief financial officer, Tech began searching for a new president as well.

Ford had vacated the executive's chair, and Charles Holmes, a Professor of Physics, was named interim president. Meanwhile, Lattman was meeting with deans of five mining colleges



in Fairbanks, Alaska, to discuss mutual issues. A secretary at the host university gave him a message to call one Judy Floyd, chair of the Board of Regents at New Mexico Tech.

The call had come from a law office in Albuquerque, where the board was meeting.

"I couldn't get through," Lattman said, so he procured a military priority line to contact the secretary at the office of the board's legal counsel. She told Lattman that board members were in a meeting and she couldn't interrupt them.

"The meeting's about *me*," he shot back. In short order, Floyd was on the line to offer Lattman the presidency at Tech, and he accepted.

**the decade at new mexico tech**  
First, let's debunk a myth. Because Lattman ended the annual March celebration known as St. Pat's, ostensibly honoring the patron saint of miners, there



are those who believe the president locked the doors to the Ore House as well.

Not true. "The Ore House was gone by the time I arrived," he said.

The St. Pat's celebration, however, was becoming a liability for the state-supported school.

"It was chaotic," Lattman said, and the Socorro community was calling for its demise. At stake was student and campus safety.

He also was familiar with recent court decisions affecting academic administration via courses at the Stetson School of Law, one of which directly impacted the safety of everyone on campus in preparing universities to deal with armed intruders.

"I sat down with Jim

Shaffner, Denny Peterson, Lamar Kempton and Tom Zimmerman on certifying campus security personnel to carry arms," Lattman said.

Thus began the transition from Campus Security to Campus Police by certifying officers through the New Mexico Law Enforcement Academy. Zimmerman, the popular campus police chief, was a former Socorro County Sheriff himself.

Lattman also discovered how swiftly the small college could respond to a problem. Walking across campus one evening, he noticed that many of the security lights were burned out, and reported the issue. The following evening, "the campus was like daylight."

The Lattman legacy is both intrinsic and external, rooted in new degree offerings to reflect growing global diversification – programs and philosophies thoroughly continued by his successor.

Programs in electrical engineering and business

administration that began during the Lattman administration have grown to include a Ph.D.



Lucy Chavez, Administrative Assistant to seven Presidents

in electrical engineering and master of engineering management (MEM) degrees. It was Peterson who taught the first class in what became the Department of Management.

College presidents deal with dollars a great deal of the time; or, in Lattman's words, "One of the major decisions

an administrator makes is the placement of resources." The basic philosophy is to use those resources to

make strong departments better and to strengthen weak departments. Lattman extends that philosophy by challenging weaker departments to first show evidence they're striving to do better before asking for more money.

No departments are of equal strength, he said. The ultimate challenge is

to have all departments accept each other as peers.

"My thinking is that the central administration is the servant for faculty and students," Lattman continued. "The less interference, the better."

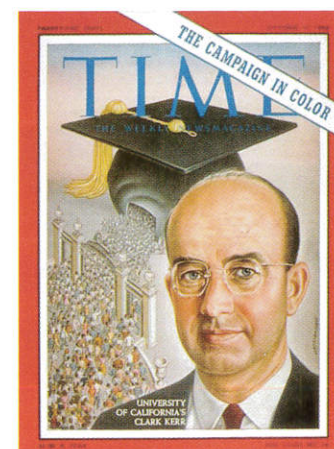
Effective faculty, he said, are those who have the self-confidence to deal with bright students, such as those who populate New Mexico Tech. Lattman also recognized the indomitable Lucy Chavez, executive secretary for four New Mexico Tech presidents, as having held "the most important women's staff position in the college . . . She was a natural-born lady. Lucy was a gem; she was superb."

*into retirement and beyond*  
*Gold Pan* caught up with the Lattmans in their beautifully appointed two-story home in northeast Albuquerque on an unseasonably warm winter day.

Ever the professor, Larry, as he is known to friends, is wearing a wide-wale corduroy jacket with

leather patches at the elbow; Hanna is gracious and soft-spoken, and their affection for each other is clear.

Know this: Larry Lattman



Clark Kerr

can hold court with the best of them.

The conversation ranges from his current reading material (Shelby Foote's Civil War trilogy) to favorite comedians (Red Skelton, Jack Benny, Fred Allen, to name a few).

Education was always central to the conversation.

He shared advice he gave his son, Martin, who was having difficulty deciding on a college major. If you are interested in

science, but do not know which one, then major in mathematics – the best basic preparation for a career in science. If not interested in science, then major in philosophy and learn how to think and reason. He chose the latter course.

When Martin eventually applied to Cornell to work on an MBA, he worried that he didn't have the preparation of a BBA. The graduate advisor was delighted with his degree in philosophy stating, "We won't have to erase all the clutter of the undergraduate degree in business."

Lattman is a connoisseur of language and enjoys and can tell a great joke himself. He playfully recalled the words used by Clark Kerr, former Chancellor of the University of California at Berkeley, speaking at his final commencement after being terminated by the school's regents: "I leave as I came – *fired with enthusiasm.*"

Lattman has been equally enthusiastic about life in retirement. He spent

seven years on the board of directors for Public Service Company of New Mexico, and currently serves on the board for the New Mexico Museum of Natural History with Dr. Peter Gerity, Tech's V.P. for Academic Affairs.

For years, Lattman taught a popular geology class and an AARP defensive driving course at Albuquerque's Bear Canyon Senior Center, and has been called the Walter Mitty of race car drivers. One summer, Lattman took a course at Bob Bondurant's School of High Performance Driving in Phoenix to get the most from an RX7 Turbo 2 racing vehicle he had bought.

Bondurant, a former Indianapolis 500 racer, handed Lattman his diploma and said, "Between here and Socorro, forget you ever took this course." Of the 26 students in that class, Lattman, then in his 60s, graduated fourth. Since retirement, Larry and Hanna have become avid bird watchers, and from time to time he leads a birding tour at

the Rio Grande Nature Center. They often travel east to visit their children – Barbara in Arlington, Va., and Martin in Germantown, Md., 45 minutes away – and their five grandchildren.



If Larry is the play-by-play announcer, Hanna does the color commentary; theirs is a partnership. She provided the family and career support essential to his success.

As the afternoon sun begins its descent, we prepare for departure. A peek through the family album and a final musing: "One thing about retirement is that one day your word is the law, and the next it's 'Who the hell are you?'"

We hope, in some small measure, to have answered that question on these pages.

# they also served

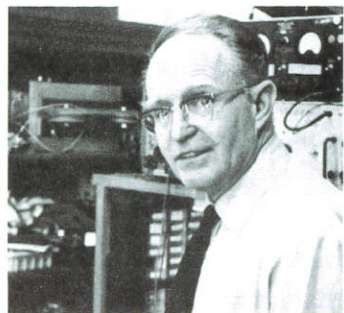
dr. charles r. holmes

nmt interim presidents —  
a call to service in times of  
transition

*Editor's Note: Gold Pan's Presidents Series has generated a great deal of feedback, including a suggestion that we include brief glimpses of the two gentlemen who served New Mexico Tech as Interim Presidents during this period — Charles R. Holmes and Fred Kuellmer. Both men answered a call, not to glory, but to service.*

## dr. charles r. holmes

Dr. Charles R. Holmes, a longtime professor of physics and research scientist in atmospheric physics at New Mexico Tech, served a year as the university's president, from 1982 to 1983, between the terms of Kenneth Ford and Laurence Lattman.



Dr. Charles R. Holmes

To students, he was Doc Holmes, and to his friends he was Charlie. He was a husband to Dorothy and a father to four children. But up on south Baldy Peak at Langmuir Lab, or in his Workman Center office, Holmes was in his element. In the following words of Tech alumnus Joe Chew, from the book, *Storms Above the Desert* (1987, University of New Mexico Press): "Holmes did not seek the position (of President); he merely failed to run fast enough when it was thrust upon him."

There were those who saw Holmes as a non-aggressive individual, perhaps as a presidential figurehead. "From his stooped walk to his absentmindedly professorial demeanor, he looked like the kind of president that power-hungry subordinates dream of.

"Ah, but that observation is only part of the story."

Friends and colleagues can attest that Holmes's mild-mannered appearance was deceiving.



Dorothy and Charles Holmes

"Old-timers at Tech have fond memories of his term as President of the Institute Senate, where in half an hour he would dispose of business his predecessors would have spent all afternoon on.

"Newcomers would occasionally try to bully the 'meek' little physicist, only to find themselves staring in to a pair of protuberant, bloodshot blue eyes with all the warm vulnerability of glass. When Doc Holmes gave them 'the look,' strong and ambitious men suddenly

developed the urge to sit down and shut up."

He was a man of routine, a clear and decisive thinker — and a creature of habit. He was home for dinner at the stroke of six, and afterward returned to his campus office until one minute before 10 o'clock, when he would walk home to catch the evening news.

The inimitable Doc Holmes died in his sleep August 19, 2004, of natural causes, following several years of declining health.

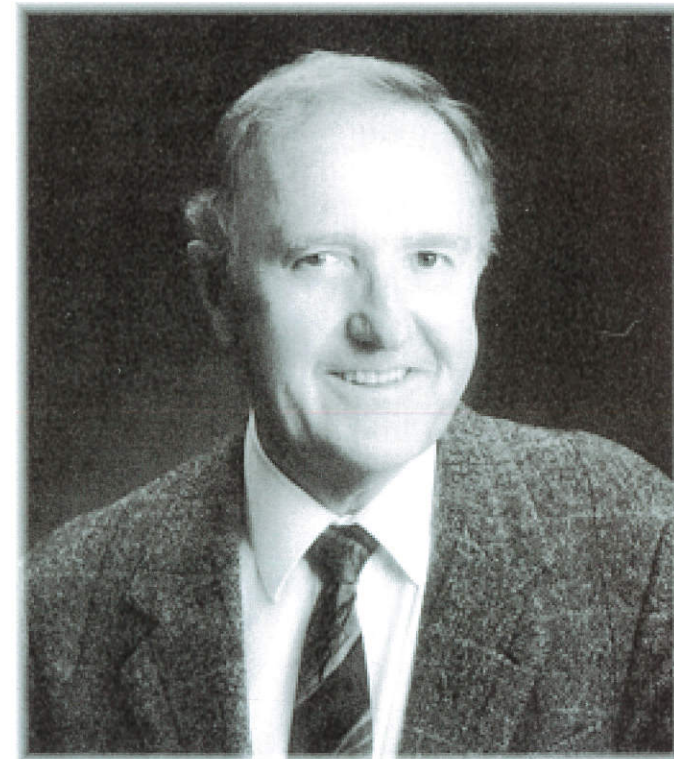
## dr. frederick j. kuellmer

Dr. Frederick J. Kuellmer served New Mexico Tech for some 40 years as a teacher, researcher and administrator, including a brief term as acting president:

- Senior Economic Geologist, NM Bureau of Mines, 1952 – 1964
- Vice President of Academic Affairs, New Mexico Tech, 1966 – 1976
- Acting President, New Mexico Tech, 1975
- Professor of Geology, Geoscience Department, 1970 – 1983
- Chairman, Geoscience Department, 1980 – 1981
- Dean of Graduate Students, New Mexico Tech, 1984 - 1987
- Vice President of Research and Development, New Mexico Tech, 1987 – 1991

The role of dean of students isn't won by virtue of a popularity contest; nonetheless,

Kuellmer enjoyed a rapport with students, who called him "Freddy Feldspar" after a mineral the geologist studied in his early years.



He and his wife, Jane, and their four children, often had students who couldn't get away for the holidays join them for family dinners.

Professionally, Kuellmer accrued many awards, including a postdoctoral fellowship for a year of study in Zurich,

Switzerland. He also published a number of papers and reviews on coals, which he began to study in the 1970s.

Perhaps with that image in mind, New Mexico Tech saw fitting to name a room on the second floor of the Sken Library after him.

And so, on Dec. 4, 1999, in memory of his educational values, and his devotion to Tech, a quiet, and yet cheery, library room was named the Frederick J. Kuellmer Reading Room, and remains so today.

Kuellmer died in 1992.

By Valerie Kimble

*What was Tech like when you were here? If any of you have a story to tell, send it to Colleen Guengerich (cguengerich@[admin.nmt.edu](mailto:admin.nmt.edu)), Director of Advancement, and you may see your story published in **Gold Pan!***

He also loved New Mexico, saying it was the first place he had spent any time where he could actually see the rocks.

Kuellmer read each

morning's newspaper from cover to cover, and spent a lot of time reading professional journals. It wouldn't be difficult to imagine him sitting in a sturdy chair with a book in his hands and a light over his shoulder.



The connection between Tech alumni and the Career Services Office does not end at graduation. In fact, Career Services welcomes the opportunity to work with graduates desiring help with their career plans as well as those who have opportunities to offer to current Techies.

### career & graduate school fair

The Fall 2012 Career and Graduate School Fair was held on September 20 at Tech. More than 700 students attended to learn about full-time,



internship, cooperative education, research, and summer positions. If your organization is interested in attending future fairs, please visit [www.nmt.edu/career-fair](http://www.nmt.edu/career-fair) for more information and to register. Interviews, information sessions, meetings with faculty members, and classroom presentations can also



be arranged around the fair. Alumni seeking new opportunities are also invited to attend this event to talk with recruiters. Future career and graduate school fair dates: February 7, 2013 September 19, 2013

### job postings

Does your organization have positions open? In addition to attending the Career and Graduate School Fair, you can share your opportunities with Tech students and alumni using the Career Connect system. Visit the Career Services website at [www.nmt.edu/career-services](http://www.nmt.edu/career-services) and look for "Information for Employers." You can manage jobs and even arrange resume collections and interviews through the system.

### mentor network

One great way to positively impact the experience Tech students receive is to get

involved in Tech's Mentor Network. Alumni can visit the Mentor Network section of Career Connect, the office's system for sharing jobs and internships, at [www.myinterfase.com/nmt/mentor](http://www.myinterfase.com/nmt/mentor). Once a mentor account is created, students will be able to view the mentor's information and contact mentors who can help them find their career paths.

### etiquette dinner

One of the missions of the Career Services office is to prepare Tech students to be well-rounded candidates for exciting careers in a variety of industries. As part of this goal, the office hosted the inaugural Etiquette Dinner and Fashion Show this spring. Over



70 students attended the dinner, where they learned how to manage a business meal. Served a difficult-to-eat meal of tossed salad, minestrone soup,

# career services

### career cab

Career Cab, the office's take on Cash Cab, made its first appearance on campus in April 2011. With the aim to teach students about important career resources, Career Cab gave students rides to classes in exchange for answers to career services trivia. Highlights are available in a YouTube video on the Career

### career closet

Many college students – not just at Tech – lack professional attire that is appropriate for



Services website at [www.nmt.edu/career-services](http://www.nmt.edu/career-services).

interviews. Therefore, the Career Services Office established the Career Closet. Faculty, staff, students, and community members donated more than 25 suits as well as other business clothing to the Career Closet, which students can borrow. Alumni with professional clothes they no longer wear are asked to consider donating to the Career Closet. We are glad to accept more donations.

For more information on any of the services provided by Career Services, please contact Christina Anthony, Coordinator of Career Services, at [canthony@admin.nmt.edu](mailto:canthony@admin.nmt.edu) or Lillian Armijo, Director of Student Affairs, at [larmijo@admin.nmt.edu](mailto:larmijo@admin.nmt.edu).

Connect with us on Facebook at [www.facebook.com/NMTCareerServices!](http://www.facebook.com/NMTCareerServices!)

# people you know

people you know

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NEW MEXICO COLORADO WYOMING KANSAS

## 1970s

**Dr. Wallace T. Clark III** is the Chief of the Systems Engineering Division, Air Force Nuclear Weapons Center, Kirtland Air Force Base, N.M.

Wally has also served as Chief Scientist, 498 Nuclear Systems Wing, AFNWC; Chief, High Power Microwave Division, Directed Energy Directorate, Air Force Research Laboratory at Kirtland; Chief, Laser Division, and Chief, Technologies Branch, AFRL, Kirtland.

Prior to entering federal civil service in 1998, Wally worked in industry where he performed Environmental Protection Agency sponsored research on particle drift velocities in electrostatic precipitators via laser Doppler velocimetry; led the engineering and construction of high vacuum out-gassing test stations for programs at Oak Ridge National Laboratory; developed in vivo fiber optic-based blood pressure and blood gas transducers

at Bell Laboratories; led a team measuring the electromagnetic signature of a Trident missile's 3rd stage plume for the U.S. Navy; was the Chief Scientist of the U.S. Air Force Electromagnetic Pulse Simulators at Kirtland; and developed the 9-space algorithm to determine the camera observation point of the first U.S. unmanned aerial vehicle.

After earning his bachelor's in physics from New Mexico Tech, Wally earned a master's in physics from Idaho State University and a Ph.D. in Instrumental Sciences from the University of Arkansas.

He and his wife Kathleen Gay (Kathy) Bunch have been happily married for 31 years. They have a daughter, Alethea Rae Espalin and a son W. Thomas Clark IV, a 2007 graduate of New Mexico Tech.

**Luis Jaramillo** is the Chief Technical Officer with Ireland-based Colombian Mineral Resources. He is a Colombian national

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and a Geologist from the Universidad Nacional de Colombia. He earned a master's in economic geology from New Mexico Tech.

Jaramillo has served as managing director of Ingeominas (National Institute of Geology and Mines of Colombia) and manager of the Planning Department of MINERALCO. He is also a member of the Colombian Society of Geologists and has occupied the chair of President of the Board of Directors for the Colombian Mining Chamber.

During his career in private companies, he was head of Geology for Rio Tinto Colombia for more than five years on base and precious metals and coal. He has worked with other international companies in Colombia such as Anglo American, Billiton Developments and Western Mining Co. On the international stage, he has been a consulting geologist for the United Nations as well as the World Bank.

## 1980s

**Igor Gonzales**, was appointed Executive Vice President and Chief Operating Officer of Barrick on May 2, 2012, having previously held the position on President of Barrick's South American region, a position he held since 2005.

Mr. Gonzales joined Barrick in 1998 and has more than 30 years of experience in the mining industry. He has played a key role in the



successful growth of Barrick's South American business unit and has also been integral to the development of the Pascua-Lama project. Under Mr. Gonzales' leadership, the South American region consistently demonstrated strong performance in safety, production, and cost management

Mr. Gonzales has a Bachelor of Science degree in Chemical Engineering from the University of San

Antonio Abad in Cusco, Peru, and was a Fulbright Scholar at the New Mexico Institute of Mining and Technology, where he earned a Master of Science degree in Extractive Metallurgy.

## 1990s

**Dr. Vince Tidwell**, who in 1999 earned his doctorate in hydrology from New Mexico Tech, recently was promoted to the rank of "Distinguished Member of the Technical Staff" at Sandia National Laboratories in Albuquerque. His advisor at Tech, Dr. John Wilson, said Tidwell has made many important contributions to the science of hydrology through his field and laboratory work, and related theoretical and modeling contributions.



Dr. Tidwell's promotion to honorary rank also is based on his distinguished leadership in the development, testing,

application and promotion of the systems dynamics approach to water resources decision support, which integrates science, engineering and society.

## 2000s

**Kristi Coleman, M.D.**, who graduated with a B.S. in Biology from New Mexico Tech in 2004, is one of five new physicians at Sky Lakes Medical Center in the Klamath Falls, Ore. Coleman will be practicing family medicine at Cascades East Family Medical Center. After Tech, she attended the College of Medicine at the University of Cincinnati. Dr. Coleman began her residency program in Klamath Falls on July 1, 2012.

**Dr. Bayani Cardenas** is the recipient of the inaugural "Kohout Early Career Award" from the Hydrogeology Division of the Geological Society of America (GSA). Dr. Cardenas earned his doctorate in hydrology from New Mexico Tech in 2006. The 2012 award is for "Fundamental



# in memoriam

## people you know

advancements at the intersection between groundwater-surface water interactions, geophysics, and multi-



Meinhard Bayani Cardenas

physics modeling.”

This is a new GSA award, endowed by the estate of Francis Kohout, a pioneering hydrogeologist. The award is presented to a distinguished early career scientist for outstanding achievement in contributing to the hydrogeologic profession through original research and service, and for the demonstrated potential for continued excellence throughout their career.

Steve Ingebritsen, 2012 Hydrogeology Division Chair, said there was a

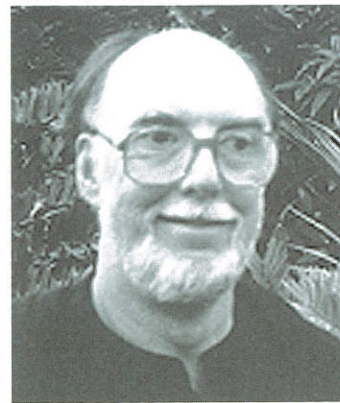
**Michael M. Schmidt**  
January 22, 1952  
August 4, 2012

Michael Minter Schmidt was born in Bad Nauheim, Germany, on Jan. 22, 1952, and passed away unexpectedly on Aug. 4, 2012, in Colorado. Michael came to America when he was three. He had disabilities, but no limitations.

Michael was able to achieve academic success, starting with a bachelor's degree in psychology from New Mexico Tech in 1973. He then earned his master's degree from New Mexico State University and a Ph.D. from the University of New Mexico in psychology. He also attended the University of Colorado Medical School and had an ABPP and ABCN specialty certification. He was an examiner for the specialty boards.

Among his many achievements, Michael published a psychology book, wrote professional articles, and developed a memory test. He had a

successful private practice, providing counseling, neuropsychological testing and forensic examinations in prisons and jails. He closed his practice in 2004.



Michael was the beloved husband of Janet Mohler. They married in 1980 and he was a loving and faithful husband. He loved animals, he cared for the wild creatures that lived in the yard, and he loved his beautiful dog, Penny. She brought him a lot of joy.

Michael was a man of great personal integrity, strongly influenced by the examples of his stepfather, Edwin Schmidt and his grandmother, Katherine Neufeld Schmidt. He was fun-loving and witty. In everything that he did, he always tried to do his absolute best.

After retirement, he developed an interest in politics, and wrote a blog for a year about media bias in the local newspaper. In June, he took over another's blog and, like Don Quixote, was tilting at the windmill of the media. He was a lover of liberty and was committed to the conservative ideals of the founding fathers.

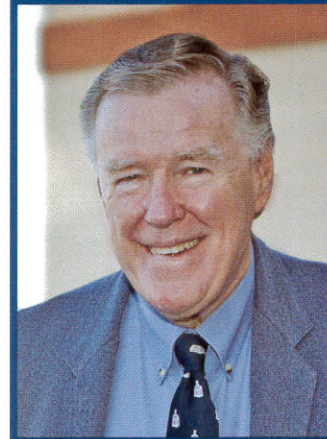
He was a beloved husband, kind, patient and caring. He was unique, being both highly educated and yet down to earth and practical. He will be missed.

Many companies offer matching gifts. Does yours? Corporate matching gifts are a great way for Tech alumni, parents, and friends to maximize personal contributions to the University and increase the impact of their gift. By taking advantage of a company's matching gift benefit, you may be able to double or even triple the amount of a contribution.

Call the Advancement Office at 575.835.5616 for more information.

# the 1889 society

think about it



John R. Dowdle

In 2010 my class celebrated its Golden Reunion during New MexicoTech's Graduation Ceremonies. Over 50 percent of the surviving members of the class attended, collected our certificates proving we had made it, and generally had a great time. Afterwards, we started thinking about what Tech had done for us and what we could do for the University.

The result was The Class of 1960 Fund. Everyone contributed and the fund is now endowed. The income will be used to provide future scholarships. However, there is always a need for more support. My own contributions were one-time gifts such as a bench for the Memorial Park. This was the first time I had participated in a group effort. It felt good.

It also started me thinking about how I could do more for the school and for future students. At my age I wanted to make a contribution that would have a greater impact and express my gratitude for what Tech has done for me as well as my pride in the school. I am in the process of revising my estate plan to do more for Tech. With the drive to celebrate Tech's 125 years of educating top grade engineers and scientists who excel in their fields, now is a great time to do it. I am still thinking through the most effective way to manage the gift, but I want to do it in the context of the 2014 drive. The whole process has been a rewarding experience.

So, if you want to have the same sensation and express your gratitude, I encourage all of you to stand back, THINK ABOUT IT, and act on it. Now is the time.

John R. Dowdle, Class of 1960

Find out more

Join the 1889 Society: Your Legacy at Tech

The 1889 Society is New Mexico Tech's program for honoring and thanking alumni and friends of Tech who have arranged a bequest or planned gift to the university. Anyone who notifies Tech that the University is named as the beneficiary of a gift through his or her estate, or through a planned gift during his or her lifetime, is automatically enrolled as a member of the Society.

Please call the Office for Advancement to discuss how you can become a member of the 1889 Society. If you have already named New Mexico Tech as a beneficiary of a bequest or planned gift, please let us know by contacting Colleen Guengerich, Director of Advancement, by email ([cguengerich@admin.nmt.edu](mailto:cguengerich@admin.nmt.edu)) or by phone (575.835.5352) so that we can welcome you as a member.

## 2012-49ers Celebration Schedule

### Thursday, October 18

**10 a.m.-5 p.m.** Sign in with the Advancement/Alumni Office, Fidel Center.

**6 p.m. Opening Reception.** Reception at the home of Dr. Lopez.  
**7-10 p.m. Old Town Bistro.** On Facebook <https://www.facebook.com/Evening—The Vigilante Band @ the Capitol Bar>



### Friday, October 19

**10 a.m.-5 p.m.** Sign in

**9 a.m. SPE Gold Rush Golf Tournament.** To sign up or RSVP, contact the Petroleum and Chemical Engineering Department at 575.835.5412.



**9 a.m. Paint the "M"** RSVP by noon, October 18 at [paintm@nmt.edu](mailto:paintm@nmt.edu).

**10 a.m.-3:30 p.m. Campus Tours.** Tours at 10, 11, 1:30 and 3:30

**11 a.m.-12 p.m. Open House: Biology Jones Annex 218**

**1 p.m.-2 p.m. Open House: Technical Communication** Dessert reception. Fitch 106/107. RSVP to [bonnekessen@nmt.edu](mailto:bonnekessen@nmt.edu)

**4:30 p.m. Black and Blue Rugby.** Pygmies VS. Alumni Ancestors.

**6 p.m. Decades Alumni Reunion.** 3rd floor Fidel.  
**Evening—The Vigilante Band @ the Capitol Bar**

### Saturday, October 20

**11 a.m. 49ers Parade.** "123 years of Miners fighting Pirates"  
 Line-up at 10 a.m., Sedillo Park To enter contact Mike Olguin, 575.835.5618 or [molguin@admin.nmt.edu](mailto:molguin@admin.nmt.edu).

**1 p.m. NMT Men's Soccer vs NMT Alumni Soccer** on the Athletic Field.

**1 p.m.-3 p.m. Alumni Association general meeting,** MSEC 103.

**6-7 p.m. Old Town Bistro. Evening—The Vigilante Band @ the Cap!**

### Sunday, October 21

**9-11 a.m.** Alumni farewell breakfast. Fidel coffee shop Information: Mike Olguin [molguin@admin.nmt.edu](mailto:molguin@admin.nmt.edu).



Years of Miners Fighting Pirates!

Sarah Hendrickson wants to make a difference – in her field, in her community and in the world.



*Sarah Hendrickson adjusts her sleeve while at work collecting samples in the Star Diamond Mine in Theunissen, South Africa. That mine was the shallowest mine in which she worked at only 560 meters deep. The deepest mine she visited was the Kloof Gold Mine at 4,300 meters deep.*

She selected hydrology as her course of study because she sees water as the most important resource. She is nearing the end of her master's program at Tech and hopes to find a doctoral program that focuses on water policy.

Her research project has taken her to South Africa both of the past two summers. She worked on a collaborative project with scientists from Tech,

Princeton University and the University of Toronto. She collected and identified organic carbon samples from the deep subsurface for the Deep Carbon Observatory, a project funded by the National Science Foundation. She visited several diamond and gold mines near Bloemfontein, including a 4,300-meter deep mine.

She examines the components of organic compounds to learn about the carbon cycle and how it relates to the strange microorganisms that thrive in an oxygen-poor environment.

Ultimately, she aims for a career with a non-governmental organization that focuses on water issues in New Mexico.

"New Mexico has such a long cultural history," she said. "A long history of managing water resources. I want to stay in New Mexico and work with agricultural, industrial and cultural groups to protect and conserve our water." Hendrickson didn't

require very long to get over culture shock upon arriving in Socorro. "About a week," she said. "I had to get used to the lack of traffic, the awesome weather and people who wave to you. ... Those are good things."

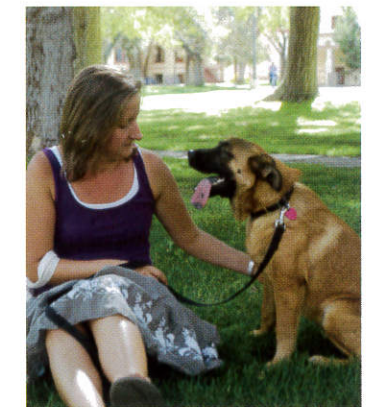
She was born and raised in New Jersey, then moved with her family to northern Virginia as a teenager. After high school, she worked for about 10 years as a bartender. During her bartending time, she became somewhat of a pool shark. She regularly competes in the Capitol Bar's pool tournament – winning it as often as not. The life of a bartender wasn't fulfilling, however.

"I felt like I wasn't making an impact," she said. "I decided I needed an education to help do something change that." Shortly after coming to Tech, she became active with the Graduate Student Association. She served six months as vice president and a year as president. She helped turn the organization around and

fix the group's finances. For her efforts, she won the 2012 Appreciation Award from the GSA.

She is also mounting a fundraising effort to help the aptly named Water Project. She is planning a 5K fun run for December 1 and hopes to raise \$6,000 to construct a well in a small village in Africa.

Her next project is to work with Tech administrators to start a community garden for students to grow their own food.



*Sarah Hendrickson with her new puppy, Darcy, who she adopted from the Socorro Animal Shelter in early September. Darcy is named for the French engineer Henry Darcy, who developed an equation that describes the flow of a fluid through a porous medium, known as Darcy's Law.*

**New Mexico Tech Performing Arts Series** 7:30 pm @ Macey Center on NM Tech campus in Socorro (575) 835-5688 • [nmtpas.org](http://nmtpas.org) • [facebook.com/NMTPAS](https://www.facebook.com/NMTPAS)

<b>Mystic India</b> Fri., Oct. 19 \$20/18/10 Visually stunning Bollywood-style dance and music.	<b>Alfred Hitchcock's The 39 Steps</b> Tues., Oct. 30 \$20/18/10 Award winning, longest running Broadway comedy thriller.	<b>Cleo Parker Robinson Dance Ensemble</b> Fri., Nov. 16 \$16/14/8 Inspired by the African-American experience.	<b>Gregory Popovich's Comedy Pet Theater</b> Tues., Nov. 27 \$20/18/10 Comedy, juggling and circus acts with rescued cats and dogs.
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