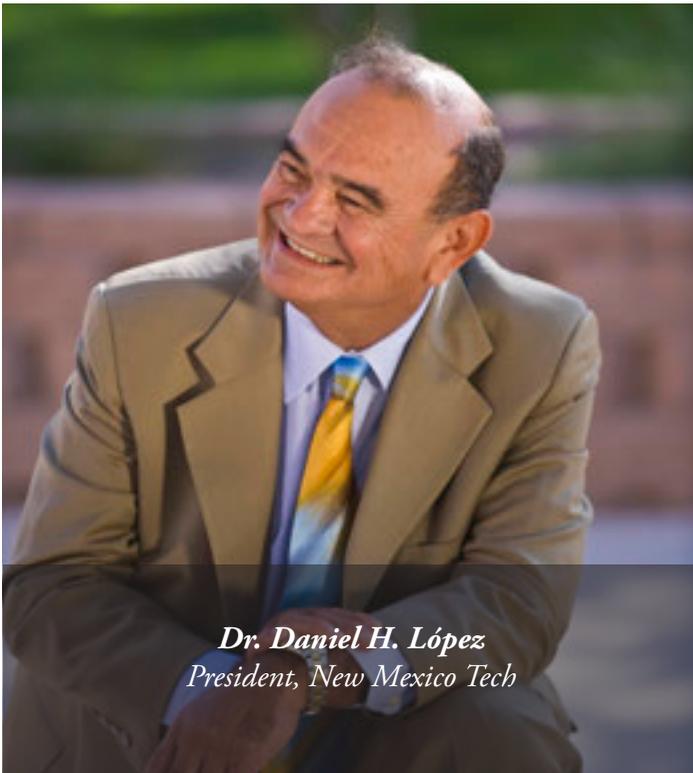


Dr. Daniel H. López is the longest serving President at the New Mexico Institute of Mining and Technology. Since his appointment as President in 1993, Dr. López has overseen significant growth at the University—in research projects, student population and overall budget. Dr. López served four years in the Air National Guard before earning three degrees from the University of New Mexico, all in political science. Prior to coming to New Mexico Tech in 1987, Dr. López held several key leadership positions in state government and education. Under Governor Toney Anaya, he served as Cabinet Secretary of the Department of Labor and Secretary of the Department of Finance and Administration. After four years as Vice President for Institutional Development at Tech, he was hired as president in 1993. Dr. López's experience with state government in Santa Fe has made him an effective champion for New Mexico Tech throughout the years. As Chair of the Council of University Presidents, he is also a spokesman for all higher education in the state.

A word from the President . . .



Dr. Daniel H. López
President, New Mexico Tech

Dear New Mexico Tech alumni,

As we wind down another school year at New Mexico Tech, we can celebrate our many successes. We are nearly finished building a new 150-bed dormitory on the south side of the field. After graduation, we'll start construction of a much-needed new \$24 million building for the New Mexico Bureau of Geology and Mineral Resources.

Over my 26 years at New Mexico Tech, I have seen a wealth of changes to our beautiful campus, our facilities and our culture. I'd like to think that the vast majority of these changes have been for the better.

New Mexico Tech continues to be a leader in science and engineering education and we are regularly recognized for our high-quality, affordable education by every method of ranking universities. We can always use your help to support the university. Our Alumni Relations Office is increasing its fund raising efforts, and I encourage you to consider contributing. New Mexico Tech provided the foundation for many successful careers and we hope our alumni are willing to give back to the university.

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,

A handwritten signature in black ink that reads "Daniel H. Lopez". The signature is written in a cursive style.

Dr. Daniel H. Lopez
President, New Mexico Tech



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Greetings!



Colleen Guengerich

Letter from the Director
Office for Advancement
 June, 2013

Greetings Techies!

Another school year has ended. More bright young men and women have graduated with excellent degrees in science and engineering from your alma mater. Consider hiring fellow alumni this spring; you know from experience how industry-ready our grads are.

This past spring the Career Services department at New Mexico Tech hosted its largest-ever Career Fair, with over 50 national companies recruiting from our fine pool of grads. Please encourage your companies to participate in the future.

The Office for Advancement and Alumni Relations held our first Alumni Fund Campaign this past fall and winter. Thanks to all of you who said “yes” when asked by our students to pledge a gift (of any size) to the Alumni Fund Campaign. We spent a week of evenings, with dozens of students, reaching out to alumni in the far reaches of the U.S. via a phon-a-thon. Students were very grateful to those of you who were kind and gracious, and were positively thrilled by some of the conversations you engaged them in. Thank you! Generous New Mexico Tech alumni raised nearly \$80,000, which goes into our Alumni Fund Campaign and will be used toward student scholarships, research, travel and equipment improvements.

Times are still difficult in higher education. Our office is doing a lot of work to prepare for major fundraising in the months and years ahead. Please consider ways that you might give back to your University. It doesn't matter *how much* you give, it just matters that you do give. Costs for tuition are increasing nationwide. Tech has been able to stave off large tuition increases due to the foresight of our administration, but our students still feel the crunch. If you question whether you should give at this time to NMT, just remember what it was like when you were a student – and how much it meant to you to avoid a student loan one semester, or to have enough funds to complete that research project you started. Each donation is greatly appreciated. Enjoy your summer!



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

TABLE OF CONTENTS

Features

From the President 2
From the Director 3
Research
MRO.....
4Where Are They Now?
Mary Torres6
How We Got Here:
Daniel Lopez..... 8
Graduation 2013 18
Faculty Spotlight
Robert Cormack.....20
Sports @ Tech..... 25
Career Services..... 28

Departments

Events.....22
Alumni Reunion
Class of 62..... 23
Class of 63.....
37People You Know..... 29
In Memoriam..... 31
The Last Word:
Zachary Lawrence
Inside back cover

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research

magdalena ridge observatory

magdalena ridge observatory helps trim odds of asteroid impact

By Thomas Guengerich

New Mexico Tech scientists provided important data to help NASA scientists at the Jet Propulsion Laboratory effectively rule out the possibility that the asteroid Apophis will impact Earth during a close flyby in 2036.

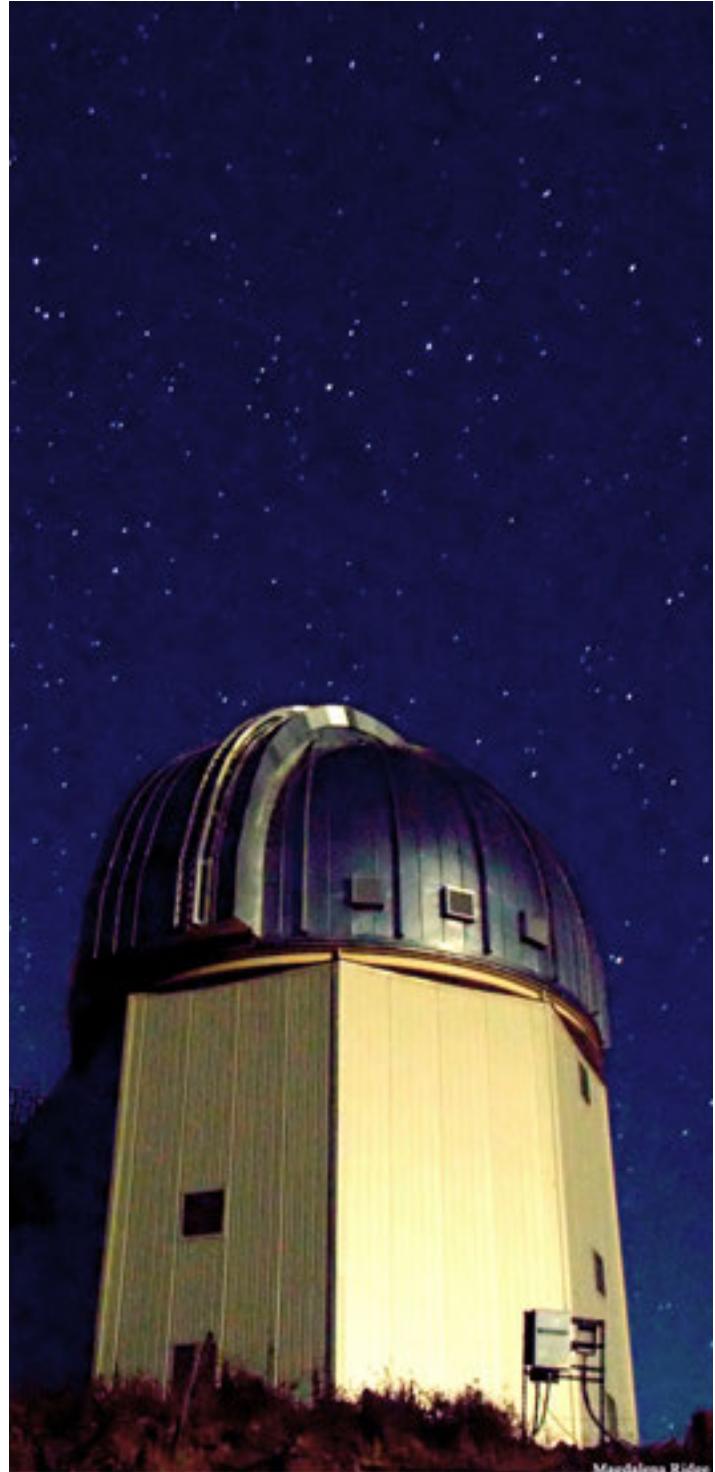
The Magdalena Ridge Observatory is one of three telescopes that provided critical data on Apophis' orbit. Coupled with observations from Hawaii, the NASA scientists can now accurately pinpoint the location of Apophis in future encounters. Due to differences in orbit, Apophis and Earth cross paths about every seven years.

Astronomers had warned for several years that Apophis had a small chance of striking Earth in 2036. Thanks in part to observations at the Magdalena Ridge Observatory at New Mexico Tech, those threats have been negated.

Discovered in 2004, the 270-meter asteroid gathered the immediate attention of space scientists and the media when initial calculations of its orbit indicated a 1-in-40 possibility of an Earth impact during a close flyby in 2029. Data discovered during a search of old astronomical images provided additional information needed to rule out the 2029 impact scenario, but a remote possibility of an impact in 2036 remained—until recently.

NASA project manager Don Yeomans credited New Mexico Tech in an official press release.

“With the new data provided by the Magdalena Ridge Observatory [New Mexico Institute of Mining and Technology] and the Pan-STARRS [Univ. of Hawaii] optical observatories, along with very recent data provided by the Goldstone Solar System Radar, we have effectively ruled out the possibility of an Earth impact by Apophis in 2036,” said Yeomans, who is the manager of NASA’s Near-Earth Object Program Office at JPL. “The impact odds as they



Magdalena Ridge Observatory at night

stand now are less than one in a million, which makes us comfortable saying we can effectively rule out an Earth impact in 2036. Our interest in asteroid Apophis will essentially be for its scientific interest for the foreseeable future.”

NASA detects and tracks asteroids and comets passing close to Earth using both ground and space-based telescopes. The Near-Earth Object Observations Program, commonly called “Spaceguard,” discovers these objects, characterizes a subset of them and plots their orbits to determine if any could be potentially hazardous to our planet.

New Mexico Tech is one of six members of Spaceguard.

Three telescopes are tasked by NASA to discover new asteroids. Tech’s 2.4-meter telescope at the Magdalena Ridge Observatory is one of the three funded telescopes that characterizes the newly-found asteroids.

“We’re honored to be one of the NASA-supported telescopes that is continually surveying the night sky,” Eileen Ryan said. “We are six observatories working together synergistically. It’s a small group and working together is fun and rewarding.”

The April 13, 2029, flyby of asteroid Apophis will be one for the record books. On that date, Apophis will become the closest flyby of an asteroid of its size when it comes no closer than 19,400

miles (31,300 kilometers) above Earth’s surface.

“But much sooner, a closer approach by a lesser-known asteroid is going to occur in the middle of next month when a 40-meter-sized asteroid, 2013 DA14, flies safely past Earth’s surface at about 17,200 miles,” said Yeomans. “With new telescopes coming online, the upgrade of existing telescopes and the continued refinement of our orbital determination process, there’s never a dull moment working on near-Earth objects.”

The Near-Earth Object Program Office at JPL manages the technical and scientific activities for NASA’s Near-Earth Object

Program of the Science Mission Directorate in Washington. JPL is a division of the California Institute of Technology in Pasadena.

As it turns out, on 15 February 2013 about 12 hours before 2013 DA 14 made its close approach, a small (about 20 meters in diameter), unrelated asteroid entered Earth’s atmosphere over Chelyabinsk, Russia with an estimated speed of 18.6 km/s (over 41,000 mph). The object exploded in an airburst and created a bright flash (it cast shadows and was brighter than the Sun) and many small meteorite fragments were expelled in a powerful shockwave over the city. Eyewitnesses also felt intense heat from the fireball. The Earth’s atmosphere fortunately absorbed most of the object’s energy, but it had a total kinetic energy equivalent to approximately 440 kilotons of TNT which is 20–30 times more energy than was released from the atomic bomb detonated at Hiroshima. The object was undetected before its atmospheric entry (it approached from the direction of the Sun so was obscured by its light), and about 1,500 people were injured seriously enough to require medical treatment.

Artist’s illustration of asteroid Apophis near Earth. The asteroid will fly extremely close to Earth in 2029, and then again in 2036, but poses no threat of hitting the planet.



where are they now?

mary torres, '83

Tech Grad Elected American Bar Association Officer

By Greg L. Gambill/ New Mexico Bar Association and Thomas Guengerich



Mary Torres

Adding yet another milestone in her continued leadership of local, state, and national bar associations, Socorro native and New Mexico Tech graduate Mary T. Torres has been elected secretary of the American Bar Association for 2014.

Her election marks the first time in its history that a Hispanic woman has served as an officer of the ABA, which is the nation's largest organization for lawyers.

"I'm really excited about this new path of service to my profession," Torres said. "We had a reception in our suite on the night I won and it was really great, and a celebration for my family, who has always been so very supportive of my endeavors.. It was really great having my family there to celebrate this with me." Torres and her family and supporters celebrated with New Mexico decorations and 20 dozen green chile rellenos made by her mother, Euna Torres of Socorro.

The ABA House of Delegates selected Torres at the ABA Midyear Meeting on February 10 in Dallas. She was accompanied by husband John Chavez, her brother Paul and his wife, Minnie, of Socorro, and her brother Tom and his wife, Nancy, who live in Fort Worth, Texas, and numerous nieces and nephews. Her family, friends, and members of the State Bar celebrated as they awaited the results of the election and after learning of her victory.

Torres was named a Tech

Scholar and earned her bachelor's in general studies at New Mexico Tech in 1983. She then taught at Socorro High School for six years before enrolling in law school at the University of New Mexico.

She credits her parents, the late Gene Torres and her mother Euna for instilling in her a desire to continue her education. Her father was a strong and avid supporter of New Mexico Tech and her brothers continue that tradition.

She said her time at Tech taught her to work hard, be prepared and be willing to ask for direction and help when necessary.

"One of my favorite professors was Dr. James Corey," Torres said of the English professor. "And Barbara Popp, who taught the education courses necessary for me to earn my teaching certificate. I also really liked and admired Dr. Bob Cormack, who taught psychology. You could go to them for anything. They truly had open door policies. I learned from



them how to be a good teacher, and to have that same open-door and approachable policy."

While a teacher at Socorro High, Torres started a mock trial team. The late District Judge Neil Mertz helped her coach the team and became her mentor. Mertz opened the courthouse to Torres and her students for practices and helped coach the team. Socorro won the state championship twice and earned trips to the national competition.

From that experience, "I got bit by the law bug," she said.

After earning her law degree at UNM School of Law in 1992, she became active with the State Bar



of New Mexico right away. She became the chair of the Young Lawyer's Division, which helped her network with other attorneys. She became president of the state bar in 2002.

Her history of activities, awards, and appointments is extensive, with a national presence that is

impressive.

Torres was the first Hispanic woman to serve as a president of any state bar association in the country when elected in 2002. She has served on boards of or been active in the UNM School of Law, the New Mexico Defense Lawyers Association, the Defense Research Institute,

and with state and national Hispanic Bar associations.

She was part of the executive council of the National Conference of Bar Presidents from 2002 to 2005, leading that organization as president in 2009 – again, as the first Latina to do so.

Her long-standing commitment to the ABA has been marked by service on numerous committees and commissions.

Currently, she is the chair of the ABA Center for Racial and Ethnic Diversity and secretary of the Minority Caucus to the House of Delegates. She was the only State Bar leader to serve on the Steering Committee for U.S. Supreme Court Justice Anthony Kennedy's *Dialogue on Freedom* program, which was created after the September 11 attacks to teach high school students the important cornerstones of our constitution: liberty, freedom, and justice.

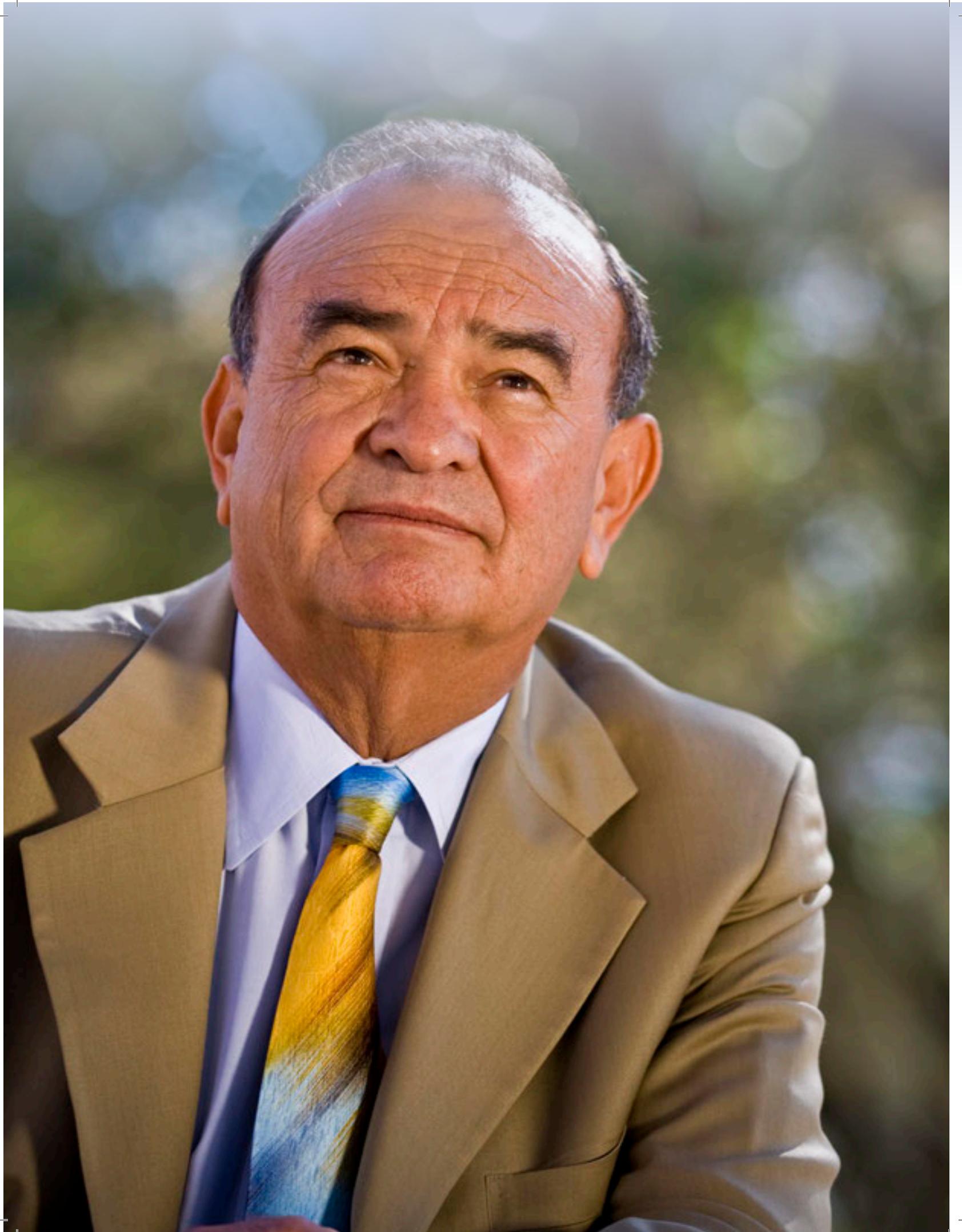
Her nomination will be confirmed at the August

ABA Annual Meeting in San Francisco. Until then, she will hold secretary-elect status while she serves on the ABA Board of Governors during 2013-14. She will begin her three-year term as secretary in August 2014.

Torres primarily handles civil litigation matters at the Beall & Biehler Law Firm in Albuquerque. She has extensive experience in civil rights, employment, insurance, premises liability, and governmental liability-related matters, with jury and bench trial experience in both state and federal courts.

Torres is married to John Chavez of Albuquerque. She has three step-children and two grandchildren.

Do you know of an outstanding Techie? have comments or suggestions? Make yourself heard! email LaVern: lrobinson@admin.nmt.edu. This is your magazine; we want to hear from you!



how we got here

the presidents' series: daniel h. lópez

the lópez presidency — a lifetime of leadership and public service

By Valerie Kimble/New Mexico Tech

Selecting Dr. Daniel H. López to serve as the 16th President of New Mexico Institute of Mining and Technology was the right choice at the right time.

Few would argue that what New Mexico Tech needed 20 years ago was an individual well-versed in both the administrative and legislative issues, with a wealth of experience in, and understanding of, the workings of state and federal government and higher education.

The fact that López has served as chief executive longer than any other president at the university speaks for itself. Presidents who serve long terms tend to have greater influence, while those with less than five years on the job have little time or opportunity to effect change.

By contrast, UNM has had seven presidents in the past 20 years, and NMSU,

currently looking for its next leader, has had nine.

There being no substitute for institutional memory, and no better teacher than experience, Dr. Daniel H. López is easily the leading higher education chief executive in New Mexico. Ironically, the reason some voiced objections to his ascension to the presidency; that is, his doctorate in political science, which some felt was a soft-science field, is what has made López one of the university's most successful and enduring leaders.

If it was López's predecessor, Dr. Laurence Lattman, who paved the way for the era of the politically-savvy president, then it was López who refined the process and built on it.

He has been the most public of the university's presidents, from chairing the Council of University Presidents, or CUP, since 1993, to being named one of New Mexico's power leaders several times, to heading the state's Distinguished Public Service Awards committee.

An additional irony: When López arrived in Socorro 26 years ago, he only intended to stay for a year, at the most. He had just completed a term as cabinet secretary for Gov. Toney Anaya, and had been asked to come to New Mexico Tech to troubleshoot at the Terminal Effects Research and Analysis group, now known as EMRTC. Instead, 2013 marks his 21st year as President.

humble beginnings

The distance from Puerto de Luna, a small farm and ranch community in eastern New Mexico, to the executive suite in Brown Hall on the New Mexico Tech campus in Socorro, is

less than 150 miles as the crow flies.

But, as gauged by time and culture, the distance between the two places is immeasurable.

The future leader was born the seventh of 12 children to a multi-generation family of farmers and ranchers on the last homestead settled in Guadalupe County, seven miles from the village of Puerto de Luna, which translates as "Gateway of the Moon."

Puerto de Luna very well could have been the moon, as far removed from conventional city life as it was. His great-grandfather and



The López family ranch in Puerto de Luna

how we got here

the presidents' series: daniel h. lópez

his grandfather were large landowners in Territorial New Mexico. In time, his father bought the property, where the family grew a range of crops and raised cattle.

Early childhood spent in a remote area spawned a certain self-sufficiency and a strong work ethic – qualities that would serve him well for a lifetime. “I performed all the chores



A view of the ranch.

a cowhand would, from branding the yearlings to feeding the cattle on the range in a snowstorm,” he said. At a very young age, he was driving a tractor and baling hay, hoeing, weeding, mending fences and feeding stock.

His mother had been a teacher who left her career to rear a large family; years later she returned to the classroom, her children grown and gone, but not before instilling in them a love and respect for education. Bookshelves

were stocked with encyclopedias and classic childhood literature.

“We all ate dinner together as a family, and then we all did our homework at the kitchen table,” López said. “And we had fun while we worked ... we didn’t know any other kind of life,” he continued. “Learning was central to our upbringing, from early on.”

He recalled listening to his oldest brother, who graduated from college in four years, talking about the excitement of college and the joy he found in learning.

Ranch work gave way to López spending the summer of his junior year in high school working for a company in Colorado Springs to save money for college. He matriculated the following year, 1964, following his brother to the University of New Mexico, where he enrolled as an engineering major before immersing himself in a more liberal arts curriculum, studying Latin, history and the arts. “I was scheduled to

graduate in 1968, but as a member of the Air National Guard, I was activated to serve during the Korean Pueblo Crisis,” López said, referring to the USS Pueblo, a technical research ship that was captured by North Korea on Jan. 23, 1968.

The break gave him a chance to spend time in Korea and Japan, before returning stateside in 1969. He spent other summers in Colorado and California, working in construction to add to his savings.

López earned his first degree in 1970, a bachelor’s in Political Science, followed by a master’s in the same discipline in 1972. In the fall of that year he was accepted to a Ph.D. program

at UCLA. After a successful term, he nonetheless decided to return to New Mexico and complete his doctorate at UNM.

Simultaneously, López went to work for the National Alliance of Businessmen in Albuquerque, before joining an advisory council on technical education. Both his master’s and Ph.D. degrees were earned while working full time.

the world of politics and policy

Starting in 1970, López got his first glimpse of the national political scene during summers spent working in Washington, D.C. He spent the first summer working as a Congressional liaison with the Small Business



Larry Lattman, Dan López, from NMT, and Richard Peck, Bobbie McBride from UNM.



President López with state Senators Ben Altamirano and Joseph Fidel

Administration, and the next two summers on two special projects for the U.S. Department of Labor, providing leadership training for minority students.

López spent nine years (1973-1982) as executive director for the New Mexico Advisory Council on Vocational-Technical Education. The Advisory Council was affiliated with UNM as its fiscal agent, with an office on campus, and where he served as Adjunct Professor of Political Science for 10 years.

He later formed a consultant company, S&L Associates, working as a consultant in human resources, planning and budgeting. His interest in politics was

reactivated in 1981, when López worked behind the scenes, successfully campaigning in races for State Auditor, Lt. Governor; and, ultimately, helping elect a New Mexico Governor.

That successful gubernatorial candidate was Democrat Toney Anaya, who in 1983 appointed López as Cabinet Secretary for the Department of Labor. In 1984, he was moved to the Department of Finance and Administration where he honed his skills in the fields of finance and human

resources until 1986.

López said, “DFA’s purpose is to make state government more efficient and responsible, and to administer laws relating to finance of state government.”

Duties of the Secretary include administering all department operations and enforcing laws for which DFA is responsible.



Dan López with Senators Bingaman and Domenici

“I was also responsible for control of a \$2.8 billion state and education budget, and a \$6 million DFA operational budget, with direct administrative responsibility for 176

employees.”

In 1987, López became Chief of Staff for the House Appropriations Committee under former State Rep. Max Coll, he of the Phil Spector-like pate of puffy white hair, who ran the show. Coll spent 24 years in the Legislature, the first term as a Republican.

“Max Coll may have come across as a singular character, but he knew his stuff,” López said, adding that working with the legislator in Santa Fe provided him with tremendous insight into the legislative-political process. Following a stint with the House Committee, López also spent several sessions as Chief of Staff for the Senate Finance Committee, chaired by the late and beloved Sen. Ben D. Altamirano. From



Dr. López with state Senators David Ulibarri and Howie Morales

how we got here

the presidents' series: daniel h. lópez

Sen. Altamirano, López learned the art of how to be effective, and when to compromise.

The Senator was a master of bringing people to consensus and achieving results. He also was a great supporter of New Mexico Tech.

López would build upon this foundation for the next quarter-century of his career.

from m-mountain to brown hall

As just plain “Dan,” López already was at least nominally acquainted with the Socorro community, having spent many holidays here as the husband of Socorro native, Linda Vigil, the second eldest of five daughters born to a well-known local family. “Linda worked for my



Linda Vigil López



Then-TERA Director Phil McLain and Dan López

oldest brother at the Equal Employment Opportunity Commission where he was initially deputy director; and, ultimately, director,” López said. “He had a party at his house and played matchmaker.”

López’s brother did a great job: The couple was married in 1975 at Our Lady of Guadalupe Parish in Albuquerque.

And now we come to August of 1987. López agreed to spend a year working to get New Mexico Tech’s largest research division back on its feet when he was hired as Deputy Director for the Terminal Effects Research and Analysis (TERA) center, the precursor to

today’s EMRTC, under Director Phil McLain, who had succeeded Lamar Kempton, the original king of the mountain.

Two years later and at the invitation of President Lattman, López was named Vice President for Institutional Development, overseeing the offices for Auxiliary Services, Human Resources, and other Institutional support units, working directly with students. As a side job, he served the Institute as its Internal Auditor and the University’s Chief Legislative Lobbyist.

When Lattman retired in 1993, the Board of Regents resisted pressure to move another physicist into the

presidential chair and chose López as the school’s next president.

The expansion and growth of New Mexico Tech’s engineering programs is one of the hallmarks of the López presidency. The Electrical Engineering Department, launched during Lattman’s tenure, reached its high-water mark during the López years. The first two master’s degrees in the program’s history were conferred in 2005.

He also expanded the University’s engineering programs toward more mainline, traditional areas, such as Environmental Engineering, Civil Engineering, Chemical Engineering and



Dan López and Senator Pete Domenici sharing a laugh

Mechanical Engineering, the last boasting the highest enrollment of any program on campus.

Civil Engineering, first offered at the N.M. School of Mines in 1913, was dropped in 1948 after conferring only five degrees in 35 years, the lowest of any program on campus. The López administration revived the program in 2003, and has since conferred degrees on 55 civil engineering graduates.

goals and grants

“One of the areas I was most involved with was to create a more stable environment for the research and educational processes to take place,” noted the president. “When I did become president, we had very little external



Dan López signing an MOU in China

public support – I knew of other opportunities, especially federally-sponsored projects.”

In 1993, New Mexico Tech had about \$20 million in federally sponsored projects. The President initiated a push in federal sponsored support, and then engaged Dr. Van Romero, V.P. for Research and Economic Development, to work on

acquiring additional federal funds, while the President concentrated on securing monies at the state level.

The result? New Mexico Tech reached its high-water mark in sponsored project research in FY10, with a total of \$101 million. Today, the university is compiling a more diversified portfolio of private- and international-funded

research to offset the drop at the federal level.

“I knew how to get money from the public sector—such as Research and Public Service Programs funds through the State of New Mexico for ICASA and the Aquifer Mapping Program through the N.M. Bureau of Geology and Mineral Resources—for state and capital funds, while Van worked to establish federal partnerships,” he said.

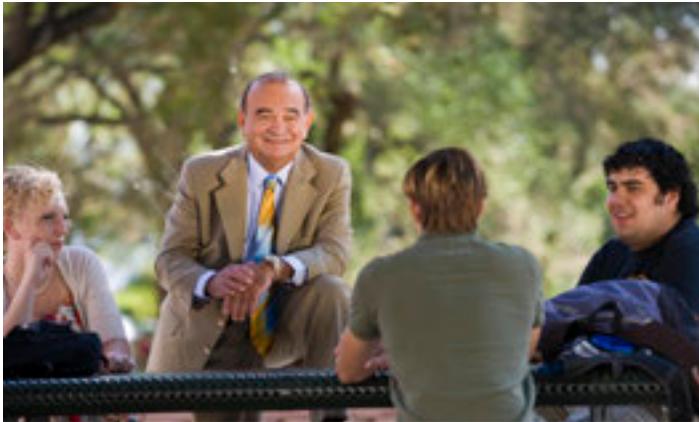
Most recently, endeavors in the international arena include securing memorandums of understanding (MOUs) with both China and India in oil and gas research (the former) and law enforcement training and cyber security research (the latter) – plus student



Dan López (front left) and Van Romero with the Chinese consortium

how we got here

the presidents' series: daniel h. lópez



*An informal meeting on campus with a group of Tech students
Heather Miller, Devin and Nick (Dallas) Chavez*

recruiting efforts in both countries.

“We’re also working with a research company attached to Venezuela’s state oil company, PDVSA,” he said, in the wake of Venezuela breaking off diplomatic relations with the U.S. in 2008.

López has traveled widely, and is a student of international relations. “We have to think globally, because the world has become very small with the Internet and other forms of communication,” he said.

The President was quick to credit the work of his four vice presidents in the success of these international partnerships and other

programs, including W. Dennis Peterson, his former Vice President for Administration and Finance, who remains a member of the N.M. Tech Research Foundation.

The President also took a direct role in the move to recruit more minority students. When López first came to N.M. Tech in the late 1980s, the university student population was less than 10 percent Hispanic. “About a dozen years ago, we set a goal to reach 25 percent Hispanic enrollment,” he said, in reaching out to minority and low-income students. By 1997, Hispanics represented 18 percent of undergraduate students. The university first reached the 25 percent mark in the

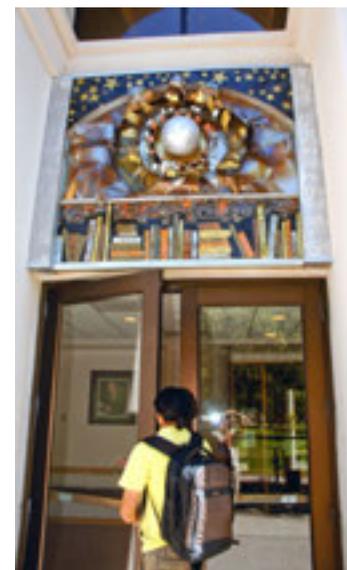
fall 2008 semester, and has been at greater than 26 percent ever since.

The school’s designation as an Hispanic Serving Institution (HSI) makes it eligible for a series of federal grant funds. Witness the \$11.5 million the university has received in Title III and Title V grant program monies, funds which have richly enhanced the university’s technological infrastructure by creating and supporting 22 Smart Classrooms and other classroom enhancements. The total return to the school will be more than \$17 million. New Mexico Tech’s reputation in explosives research and testing helped bring in state and federal funding for programs in Homeland Security, cyber security and those at the Playas Research and Training Center.

Under the President’s leadership, New Mexico Tech secured some \$200 million in capital funds for construction projects, starting with the Skeen Library. “Larry Lattman was president at the time, but it

was my job to obtain state funds,” said López. Major buildings erected directly under López include the Altamirano Apartments, the Joseph A. Fidel Student Center, the new, 150-bed residence hall scheduled to open this fall, and the Bureau of Geology and Mineral Resources (set to begin construction this summer) to name just a few; plus, millions in infrastructure upgrades.

In addition to his regular duties, the President serves on a range of public and private boards at both the state and national level, and chairs quite a few of them. Of particular note is his role in getting Congress to



Entrance to the Skeen Library



The Joseph A. Fidel Student Services Center

pass legislation earmarking \$50 million per year for the Research Partnership to Secure Energy for America (RPSEA). New Mexico Tech is one of a number of universities in the consortium conducting research in oil and gas recovery.

López is also tenured with the departments of CLASS and Management.

Finally, consider this: This year marks the 20th anniversary of World Wide

Web technology being made available on a royalty-free basis, a phenomenon that has thoroughly changed the way the world communicates, receives and processes information – the same year López assumed the presidency.

A whole lot has happened since then.

trying times, good times

Daniel López has spent 41 years of uninterrupted employment in diverse income-generating

enterprises, primarily in the public sectors of state government and higher education. Twenty-six of those years were spent at New Mexico Tech.

“What motivated me is the excitement of living and working in a learning environment and exchanging ideas and information with faculty and staff,” he said, adding: “There is something to be learned even during the most trying times.”

Indeed, the learning curve for the President spiked dramatically when the Bull morphed into a Bear. The widely watched Dow Jones Industrial Average hit its all-time high on October 9, 2007. Less than 18 months later, it had fallen more than 50 percent.

The nationwide economic spiral that began in late 2007 was on full throttle by the fall of 2008. Months before the momentous stock market crash of October 2008 and the recession that followed, New Mexico Tech had, under the President’s directive, halted all but essential travel, and

implemented budget cuts campus-wide.

While the cuts created a lot of disruption, the university was able to withstand the cuts without layoffs, which the President credited to open lines of communication and the support of faculty and staff. López felt personally responsible for “protecting the university, to help enable it to persist, even during these difficult times.”

He accedes to a certain level of reward in tackling tough problems, and the decision-making process; and credits the direction and support of the Boards of Regents he has worked with over the past 20 years.

“I have had the privilege to have worked, and continue to work, with some extraordinary individuals who have served New Mexico Tech and its constituents as Regents,” he said.

“In fact, I believe that New Mexico Tech has had the most outstanding board members of any university in New Mexico. It has been

how we got here

the presidents' series: daniel h. lópez



Dan López at the President's Club Dinner with longtime Regent Ann Murphy Daily in 2011

a personal and professional pleasure to have worked with people I respect," he said.

When he isn't meeting with his colleagues in higher education, or preparing for legislative committee meetings – in and out of regular session – it comes as no surprise to find that López enjoys relaxing with a good book. "I especially enjoy history and biographies," he said. He retains literary interests cultivated in his youth, and has read classical writings by Russian, French, Spanish and a host of Latin American authors.

While López's early education inspired his love

for the classics, history and biographies, "The fiction gives me an appreciation for the larger view of the world, and how human beings fit into the great scheme of things," he said.

The President also is credited with improving town-and-gown relations within the Socorro community and government entities as well. For instance, the annual President's Golf Tournament every September brings hundreds of golfers to Socorro for fun and prizes – all while raising critical dollars for student scholarship support.

"I started the tournament

with a goal of raising \$10,000," López said. That modest goal has been surpassed exponentially, with more than \$170,000 raised annually to support scholarships.

His mornings follow a pattern. López is an early riser, and by the time he arrives at his office in Brown Hall, he has already perused several periodicals, including *The Chronicle of Higher Education* and state and local newspapers. He then joins Lonnie Marquez, his V.P. for Finance and Administration, for coffee and discussions that range from golf to politics, putters to policy.

the lópez legacy



View from a golf cart during the President's Annual Golf Tournament.



Dan and Linda Vigil López

It may be too early to lay a mantle of legacy on the shoulders of Daniel López. At 67, he is healthy, energetic and with no immediate plans to retire. Not when there is still so much to do.

Among his goals is to leave New Mexico Tech with a legacy of giving. His goal is to have an active, ongoing successful private giving campaign. A

how we got here
the presidents' series: daniel h. lópez



Aerial view of New Mexico Tech campus, circa 2000

significant endowment was left to New Mexico Tech of a half-million dollars, among other bequests to the university, including a \$10 million gift from one of the President's closest friends, the proceeds of which should be released to the university later this year.

“We would like to cultivate other donations, and are in the process of launching a Capital Campaign, by identifying potential donors and creating a supporting database,” López said.

Already, the university has collected more than \$70,000 through a “giving campaign” aimed at alumni

and parents of current students.

The next step is to instill in the university's student body the concept of “giving back” to the school where they received a superior education at an exceptional value.

Other aspects of his legacy are more sublime. At a time when higher education more and more must make its case for additional external funding and sustained research support from the federal and private sectors, López already has laid the groundwork for his future successor. Closer to home, he has established a framework at

the administrative level that gives his cabinet members the leeway to be creative and resourceful – never forgetting that the final decision rests on his capable shoulders.

López is a keen observer of human behavior, and has an innate understanding of what makes a good leader, a good employee, a successful lobbyist – and he inspires his employees to maintain high standards, leading by example.

Those who know him personally speak of his integrity and an abiding faith in mankind, even as the world seems to unravel

some days. His deep love for and commitment to New Mexico Tech is the gold standard for higher education.

Strolling through the New Mexico Tech campus, one sees no edifices named for a Colgate, a Ford or a Lattman, and it may be that when López leaves the executive suite in Brown Hall, there may be no building named for him as well.

But rest assured, the legacy of Daniel H. López will endure.



A cardboard figure standing in for the tournament host several years ago.

Graduation

New Mexico Tech has awarded 7,556 bachelor's degrees, 2,827 master's degrees and 405 Ph.D.s



The average GPA of the Class of 2013 is 3.189. 67 percent had GPA's of 3.0 or greater. Only 11 percent had GPA's lower than 2.5

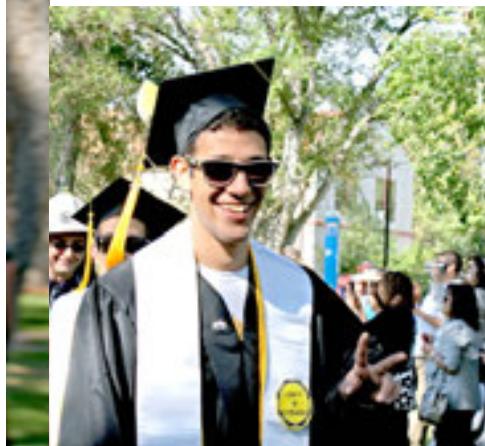


Three graduates in 2013 had a perfect 4.0

2013!



Gina Nguyen earned two bachelor's and a master's degree. Eight students received two bachelor's. Also, one family had three brothers who received degrees — the Soliman boys — Omar, Sohaib and Moaaz



faculty spotlight

dr. robert cormack

dr. robert cormack

Psychology Professor Dr. Robert Cormack is the longest-serving, full-time member of the faculty at Tech, now in his 45th year; and, oh, by the way, he's still rockin' the sandals, doesn't own a cell phone and may never.

Only a day or two before interviewing for a faculty post with one of the Claremont Colleges in California, Cormack saw a want-ad for a psychology professor at a school called New Mexico Institute of Mining and Technology, and decided to call about it.

"I called Fred Kuellmer, who was then dean of the college," said Cormack, telling the erstwhile geology professor that he had a flight layover in Albuquerque and could make himself available for an interview. Cormack recalls Kuellmer's response: "I make it a practice to never turn down a free interview."

Tech had no psychology department at the time; rather, social science courses were taught by humanities faculty or by Warren Shay, an instructor in the education department,

which the school did have.

"I was extremely impressed," said Cormack, who had already decided not to accept the job in California.

And so, with new-hires William Reeve as its chairman and Robert Cormack as its professor, New Mexico Tech launched a full-blown program in the study of psychology in 1968.

In a photo from a Porphyry yearbook from around that time, Dr. Cormack resembles a young George Carlin – clean-cut, short-haired and a bit serious . . .

fast rewind

Robert H. Cormack was born in Dayton, Ohio, to Elbert and Orpah Cormack, who moved to Cincinnati, where they reared their family in the conservative Midwestern mores of the era.

Dinner-table conversations were intellectually stimulating, often about scientific subjects or events, discussions supported by magazine subscriptions to educational and news publications of the time. For an avid reader, the icing on the cake was living three

blocks from a public library.

Cormack received his bachelor's in psychology in 1955 and a master's in general psychology a year later from the University of Cincinnati. He then spent three years in the U.S. Air Force before returning to Cincinnati for a Ph.D. in experimental psychology in 1962.

As a graduate student, Cormack taught classes in the university's night school, the equivalent of a community college. He then spent four years at Alfred University in Alfred, N.Y., before moving to Savannah, Ga., to join the psychology program at Armstrong State College.

He hated it there: "It was run like a high school." In short order, Cormack set his eyes westward.

It turned out that Tech was a good fit for Cormack, and vice versa. "I've always preferred small, less-urban types of towns," he said.

In some ways, Tech has changed dramatically since then, said Cormack, particularly as to the ratio of men to women.

"Back then, there was a huge difference in the male-to-female student ratio—now, we're moving toward parity," he said.

This difference was reflected with faculty as well. Among the few female faculty of 45 years ago were geologist Christina Balk, mathematician Merri Lomanitz and Ruth Gross in humanities.

Women, as the slogan goes, have come a long way.

psychology then and now

Physiological biology is a contemporary focus, as are behavioral and cognitive fields, Cormack said. "Most agree that the days of an overriding single theory or set of concepts to explain everything are pretty much over."

As an example, Cormack said that "whole hunks of material" of an introductory course he taught in 1968 are obsolete: "We taught what we knew, but we were wrong," he said.

"We never even dreamed of the techniques available today," said Cormack, citing the ability to scan the brain, to stimulate it, and to witness physiological changes

in real-time sequence.

His own specialty is visual perception, including depth perception, illusion, color vision and tactile and aural stimuli, for example.

Among his standout courses was one on the philosophy of science. “I enjoyed teaching that,” said Cormack, explaining that philosophy is important in studying the nature of consciousness in specific targets, as opposed to any overarching philosophical rendering of the mind. He said he enjoyed reading the works of Bertrand Russell and David Hume, whose studies examined the psychological basis of human nature.

Another subject he finds interesting is the fallibility of human memory, and the “fake” memories people have; showing, he said, “that the easiest person to fool is oneself.”

Cormack served as dean of students from 1970 – 1978 under both Stirling Colgate and Ken Ford; and often presents a “How to Study” seminar. “There seemed to be a need, so I started it on my own,” he said, adding

that Student Services then offered to sponsor the seminar, “and it took off from there.”

a multi-faceted personality

The list of courses he’s taught is divergent. One semester, an instructor in the physical recreation program quit mid-term, and Cormack volunteered to then-director Jim McCarthy to take over the man’s classes.

“It was an excuse to play racquetball during the day,” said Cormack, an “excuse” that lasted for 12 years.

He also lent his bass voice to Tech musicals in the days of the much-revered Michael Iatauro. Cormack’s first theater experience was in high school musicals, before taking on stage-hand duties for a collegiate Shakespearean play while in the military.

Travel once occupied much of his free time. Cormack recalled backpacking in northern New Mexico and southern Colorado mountains with Jim and Corale Brierley, Anton and Anita Budding, and Alan and Alice Sanford and their families.

Cormack’s own family includes his son of whom he is quite proud – Dr. Lawrence Cormack, a professor of psychology at the University of Texas at Austin.

cultural metamorphism

“I’ve been extremely fortunate to have been allowed to teach here at Tech,” Cormack said, as mid-morning moved in. “I’ve worked with some fantastic colleagues and met some very fantastic students.”

Time is transformational and, they say, dimensional, observable as cultural and social revision. For Cormack and other faculty, getting together at the Capitol Bar was a natural thing to do at the end of the day, as it was for students as well.

The first time Cormack taught a class in perception, he set up an experiment using samples of Coors and Budweiser beers, to see if students could tell the difference between the two. “I don’t do that now,” he said. “I use different brands of sodas. ... It’s not all that acceptable now to be allowing students to drink alcohol.”

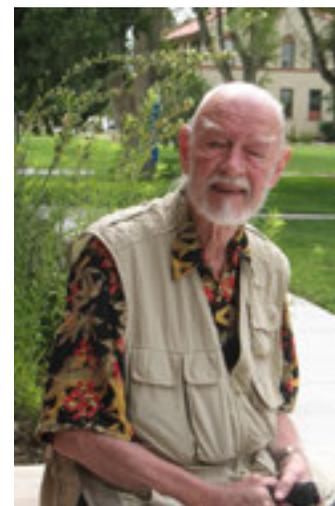
Cormack was amused when,

early in a semester and after class, a student would say to him: “My mom says to say ‘hi.’” Now, he says, he is as apt to hear a student say, “My grandmother took your class.”

Many of Cormack’s former students went on to grad school and disappeared; still others came back to campus for 49ers or commencement. “Now,” he says, “we have several students who returned as professors.”

New Mexico Tech bestowed upon Cormack the Distinguished Teaching award at commencement exercises in 2008. The nomination came from students, who thought it was long overdue.

It was.



Dr. Robert Cormack

calendar of events

alumni receptions

Check www.nmt.edu/advancement for alumni reception event details

ALUMNI RECEPTION SCHEDULE FOR 2013

Save The Date!
PRESIDENT'S GOLF TOURNAMENT
September 19-20, 2013

Contact

Theresa Kappel, Coordinator
tortiz@admin.nmt.edu
575.835.5292

JUNE

- 20 Albuquerque, NM
- 23 San Diego, CA
- 24 Ridgecrest, CA
- 25 Pomona, CA
- 26 Huntington Beach, CA

AUGUST

- 10 Elko, NV

SEPTEMBER

- ↳ Tucson, AZ
- ↳ Bethesda, MD
- Alexandria, VA
(Green chili)*
- ↳ Seattle, WA
(Green chili)*
- ↳ Los Angeles, CA
(Green chili)*
- ↳ San Francisco, CA
(Green chili)*
- ↳ Seattle, WA
(Green chili)*
- 30 New Orleans, LA (SPE)

OCTOBER

- 10 Chicago, IL
- 17-20 49ers CELEBRATION ALUMNI HOMECOMING
- ↳ Farmington

* Look for us in these areas when the Green chili has been harvested and ready to be roasted.

↳ Dates TBA.

local events

JUNE:

- June 1:**
- Very Large Array Guided Tour



- Guided Night Sky Stargazing

- June 3-9:**
- Socorro Open Golf Tournament

- June 8:**
- Elfego Baca Shoot



- June 11:**
- Summer Classes Begin

- June 16:**
- Father's Day

JULY:

- July 4:**
- 21st New Mexico Tech July 4th Celebration.
www.nmtpas.org/node/108



- July 6:**
- Very Large Array Guided Tour
 - Guided Night Sky Stargazing

AUGUST:

- August 2:**
- Summer Semester Ends!
 - Annual Chili Harvest Triathlon



- August 18:**
- Convocation



- August 19:**
- Fall Classes Begin

August 29-September 1:



- Socorro County Fair & Rodeo

SEPTEMBER:



- September 19-20:**
- 19th Annual President's Golf Tournament. www.nmt.edu/presidents-club

OCTOBER:

- October 7-13:**
- National Wildlife Refuge Week, www.friendsofthebosque.org

October 17-20:



- 49ers Celebration and Alumni Homecoming

golden reunion

class of 1962

the golden reunion for the new mexico tech class of 1962

By Valerie Kimble/New Mexico Tech

Nine members of the New Mexico Tech Class of 1962, and their spouses, had a chance to revisit their glorious youths at the Golden Reunion dinner honoring them on May 11, 2012. Solemn black-and-white yearbook photographs showed rows of men wearing white shirts, jackets and ties.

“We all had one jacket and a tie,” said Ernst, looking at the program. Quipped Banks: “Yeah, and if you look closely, all the jackets look the same!”

Robert Ernst graduated from New Mexico Tech on June 1, 1962, and married on June 3, 1962. He accepted a teaching position with Southwest Missouri State University and never left. His family includes four children, seven grandchildren and four great-grandchildren. Ernst retired on January 1, 2001, and is a widower.

After graduating from Tech,

Lester Welch went on to earn a Ph.D. in nuclear physics from Southern California, studying computer applications to physics in working for large laboratories.

He noted how many students at the time “came up through the co-op program,” which Welch called “a Godsend. ... It was a terrific experience.”

research in mining geology in volcanic studies. In 1967, he joined the office of the U.S. Geologic Survey in San Francisco, where he met his wife, Jane. Banks earned a Ph.D. in the geology of chemistry from Washington State University, and was one of the first to tour the Mount St. Helens crater rim after the explosion in 1983. He also spent time in Indonesia and South

and a grandchild.

Kenneth Allison joined a naval research group working on the Polaris Poseidon project, with the deep submergence task office. Sea Cliff and Turtle were two of the Deep Submarine Rescue Vehicles with which he worked. But it wasn't physics! Allison decided to get an advanced degree at Cal State



Our Alumni. They are all lively, still quick with the wit and charm. And every single one of them, shall we say it? Is just so darn smart!

Welch has two sons and a grandchild.

Norman Banks worked as a marine biologist for several years, and conducted

America, including a tour with the embassy in Chile. After retiring on Jan. 1, 1999, Banks became a commercial wine maker. He and Jane have two children

Fullerton; “But I'd been out (of school) too long, and I struggled to get a C,” he said. Then he heard about a series of evening classes the Navy was offering for

golden reunion

class of '62

project managers, and wound up with a master's in systems management. Tired of southern California, Allison returned to New Mexico, where he worked as project engineer in the early days of testing the Patriot missile on White Sands Missile Range, from where he retired in 1993.

Jim Luckslinger's career history resembles a travel brochure – armed with a degree in petroleum engineering from New Mexico Tech, he worked in South America, the Mideast, Arabia, Dubai and other oil-rich locales. “It’s been a good ride – and I could not have done it without the education I got here.” Luckslinger called his alma mater one of the finest institutions in the U.S., likening it to a small gem that shines brightly. He has two children and four grandchildren.

After receiving his degree in petroleum engineering, **Dave Hunter** spent five years in Hobbs on the production side of the oil business. He then went overseas, arriving in Saudi Arabia in January

1968 – “and it rained!” Hunter said. “Just like Hobbs!” His education at Tech “opened all the doors” for a career spent in the petroleum business. Hunter recalled the large support group he found at Tech, particularly among Professor Langdon Taylor and his family. “We’re here because they taught us so much,” said Hunter. He has four children and three grandchildren and lives outside Phoenix.

Doug Sprague, who said Tech had a special place in his heart: it’s where he received an excellent education, and where he met his wife, Yvonne; the couple celebrated their 50th wedding anniversary on May 5, 2012, and have three sons, five grandchildren and a couple of dogs. Sprague worked in Hobbs for Texaco, when

he tired of the sandstorms, he moved to the Mile-High City, first evaluating property mineral values for a Denver bank; then, missing the oil field, he went to work for Coors Energy Co. and later, for Whiting Petroleum. When the company went public in 2003, Sprague went to Wall Street with Yvonne. “I haven’t looked back,” he said, and was glad to walk away when he did.

The first job **Dave Fried** had after graduating from Tech with a physics degree was with the Naval Ordnance Laboratory in Corona, Calif. – where Allison and Welch also worked for a while. Fried worked with the computer systems on guided missiles in Corona; later, he studied the tactical effect of battleships and joined Naval support activities

in D.C. Work in data acquisition and analysis took him to Canada and the Netherlands. After leaving civil service, he spent eight years working for a friend and studying the effect of force tactics against outside threats. Some technologies pioneered in these fields had their roots in what Fried said he learned at NMT.

Joe Martinez was studying mathematics under the co-op program; however, before he could graduate, he was drafted. He joined the Air Force, stationed in Texas, Mississippi and Louisiana – and saw the ocean for the first time. He was trained as a communications officer. Martinez joined a small think tank in Albuquerque called the Dikewood Corp. Martinez also worked in mathematical modeling for Command Sciences and ITT Industries before retiring in 2002. More recently, he is active in community theater productions, including one-man-show performances as Einstein and Galileo. He has three children and four grandchildren.



The Class of '62

sports @ tech

rugby

the globetrotting rugby pygmies

By Dave Wheelock
NMT Club Sport Coordinator

Most *Gold Pan* readers will know that New Mexico Tech forgoes the stereotypical American university's thirst for mainstream recognition that comes with a dominant intercollegiate sports program. The spring 2012 issue of *Goldpan* featured the story of when and how New Mexico School of Mines, as it was then known, pulled back from institutionalizing varsity sports in favor of the core mission of excellence in engineering, technology, and scientific research.

Yet a university involves a community of young people who naturally crave

Notes from Ireland, 2002:

"After our last game, in Limerick, I noticed two young Irish lads asking our players for autographs. This moment pretty much sums up the international flavor of our adventure, and illustrates what good ambassadors Socorro, New Mexico Tech, and our state and country had in our players."

The new normal of stretched budgets seems to have placed overseas playing tours on the back burner, yet the positives to be gained remain an enticing goal. Readers interested in reviving the concept of a New Mexico Tech rugby tour, or a worthwhile goal for any Tech sport club, may contact the author, sport club coordinator Dave Wheelock, at (575) 835-5854, dwheelock@admin.nmt.edu.

and, provided positive guidance, can benefit from athletic competition. Thus, in addition to an active intramural sports program,

playing fields. The oldest of these sport clubs is not the football, basketball, or baseball club – it's the men's rugby



Rugby Club members in action.

Tech's Department of Physical Recreation provides funding and organizational support for 15 student-organized sport clubs that involve their members in a wide variety of sporting pursuits beyond the confines of the gymnasium and adjacent

club, which observes its 40th anniversary in 2013. According to early Pygmy Bill Tafoya, now an EMRTC engineer, "We were a bunch of little bitty guys and were always black and blue after we played." And so the team adopted black-and-blue hooped

jerseys and the descriptive moniker. Suitably the club's motto is "We do more with less." Since 1998, I have been privileged to coach the New Mexico Tech Pygmies.

Among the "Mores" the Pygmies have achieved are three overseas playing tours: Wales in 1998, Ireland in 2002, and England in 2006. International play has been a hallowed rugby tradition since the 1870's, but the first intercontinental tour came in 1905 when New Zealand sent her favorite sons on a five-month steamship cruise with matches in England, Wales, France, Ireland, and San Francisco (versus British Columbia). Rugby clubs throughout the world have emulated the concept ever since, in search of team strengthening, cultural

discovery, and indelible adventure.

Early in 1997, then-coach Herb Howell convinced the Pygmies that they should undertake their own, largely self-funded, tour – to Wales, where he had previously established rugby contacts. Spring break 1998 provided the window of opportunity, and Herb wisely called in five Tech graduates who stepped off their career paths to lend valuable experience against players who had literally grown up playing the Welsh national sport.

While planning and fundraising was still underway, Herb took up a business opportunity elsewhere, and so it was that soon after my arrival at Tech in January 1998, I found myself assigned coach of an international tour. Herb came along as manager to negotiate the route he had painstakingly plotted through the length of the British principality. A party of 28 jet-lagged New Mexicans landed in England on March 6.

At least we looked the part in our matching “New Mexico Tech Rugby - Wales 1998” water-resistant jackets and sweatpants.

There followed 10 wondrous days of everything a rugby tour is reputed to be: a modern team coach (bus) whisking us west and then north through a green land of abandoned castles and towns unlike any most of us had seen, free time spent wandering through medieval towns, and

skilled opponents who put the Pygmies to the test – then fed, refreshed, and lodged them in their homes. Above all, we experienced the incredibly tight bonding of a team coping collectively with challenges far from home.

Hundreds of copies of the official 15-page NMT Rugby tour program, replete with sponsors’ ads, introduced our team members at each stop along the way. Another of rugby’s endless traditions was the inclusion of

interesting “facts” about team members, such as the 150-pound back who “likes to lift weights but conceals the fact well.”

Socorro mayor Ravi Bhasker was prescient in his letter of introduction: *“The people of Socorro . . . hope the tour will serve as a catalyst for future visits to our area by Welsh teams.”* Two years later a team from Bethesda, Wales, did indeed tour New Mexico, setting the stage for one of the Pygmies’ most famous home victories.



A photo from an historic club tour.

And what of the rugby? We were well-beaten, 81-3, in our first match in South Wales by Neath Athletic, on a “heavy ground.” American translation: MUD!

After the breathtaking coach ride over the length of rural Wales allowed the players time to lick their wounds, the Pygmies experienced the joy of a last-gasp 22-19 victory over the North Wales Under 19 select team in Bethesda two days later, in what was our team’s first-ever floodlit match.

In between matches we were treated somewhere between royalty, the relative rugby neophytes we were, and objects of curiosity - *what, American rugby players?* Our hosts in the slate-mining district of Gwynedd were proud for us to tour the local mine and have their elementary children sing to us in the Welsh language. I stayed at the home of schoolmaster and rugby club president Cemlyn Jones and have never felt better “looked after.”

Our last match, another evening affair, was a

close 21-19 loss to nearby Pwllheli Rugby Club. After nine days and thousands of miles, the inevitable bumps, bruises, and cold germs that tend to accompany traveling shows such as ours had taken their toll. Not to mention the sheer exhaustion of trying to keep up with such spirited company. It was a very tired, very satisfied, and very changed New Mexico Tech rugby club that returned to New Mexico a couple of days later.

An important lesson

of sport is that there is always someone better. This is particularly true when taking on teams in countries where rugby is played from an early age. In advance of all nine overseas matches, the challenge was to compare strengths with the opponent’s camp and negotiate for a competitive match to bring out the best of the players’ skills. If onlookers were treated to a spectacle worthy of rehashing over a pint in the hosts’ clubhouse afterward, so much the better.

With New Mexico Tech claiming one match out of three in both Wales in 1998 and Ireland in 2002 (a last-minute 22-17 victory on the Trinity University campus in Dublin), I feel pretty good about our on-field success. Each of these tours, plus the three-game England trip in 2006, featured one lopsided loss, but otherwise the Pygmies have run close all the way to the end. Those fans in the clubhouse seemed well enough impressed as well.



Rugby players navigate the rocky walkways in Ireland.

career services

hire a new mexico tech student!

Students at New Mexico Tech are some of the very best! Prepared for the job market early on by taking advantage of internships and cooperative opportunities, their skill levels are above all others.

The Office of Career Services (part of Student Services) prides itself on assisting current and alumni students

with locating appropriate internships and employment during enrollment and after graduation. New Mexico Tech students and alumni are encouraged to contact Career Services for assistance in résumé reviews, mock interviews and current opportunities

As an added bonus for the Career Fair attendees, the 19th annual President's Golf Tournament will be September 19 and 20. Come visit our students, play golf and stay!

available. Students and alumni interested in employment are invited to view our current opportunities at www.nmt.edu/career-services. Companies with available internships or employment opportunities are encouraged to contact Career Services at (575)

835-5060 or by email at careerservices@admin.nmt.edu. Career Services is hosting an inaugural Open House event for all employers, companies and recruiters on June 19th from 9 a.m. to 3 p.m. Those representatives attending will have the chance to meet with faculty, visit campus labs and enjoy lunch on us! (see text box) The Open House is free; however, an RSVP is required. Contact the Career Services to reserve your spot today.



A recent Career Fair exchange

people you know

1970s

Randall D. Johnson (*BS Mineral Engineering*) has joined General Moly Inc., a U.S.-based molybdenum mineral development, exploration and mining company, as Mine Manager of the Mt. Hope project. Johnson earned his bachelor's degree in mining engineering from New Mexico Tech in 1971.

He has 38 years of mining industry experience in coal and hard rock mining with Santa Fe Pacific Mining, North American Coal Corporation, TXU/Luminant Mining; and, most recently, Westmoreland Coal Company.

Johnson previously served as general manager for Westmoreland Coal Co., overseeing all operations, including production, training and maintenance functions for an annual five-million-ton open pit, truck/shovel coal mining operation. In that role, he implemented maintenance programs to increase equipment availability; executed processes to

improve production; and was responsible for all aspects of drilling and blasting operations.

1980s

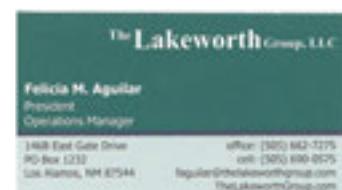
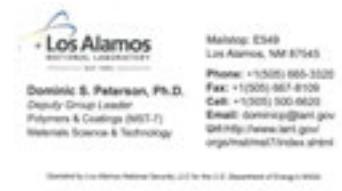
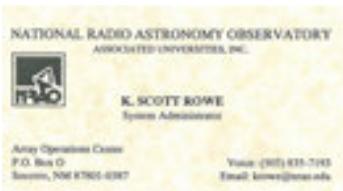
Bryan Ulrich (*BS Mining Engineering '83/ Geological Engineering '85*) resides with his wife Ellen (McKenzie) Ulrich (*BS Gen. Studies '84*) in Elko, Nevada and Denver, Colorado.

Bryan continues his work at Knight Piésold as Senior Vice President, managing, directing and overseeing designs of mine waste and heap leach facilities in the US and elsewhere.

Both Bryan and Ellen are trying to spend more time in their mountain cabin and Red Feather Lakes, Colorado.

Bryan has recently published a long short story in the style of Gonzo journalism.

"If you do not shy away from the use of colorful language used completely in context, the publication may be found at: <https://www.smashwords.com/books/view/283336>





I'm told by my harshest critics that it is a hoot."

Rick Clyne
(BS Technical Communication, '86)
 recently had his debut novel, *Point of Presence*, published by Flat Third Press (www.FlatThirdPress.com). The novel, an internet thriller, is partially based in Socorro and contains lots of gratuitous, over-the-top action sequences that take place around town. He thinks you should buy the book from your favorite ebook retailer, read it, say nice things about it on social media, and then pressure all your friends to do likewise.

Rick has worked in technical and marketing communications throughout his career. He is currently the Director of Marketing Communications for GHX, a healthcare supply chain automation company based in Louisville, Colorado.

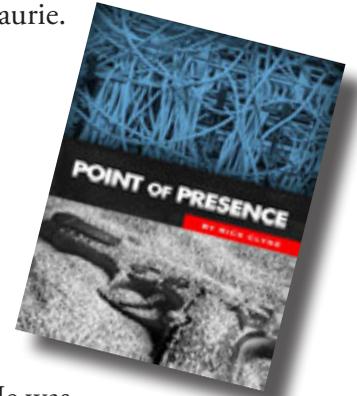
In the early 1990s, while working full time, Rick received a Masters in History from the

University of Colorado. Boy, he had a lot of energy back then. He intended to continue on and get a Ph.D. in History, but after six weeks in a doctoral program he experienced a rare moment of clarity and dropped out.

His Masters thesis was picked up and published in 1999 under the title *Coal People: Life in Southern Colorado's Company Towns, 1890-1930*. The book won the Leroy R. Hafen award in 2001, which is given by History Colorado to the best monograph published over a two-year period. *Coal People* has been one of the most popular titles in History Colorado's catalog over the past 13 years and still sells well today, although Rick doesn't get to see any money from it, because... you know...that's just the way academic publishing works. No matter, he's still awfully proud of himself.

Rick was born and raised on Long Island and has called the West home since arriving at NMT in 1982. He currently lives

in Denver with his wife Laurie.



He was serious about you pressuring your friends to buy *Point of Presence*. Please don't let him down.

1990s
Rebecca Knight
(MS Geophysics '96)
 Last year Rebecca was a science teacher at a small private school in Appleton, WI. This year she is an assistant professor, UW Extension, 4-H Youth Development Agent, Langlade County, WI; becky.knight@ces.uwex.edu [website: langlade.uwex.edu](http://website:langlade.uwex.edu)

2000s
Jasmine Olivas
(BS '09)
 Dr. of Veterinary Medicine degree on May 16, 2013 from Colorado State University.

in memoriam

Richard (Dick) C. Anderson

1928—2012

Dick Anderson arrived at New Mexico Institute of Mining and Technology in 1944 when it was known as the “School of Mines.” In 1945 he enlisted in the U.S. Army for two years and finished his time overseas in Italy. He returned to New Mexico School of Mines in 1947 to complete his bachelor’s in mining engineering.

After a year at Allis-Chalmers in Milwaukee, Wisc., he returned to study for a master’s degree in geophysics. During that time he was one of eight students in the U.S. chosen by Socony-Vacuum (now Exxon) to work in Venezuela for the summer. That launched his oil exploration career which sent him all over the world, including assignments in Australia, Indonesia, Lebanon, England, and Singapore. He was managing director of Geophysical Service Inc. in London for Europe, Middle East and Africa. Later he became CEO

of Sessonograph Service Corp. in Tulsa, Okla.

After a brief retirement he was President of Fairfield Industries.

He was 84 and lived in Houston, Texas. He is survived by his wife, four children and eight grandchildren.

Dr. Ralph Ball

1925—2012



Longtime Professor of Mathematics, Dr. Ralph Ball died on Aug. 2, 2012, in the

Socorro home he shared with his daughter and her husband. He was 86.

Dr. Ball taught at New Mexico Tech from 1966 to his retirement in 1987.

Ralph Wayne Ball was born October 14, 1925, in Los Angeles to George Norman and Mary Searcy Ball.

Ralph was raised in a world of movies, music and theater, and delighted in its magic. He graduated from California’s Pomona

College with a degree in music. While in college, he married Onetha Phelps. He spent the following years teaching music and driver’s education, before moving to Las Cruces, where he earned his Ph.D. in mathematics from New Mexico State University.

Ball’s first post-graduate position was with Appalachian State Teachers College (now Appalachian State University) in Boone, N.C. Ralph and Onetha moved to Tech and Socorro in 1966.

Dr. Ball served as department chair for eight or nine years, and worked with fellow faculty to revamp the department’s curriculum, reinforcing its strengths. He advocated for more advanced classes.



With his love for musicals, Ball naturally gravitated to Tech’s music program and played violin for theatrical productions.

In 1973, Ball married Eunice Lober, with whom

he spent the majority of his Socorro years. Ball retired from New Mexico Tech in 1987 and he and his wife moved to Washington state. In his later years, Ball’s health began to fail, and, following the death of his wife, Ralph returned to Socorro, eventually moving in with his daughter and son-in-law, living out his final years among family.

Robert Bolton

Robert Bolton had a heart attack Friday, February 8, and could not be resuscitated. Paraphrasing his friend Mark Lund, “He was at work, talking with some maintenance guys, and suddenly collapsed. He was unconscious as soon as he hit the ground. An ambulance arrived very quickly, and he was taken to the hospital, but it was no go.”

Robert lived in Houston, Texas.

As a graduate student, Robert would save money all year to spend on mineral samples at the Tucson Gem and Mineral Show—

in memoriam

sometimes sleeping in his truck to save the cost of a motel. He had collected guns, but sold them all in the early nineties.

Robert had a Bachelor of Science degree in Geology (Class of 1988) and a Master of Science degree in Geology from New Mexico Institute of Mining and Technology (class of 1993). He is survived by several close family members.

Obituary

"In loving memory of a wonderful person. We will love you..."

Robert Graham Gantz Bolton passed away on February 8, 2013. Robert is survived by his mother, Virginia Graham Bolton and sister, Cheryl Nastasio. Robert was predeceased by his beloved fiancée Beverly Ann Mashayethi. Memorial services will be at the Chapel of Eternal Peace located at 2454 S. Dairy Ashford, Houston, TX 77077.

Henry Andrew Grebe 1955—2012

H. Andrew "Andy" Grebe, age 57 of Houston, Texas, died October 22, 2012.

Andrew was born August 6, 1955 in Krugersdorp, South Africa. He was a 1972 graduate of General Smuts High School in Vereeniging, South Africa.



Andy Grebe

He served in the South African military, 1 Field Ambulance Battalion, Durban, South Africa and in 1989 was awarded a general service medal for operational service inside South Africa. Andrew became a U.S. citizen on March 21, 2003 of which he was very proud. Andrew obtained a master's in Metallurgy in 1983 and was a Rotary Foundation Scholar at New Mexico Tech. In 1996, he earned his Ph.D. in Materials Engineering, also at Tech. He served as an adjunct professor at Texas A&M-Galveston, in the Maritime Systems Engineering Department, teaching Materials Engineering at the sophomore level. He worked and consulted in the areas of downhole drilling equipment,

tubular metallurgy, ceramics, powder metallurgy, inspection, standardization and in quality management. His research interest focused on the dynamic behavior of materials.

Grebe served and worked on multiple committees of ASM, ASTM, API, ASQ, AWS, NACE, the Tube and Pipe Association, and the National Association of Steel Pipe Distributors. Andrew was an avid rugby fan and supported the game and the Springboks his whole life. Andrew is survived by his wife and true love of 40 years Sandra J. Grebe, two beautiful daughters, Morgan R. Grebe and Stacey C. Grebe, and a brother, Leonard C. Grebe, and a sister, Tonsia L. Keytel.

Sally Haigler

Sally Haigler, long time resident of Socorro and beloved teacher by many, passed away Saturday, Aug. 4, at her daughter's home surrounded by her loving family. She was 80. She is survived by her daughter, Crystal, 4 grandchildren Celestia, Sebastian,

Tabytha, and Garner, and all the wonderful people she taught over the years. A Celebration of Life will be held August 21 at the Opera House at 6 p.m. To view information or leave condolence, please visit www.baldwinfairchild.com/obituaries.

James G. Jensen 1949—2012



Jim Jensen

Registered Professional Geologist Jim Jensen passed away December 1, 2012 in Sacramento, California. Jim is survived by son Phil, siblings Chris, Tom, Kathy, and David, two grandsons, nieces and nephews, and a wide friend-family base. In lieu of flowers, gifts in Jim's name can be made to the Sacramento Valley Rugby Foundation by accessing www.svrf.org.

Originally from the Los Angeles area, Jim's interest

in rocks goes back to the time he could first walk. Always a nature lover and rock-hound, spelunker, trailblazer, animal lover, hiker and camper, he had a curiosity that never wavered.

Jim graduated from New Mexico Tech with a BS in Geology—1972.

Over the last 40 years Jim made his footprint in the world of applied sciences and engineering. He was considered by many an expert in the fields of geology, petroleum, hydrogeology, environmental and geotechnical engineering. Over the last few years he became immersed in research as a planetary geologist and the exploration and discovery of outer space resources. He was particularly fascinated with the Moon, Mars, Venus, asteroids and comets.

Jim had a passion for mentoring and teaching young minds. He volunteered as a teacher of the Applied Sciences at the K-6 grade levels

and at Sacramento State's Continuing Education Program.

Many were eager to join Jim on the geologic and volcanologic field trips he organized and co-led around the Sierra Nevada, including the Tahoe basin, the Cascades, Iceland and Mexico. He led like-minded scientists and educators from all over the world that were eager to explore and discover alongside him while they enjoyed his unique, dry sense of humor.

Jim took every opportunity to be a mentor; he was a master of engaging people and infusing minds, young and old, with his many areas of knowledge.

In addition, Jim has long been involved in the sport of rugby, after playing for many years, he continued to manage and coach teams and players in the Sacramento Valley, nursing their wounds and making sure they were staying hydrated while cheering on the team. He liked to talk about rocks to his often

bemused rugby friends. He formed decades-long friendships with rugby players from all over the world. There were few that weren't touched by the kindness, passion, teachings, curiosity and antics of Jim Jensen.

Many will recall deep conversations with Jim revolving around music. He was a die-hard fan of Neil Young, adopting a line from one of Neil's songs as his often repeated motto: "It's better to burn out than to fade away." Anyone that knew Jim would likely agree that that is how he lived out his life. He never gave up on anyone or any endeavor; he always gave his best and never anything less.

Jim's biggest pride was his only son, Phillip Jensen, of Midland, Texas and his two grandsons, Ethan and Troy. As the big brother, JimBob played protector and godfather over his siblings Chris, Tom, Kathy and David, nephews Wesley and Daniel, and nieces Kimberly and Katlyn. He was highly admired and deeply

loved by all of his family including his cousins Mike, Sue, Bob and Joe, their spouses, children and grandchildren and bother-in-law John Rowley. Whether you called him JimBob, Uncle Freaky, Frodo, Stanley, JJ, Jimmy or Jim, he was one of a kind. He was compassionate, kind, smart, thoughtful, passionate and funny, whether appropriately or not, and was a friend to all. He will be sorely missed by family, friends, cats and other stray creatures that always seemed to find him.

JIM JENSEN—ROCK ON!!!

K. D. Lankford, Jr.
1920—2012



K. D. Lankford, Jr.

King David Lankford, Jr. was born December 9, 1920 in Dean, Louisiana

in memoriam

to King David Lankford, Sr. and Clara Cox Lankford. He grew up in Haile, Louisiana in Union Parish. K.D. passed away on Sunday, July 22, 2012 in Shreveport, Louisiana. A celebration service was held in the chapel of First Baptist Church, Shreveport, on Tuesday, July 24, 2012 at 11:00 a.m. The family received friends in the church parlor following the service.

K. D. graduated from the New Mexico School of Mines in 1942 with a B.S. in Geological Engineering. He served in the U. S. Army Air Corps from 1942 -1946 and was discharged with the rank of Major. He married Lee Jarmon in 1947 and together they enjoyed forty-seven wonderful years. K.D. had so many wonderful memories of their trips abroad and around the world.

After working for several different oil companies, K. D. moved to Shreveport in 1956 to become an independent Petroleum Geologist. He enjoyed

hunting and fishing with friends and especially with his three grandsons. He greatly loved his timberland and roots in Union Parish, and he spent many happy days there visiting with family and friends and driving over beloved country roads.

K.D. was a member of First Baptist Church of Shreveport for over fifty years. He was also a member of the Petroleum Club. He was predeceased by his parents, his beloved wife, Lee, and his sister and best friend, Leone Greene.

Left to cherish his memory are his son David Lankford and wife Barbara, his daughter, Carol Wedeberg and husband Jim, grandsons David Wedeberg and wife Allison, Andrew Wedeberg and wife Bethia, and Brad Wedeberg and wife Lee. He is also survived by his great grandchildren Lucy, Anna, Drew, Mac and William Wedeberg, brother-in-law, John D. Greene, sister-in-law, Elaine Jarmon, niece Stephanie Daniels and husband Noel, nephew

Mark Donnell, and great nieces Amy Courtney and Allison Ott.

Honoring K. D. as pallbearers will be his three grandsons, Dr. Robert Barrett, Noel Daniels, and Bill Fleming. Honorary pallbearers include Martin McCoy, Bill Nance, and his good friends at "The Round Table" at the Petroleum Club, Gayle Hamilton, Wayne Simpson, Henry Coutret, Lane Sartor, Ralph Richardson, and James Agent.

In lieu of flowers, please send memorials to First Baptist Church of Shreveport, the Gideon Society, or the organization of your choice.

Starr Lanphere 1941—2012



Starr Lanphere passed away May 25, 2012 at 70 years old. He was born on October 12, 1941 in Arcata, California. Starr attended Humboldt State College, spent four years in the US Air Force and then attended

New Mexico Institute of Mining and Technology, graduating with a BS in Geology, 1971.

Starr worked as an exploration Geologist for Kerr McGee in uranium and then for Santa Fe Energy Company in oil and gas. He also did stints as a stevedore, school bus driver, auto mechanic, a country store post office worker, store clerk and store owner.

Starr spent the last 27 years in Parks, AZ. He was actively involved in his community as a volunteer firefighter, served on his local fire board and also as a district representative to the state fire association. He served on an advisory board for Friends of the Dunes, a conservation organization focused on preserving the wildness and wildlife of the dunes in the Humboldt Bay area.

In recent years, Starr volunteered with the Geology trips of Hofstra University to the western states and the Rocky Mountains. He also enjoyed traveling

to Nevada Northern Railway for activities like engineering a steam engine, riding their ghost train and attending adult rail camp for a week to see how railroading was done 100 years ago.

Starr is survived by his wife, Lois, two daughters, Gwen (husband Norman) and Tania and a well-loved granddaughter, Zoe.

**Lawrence Eugene Nagle,
USAR
1914—2013**



Larry Nagle

Services for LTC Lawrence Eugene Nagle, 98, registered petroleum engineer, were held at St. Luke's Episcopal Church. Military honors followed in the Garden at St. Luke's.

Lawrence was born in Buffalo, NY, on May,

28, 1914, to Edward and Amanda (Brodd) Nagle. He married Bernice Schmidt Nagle on October 12, 1941, in Victoria, TX. They had two boys, both of which died soon after birth. They then had born to them a daughter, Rosemary, of this city. After the death of his wife in 1995, he then married Joy Cannady Nagle on October 24, 1998, in Stephenville, TX.

His earlier years were spent being very active in Boy Scouts. It was in Depression that he got his higher education. Firstly, at Canicious College in Buffalo, then on to the New Mexico School of Mines where he was awarded his degree as a Petroleum Engineer. When WWII started, he was in the Army Reserves and was soon selected to go to O.C.S. On completion, he was in the group of troops which were sent out to North Africa at the start of the war. In total he spent five years active duty with the Army followed by 25 years in the Army Reserve. During that time, he received a

special commendation from the military for his involvement in his primary work in water supply for the city of Naples. When the war was over, he was needed to organize and engineer the rebuilding of the Railroad Yards in Rosenberg, Germany. This extended his return to the states by five very long months. He remained active with the military and served numerous appointments in the R.O.A. organization. He eventually became head of their Retirement Committee working towards obtaining assistance for families of retired military. He retired from the Army as a Lt. Colonel.

Along with his military career, he worked primarily in the Oil Industry as an engineer, his career taking him all over Texas, Louisiana and on into Canada. He eventually ended his work record as being employed by Trunkline Gas Co., retiring at age 63.

Nagle devoted a great deal of his time with service to the Lutheran Church. Lawrence ran the bread pantry at Redeemer

Lutheran in Houston for three years, and provided transportation for visiting Lutheran Dignitaries. In the later years of his life, he and his wife traveled and enjoyed retirement.

Survivors include wife, Joy Nagle of Stephenville; daughter, Rosemary Nagle of Stephenville; children, Jordan Cannady and wife, Irene, of Rhode Island, Brian Cannady and wife, Susan, Mary Cannady, and Bruce Hubrecht, Steve and wife, Vicci Cannady, and Chris Cannady; and grandchildren, John Robert, Brian A., and Donnie, in California, and Sarah in Stephenville, as well as three sisters-in-law, Caroll Crouch of Victoria, Bernice Schmidt of Fredericksburg, and Lola Malone of Spokane, WA. Included must be added his faithful Golden Lab, Marilyn, his good companion for three years and his most special friends Hart and Pal Gleason in Telluride, CO.

Editors Note:
Larry, Joy, Hart and Pal shared their stories of the good 'ole days at Tech with Gold Pan in the Fall, 2011 issue.

WANTED

DEAD OR ALIVE!

No Questions Asked!



Missing Painting
Old Prospector

In preparation for New Mexico Tech's 125th anniversary in 2014, the library is trying to locate NMT's painting entitled "Old Prospector" by Branche Grant. This large, 4-feet by 5-feet, oil painting was a lasting symbol of New Mexico Tech and long played an important roll in the campus' 49ers celebration. The painting disappeared from the Sub in the 1970's along with 4 other oil paintings and a color print, which used to hang together in the Driscoll Hall Lounge. Although probably removed as part of a St. Pat's Day or a 49ers prank, these paintings have never been returned to the campus. The missing WPA oil paintings are:

- "Old Prospector"* by Blanche Grant
- "Autumn Morning"* by Sheldon Parsons
- "Winter Scene"* by Sheldon Parsons
- "Landscape"* by Sheldon Parsons
- "Adobe House"* by Fremont Ellis

In addition, the campus is missing a WPA colored print by Manville Chapman of a Native American. If you know the whereabouts of these works of art, or you happen to have good photographs of any of these works (photos are needed for positive identification of the missing art), please contact Lisa Beinhoff at lbeinhoff@admin.nmt.edu, or at **575-835-5030**. It would be really great to bring this old miner and his friends back home to New Mexico Tech for our anniversary celebration.

golden reunion

class of 1963

golden reunion dinner
honoring class of 1963
highlights diverse careers

New Mexico Tech's President, and all five members of its Board of Regents, were among those on hand to honor five members of the Class of 1963 at a special Golden Reunion Dinner in the Macey Center Copper Room on Friday, May 10.

In the spotlight and sharing their stories were James Clark and wife, Mary Lou; Vernon Hodge and wife, Barbara; Robert John Rezba, Ronald Roman and Sue Hunter; and Paul Seagraves and his brother and sister-in-law, Clarence and Mary Ann Seagraves.

Contrasting the "young, curious and creative minds" of the Class of 2013 with their counterparts from a half-century past, Office for Advancement Director Colleen Guengerich noted, "You represent the end result, the products of a New Mexico Tech education. We welcome



Alumni James Clark, Robert John Rezba, Paul Seagraves, Ronald Roman, Vernon Hodge

you, and thank you for returning to the school that made you who you are."

After leaving New Mexico Tech with a B.S. in Mathematics, **James Clark** moved to Idaho Falls to work for the National Reactor Testing Station, and he also took night courses toward an M.S. degree in Applied Mathematics.

He eventually secured a position with Los Alamos National Laboratory, where he spent the next 10 years.



James Clark

In 1973, Clark joined Controlled Data Corp., one of the nation's supercomputer builders, before heading to Australia, New Zealand and eventually to Papua New Guinea, where he worked for a copper mining company. For the next 20 years, Clark moved back and forth between Singapore and Japan with a facility owned by Bell Laboratories. Today, the Clarks are permanent residents of Australia, allowing them "to come and go freely," James said. He and his wife have four children and three grandchildren.

Robert John Rezba spent the bulk of his career in the Seattle/Tacoma areas after leaving Tech with a bachelor's in chemistry.

His first job was with a protein adhesives laboratory

in the Pacific Northwest. "But I got tired of the lab, and worked to get my MBA at night," he said.



Robert John Rezba

He worked as the assistant to the western regional manager for Ryco Chemical, managing 13 plants and overseeing all sales and administrative functions. Rezba was the company's national sales manager when the business closed. Rezba combined his experience in both chemistry and business when he set off on his own, selling water treatment chemicals and, later, polyurethane foam. "It was the most fun I ever had, and I made the most

money I ever did,” said Rezba, who is now retired.

Ron Roman remained at New Mexico Tech longer than his classmates. After receiving his bachelor's in metallurgical engineering, he remained in Socorro another 15 months to earn a master's in the program. In 1966, Roman received his Ph.D. in metallurgy from the Colorado School of Mines, and went to work for Union Carbide in South Africa. Roman left Union Carbide and teamed up with a friend to form their own business, in time operating 11 plants in three countries. The United States Agency for International Development (USAID) had established a metallurgy program at the University of Zimbabwe.



Ronald Roman

For the past 22 years, he has worked across the globe, including Chile,

Peru, Bolivia, Mexico and Canada. A career highlight was designing the largest uranium-processing plant in the world, now operated by the French government.

“I’m the party crasher here,” was how **Vernon Hodge** introduced himself, explaining that



Vernon Hodge

he did not graduate in June as the others did, instead completing degree requirements for a bachelor's in physics in August of 1963.

Hodge, like Clark, worked for the National Reactor Testing Station, operating its materials testing reactor. Adjusting to the high desert of eastern Idaho was a particular challenge for Hodge.

“In Idaho Falls, it snows from October to June,” he said. “Meanwhile, I’m from Hobbs, and had only seen two snowfalls in my entire life.”

After receiving a Ph.D. in physics from the University of Idaho, Hodge worked on a project to regulate the public health and safety in transporting radioactive materials, and changed his field to nuclear reactor safety. He then went to work for the National Regulatory Commission, where he was involved with the effort to regulate the licenses of plants and public vendors that supply reactor parts. He retired after 34 years in Martinsburg, W.Va. Today, he and Barbara live in a “mineral haven and retirement community” in Pennsylvania, Vernon said.

Paul Seagraves matriculated as a physics major in the school's cooperative work program, which was very popular 50 years ago. After leaving Socorro, Seagraves moved to British Columbia, where he earned a Ph.D. in theoretical physics. However, because his work involved work in the petroleum field, Seagraves returned to Tech and took petroleum engineering courses in the fall of 1968, before finding a job with the computing program at the University of Mexico.

“When the army invaded the university, I lost my job,” he said.



Paul Seagraves

Seagraves's “ultimate profession” was as a computer programmer. He worked in Vancouver for three years, and then with astronomy research for Sacramento Peak in Hawaii and Boulder, Colo., where he has lived since 1985.

Fellow classmate Hodge recalled seeing Seagraves in a freshman class in quantitative analysis: “Paul had this gigantic slide rule, and we were given a problem in class, and he used his slide rule to solve it,” Hodge said. “But the teacher said we had to use logarithmic tables, and then Paul got the answer wrong.”

Like everyone says: “Techies rule” – slide rules aside!

the last word

zachary lawrence

meet new mexico tech student zachary lawrence

New Mexico Tech junior Zachary Lawrence's overriding interest in science began in elementary school, but it wasn't until he dug into Tech's curriculum that he found his niche.



Zachary Lawrence

Lawrence, a 21-year-old Tech junior, had no prior experience in programming until he took a computer science course at Tech and discovered his forte – in-depth data analysis and

numerical modeling. Now, he's working on a research project with Drs. Ken Minschwaner and Gloria Manning in the Physics Department, developing a microwave limb-sounder and using data collected by NASA's Aura Satellite for the Jet Propulsion Laboratory in California.

The project combines Lawrence's interests in computational mathematics and atmospheric physics. "My research involves in-depth data analysis/developing numerical models to assess data collected by NASA's satellite to . . . assess strengths and weaknesses of technology designed to protect Earth's atmosphere from harmful ultraviolet or other radiation," Lawrence said. "The

ozone is really critical in terms of blocking ultraviolet radiation," he continued, adding that holes, or breaks, in the ozone develop during the winter seasons in both hemispheres.

Lawrence plans to track data collected by the satellite that relates to polar winters on the North and South Poles. He will then compare the physical data with established climate models to assess what is, and what isn't, effective in protecting the planet from harmful radiation.

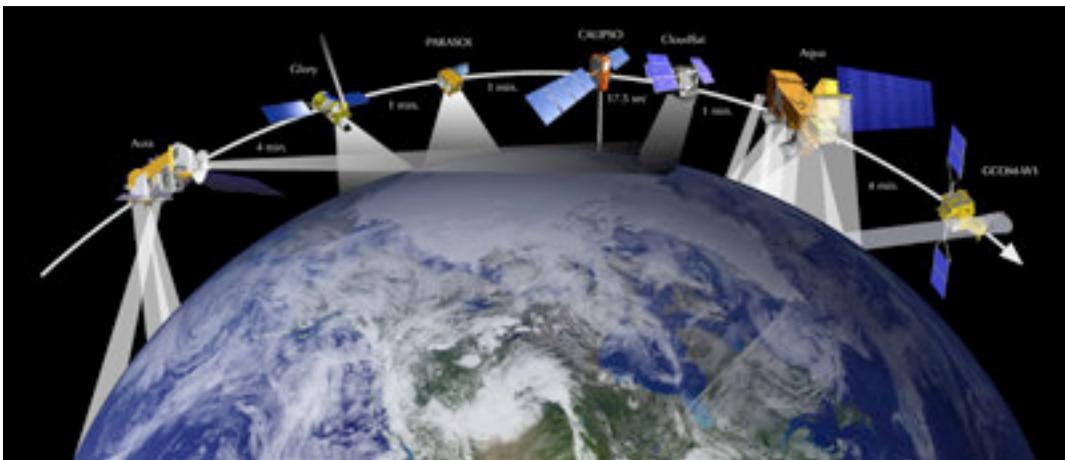
Lawrence hopes to continue his research as a graduate student someday. For now, one can find Lawrence sitting at a computer and making plot visualizations.

His family moved to Estancia in 2005, and Lawrence graduated from Estancia High School four years later; he spent his early years in education in Georgia, always taking accelerated courses.

When it came time to choose a college, Lawrence didn't have to look far for what he wanted. "New Mexico Tech is really affordable, and offers great scholarships that can be stacked with the state Lottery Scholarship," he said. Professors are readily accessible and always willing to help, he said.

Outside the classroom, Lawrence is president of the Society of Physics Students, commonly called the Physics Club.

*Editor's Note: New Mexico Tech student **Ashleigh Mitchell**, profiled on this page in the Fall 2011 issue of Gold Pan, recently was awarded two competitive national scholarships from the Society of Mining Engineers this year. One award is from the Coal and Energy Division of the Society of Mining Engineers; the other from the Mining and Exploration Division. Both were for \$1,500.*





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