



Director addresses National Press Club

by John R. Gustafson

Director John Browne recently called for a "renewed compact" between the nation and the physical sciences community at an address at the National Press Club. Below is a summary of that talk.

Browne said the impetus for such a renewal is developing an effective defense against terrorist activities, but the benefits can extend from exciting more youth to pursue a career in science to finding solutions to global issues such as clean energy.

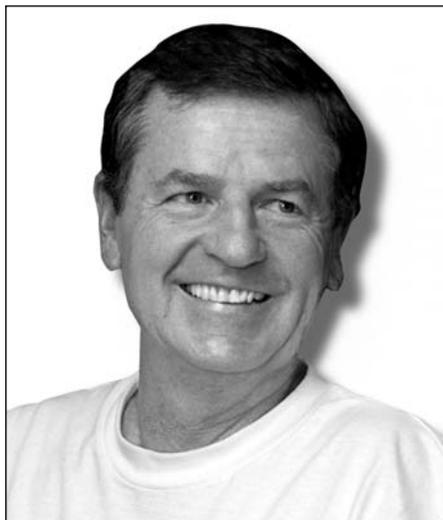
"Public investment in the physical sciences is critically important to effectively combating terrorism here and abroad, as well as addressing other national security issues," Browne said.

Noting the need to achieve a balance in federal support for different scientific fields (biology and medicine currently get half of all available funding), Browne said, "No single field will dominate in the fight against terrorism. In fact, the greatest advances will be made at the borders between scientific fields."

Following World War II, Browne said, the nation viewed science, particularly the physical sciences, as an "endless frontier" from which the pursuit of new knowledge would inevitably lead to solutions to society's problems.

Browne defined the physical sciences to include physics, chemistry, math, computer science, engineering and other technical fields.

The government's strong relationship with the physical sciences community waned with the end of the Cold War, Browne said, and to renew the compact, the physical sciences community must do a better job of explaining the potential derived benefit — the use — of its proposed research.



Laboratory Director John Browne

"The scientific community will have to focus its research on the threats we will face in the coming decades," Browne said.

Browne observed that the science community — universities, industry and national laboratories — responded quickly to the events of Sept. 11, providing "off the shelf" knowledge, expertise, equipment and advice. To ensure such an ability to respond effectively in the future requires investing in the underlying fundamental research today, he said.

"Current technology will help, but it cannot provide the nation with adequate capabilities to detect, deter or defeat" a future terrorist event more destructive than those of Sept. 11, Browne said.

"We must conduct the multi-disciplinary use-directed research now that will enable the required counter-terrorism systems" of the future, Browne said. "The science community must move research concepts more quickly into the hands of first responders and the military."

"There is no 'perfect' defense against terrorism for a free society," Browne said. "Science can, however, make it easier to detect

terrorist activities, make it harder for the terrorists to carry out their goals and provide better ways to protect our people.

"In renewing the compact between the physical sciences community, the government and the public, we will attract and train the next generation of scientists who will win the war on terrorism, advance solutions on other national problems, and increase knowledge for future generations."



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Los Alamos National Laboratory is operated by the University of California for the National Nuclear Security Administration (NNSA) of the U.S. Department of Energy and works in partnership with NNSA's Sandia and Lawrence Livermore national laboratories to support NNSA in its mission.

Los Alamos enhances global security by ensuring safety and confidence in the U.S. nuclear stockpile, developing technologies to reduce threats from weapons of mass destruction and improving the environmental and nuclear materials legacy of the cold war. Los Alamos' capabilities assist the nation in addressing energy, environment, infrastructure and biological security problems.



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Lab showcases

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State Legislature. Joining Los Alamos at the State Capitol was Sandia National Laboratories. The State of New Mexico honored both labs by introducing a memorial for their "outstanding contributions to homeland security" at the State Legislature.

Also in January, the Laboratory hosted U.S. Sens. Harry Reid, D-NV; Pete Domenici, R-NM; and Jeff Bingaman, D-NM, along with National Nuclear Security Administration head Gen. John Gordon. The four Lab guests received briefings on counterterrorism, homeland security efforts, nonproliferation and stockpile stewardship and the Atlas project.

Reid is the chairman of the Senate Energy and Water Development Appropriations Subcommittee and as

such oversees funding for the Department of Energy and the national laboratory program. Domenici is the ranking member of the Appropriations Subcommittee on Energy and Water Development, and Bingaman is chairman of the Energy and Natural Resources Committee.

The entourage heard about efforts in the global fight against weapons of mass destruction, programs to stop the spread of nuclear weapons and programs to safeguard former Soviet Union nuclear material.

"We must help Russia lock down its nuclear arsenal. Los Alamos and Sandia laboratories have an important role to play in guaranteeing that no act of terrorism ever re-revisits our nation's shores," said Reid.

"The Bush administration will request significant new funding in its budget for the labs, reflecting their importance and their new responsibilities that will evolve from the war on terrorism," Domenici said.

Though snow delayed the group's departure from Albuquerque, the senators and Gordon were able to have a briefing on the history of the Lab and

its sites, see counterterrorism and homeland defense demonstrations and tour the Atlas facility, as well as take time for media questions.



Rep. Jeannette Wallace, R-Los Alamos, Sandoval, left, visits with Mary Anne Yates, the Laboratory's coordinator for Homeland Security Initiatives, at a technology demonstration put on by Los Alamos and Sandia national laboratories at the State Legislature in Santa Fe. Yates is holding a copy of a memorial introduced in the State House of Representatives that honors Los Alamos and Sandia for their "outstanding contributions to homeland security." Photo by LeRoy N. Sanchez

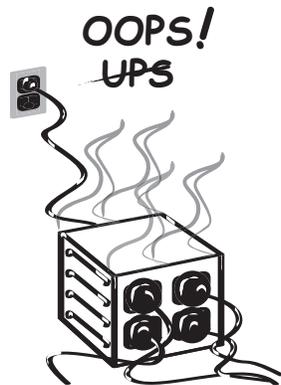
Photo not available at this time

BASIS, or Biological Aerosol Sentry and Information System, provides early warning, within a few hours of an attack, of airborne biological incidents for special events such as large assemblies, dignitary visits, high-visibility meetings and major sporting events. BASIS consists of a network of distributed sampling units deployed in and around potential target sites. Each unit, such as the one pictured, continuously collects, stores and time-registers aerosol samples. The samples are retrieved and brought to a relocatable field laboratory where they are analyzed. Photo courtesy of Lawrence Livermore National Laboratory



U.S. Sens. Jeff Bingaman, D-N.M., far left; Harry Reid, D-Nev, left; and Pete Domenici, R-N.M., center; with National Nuclear Security Administration head Gen. John Gordon, right, discuss bioresearch with Bioscience Division Leader Jill Trehwella, far right. The senators and Gordon toured several facilities and received overviews on counterterrorism and homeland defense, threat reduction and nuclear materials protection. Photo by LeRoy N. Sanchez

'Safety first'



Holy wattage!

A potential fire hazard was discovered in the Engineering and Science Application (ESA) Division recently when a desktop sized uninterruptible power supply unit failed. The exact cause of the failure of the 10-year-old unit has not been determined; however, it was noted that an electric space heater was plugged into the UPS unit at the time of failure.

A UPS is a device that sits between a power supply (e.g., a wall outlet) and a device such as a computer to prevent undesired problems, such as outages or power surges, from adversely affecting its performance. If a problem occurs in a continuous UPS system, an internal battery is automatically activated, providing an uninterrupted, stable source of power.

The UPS units used to protect desktop computer files/peripherals are generally rated for about 500 watts, while space heaters draw in the order of 1000-1500 watts. While it could not be determined that the heater was the direct cause of the UPS failure, it's likely that it at least contributed to the unit's demise.

Employees are reminded that all high-wattage devices (e.g., space heaters, toasters, microwave ovens, etc.) should be disconnected from UPS units and plugged directly into building circuits rated for the electrical load of the item.

Asian Americans and Pacific Islanders

A source of pride to be recognized

Editor's note: Energy Secretary Spencer Abraham recently released a policy statement on Asian Americans and Pacific Islanders, following is that statement:



*Energy Secretary
Spencer Abraham*

On June 6, 2001, President George W. Bush reaffirmed Executive Order 13125 to increase opportunity for and improve the quality of life of Asian Americans and Pacific Islanders, through public sector, private sector and community involvement. Executive Order 13125 demonstrates the president's commitment to include all Americans in his agenda for the nation.

Asian Americans and Pacific Islanders have a long history of contributing to the growth of American society. At DOE, a significant number of Asian American and Pacific Islander employees work diligently to carry out the department's mission. They strengthen the department with resourcefulness and intellect and continuously reinforce the value of a diverse work force. The heritage and achievements of Asian Americans and Pacific Islanders are a source of pride to be recognized. Asian American and Pacific Islander employees and the various AAPI local, state and federal organizations are among the key resources available to the department.

DOE's ability to attract the best and the most talented, both as employees and as contractors, will critically influence how well we can continue to ensure the nation's defense and energy security. We must develop, monitor and coordinate our efforts to ensure and improve the participation of all Americans in DOE programs and contracts. In addition, research and data collection conducted by the department should include all populations and sub-populations, including Asian Americans and Pacific Islanders.

I support and fully embrace the president's efforts to ensure increased opportunities for Asian Americans and Pacific Islanders. I am committed to help foster and nurture a diverse DOE work force and a culture of inclusion — with real opportunities that improve the quality of life for all through dedicated and coordinated efforts. I welcome and encourage the full participation of Asian Americans and Pacific Islanders and other employees in the spirit of the department's corporate culture of inclusion with dignity and respect.



NEWS FROM UC

HP says atom-sized computer chips a lot closer

Hewlett-Packard Co. and University of California scientists have patented a process that they said would eventually help turn out powerful computers that fit on the head of a pin with room to spare.

Scientists need to shrink computers to make them more powerful, but the technology of putting circuits on silicon, the basis of current computer chips, is reaching the natural limits of the wafers to hold circuits, turning up the pressure for a breakthrough.

The new patent was key to a play to commercialize nano-chips by building factories to produce them, and lab experiments had proved the concept — although they used components much bigger than the nanowires a few atoms wide.

The patent announced in January covers a process to pack a number of different functions into a single nanochip by dividing the chip into different zones where independent calculations could take place.

The performance improves because a single chip can do a number of things.

Students find Lab work alluring



Julie Cummings

by Michael Carlson

As they trade dorm life for adult life and meal plans for career plans, a higher percentage of college graduates this year will seek stability and opportunity within the federal government and its research facilities.

Two New Mexico college graduates are hoping to expand their existing relationship with the Lab, while one recent graduate is pondering employment with the federal research facility. They are Julie Cummings of Ecology (ESH-20), Karolyn Tolzien of Accounting (BUS-1) and Melanie Dabovich.

Cummings has just completed her bachelor's degree in wildlife science from New Mexico State University and may pursue graduate school in the near future. She currently works as a post-bachelor student in ESH-20.

"I will mainly be assisting in the continuing deer-collaring project, elk and deer telemetry and any other current wildlife projects in which my assistance is needed," Cummings said.

As an undergraduate student, she's been assisting Lab scientists with research that involves wildlife in the Los Alamos area. Her work is helping to answer how different species have been affected by the Cerro Grande Fire.

"I've always heard good things about the Lab," she said. "By working as a student researcher, I



Karolyn Tolzien

personally expected to learn a great deal about wildlife in and around the Lab."

She spent her winter break from NMSU at the Lab helping to radio-collar deer as part of a project to track the movements of wildlife between the Laboratory and Bandelier National Monument.

Tolzien said she hasn't considered work in the private sector since obtaining employment as a graduate student a year and a half ago. She worked as a banker in her home state of Montana before relocating to Los Alamos with her husband.

"I like that there is always room for promotion," she said. "The pay is decent, and the Lab supports my educational endeavors."

She recently completed her master's degree in finance at the College of Santa Fe. With a bachelor's of arts degree in accounting, also from the College of Santa Fe, Tolzien plans to take the certified public accountant exam in May. She hopes success on the test will help her find employment as a regular staff member at the Laboratory. She said she would like to eventually obtain a management position.

Dabovich, a recent communications graduate from New Mexico State University in Las Cruces, is considering applying for work at the Lab.

She currently works in NMSU's agricultural communications department where she is completing an



Melanie Dabovich

internship that she accepted as an undergraduate.

As graduation crept closer, she began to consider a career with the Lab, something she couldn't have imagined doing last August when she didn't think government work was "cool." Her attitude toward federal workers came from movies, television shows and other forms of pop culture.

"I thought government workers were uptight," she said, "but then I started doing research. I talked to people from Los Alamos. I like the idea of having the prestige that government work offers."

Résumé submissions for student and regular staff employment have increased by about 270 percent since January 2000. The Lab recently has increased advertising and lifted a controlled-hiring policy that prevented the recruitment of most technical and support staff.

"We have more than 350 University of California career, postdoc and student internship vacancies posted right now," said Shelly Melton of Staffing (HR-5). "There are lots of interesting and exciting projects being worked on at the Laboratory for which we are actively recruiting talented workers. We consider new entrants into the job market important to the Lab's future work force."

For more information about employment opportunities, visit <http://www.hr.lanl.gov/FindJob> online.



NEWSMAKERS



Charles Harrington

Charles Harrington, project leader of the Laboratory's Science and Program Management for the Yucca Mountain Project in Environmental Geology and Risk Analysis (EES-9), recently was inducted

into the Outstanding Alumni Academy at the College of Arts and Sciences, Department of Geosciences, at Western Michigan University. In addition, Harrington was the recipient of the Alumni Achievement Award.

Harrington received his bachelor's degree in geology from Western Michigan University and his master's and doctoral degrees in

geomorphology/geology from Indiana University. He also is a Fellow of the Geological Society of America.

Harrington has been at the Lab since 1983.

Three Laboratory technical staff members have been named 2001 Lab Fellows Prize winners.

Joe Carlson of Nuclear Physics (T-16), **Kurt Sickafus** of Structure/Property Relations (MST-8) and **Giday WoldeGabriel** of Hydrology, Geochemistry and Geology (EES-6) are the latest Fellows Prize recipients.

The Fellow's Prize recognizes high-quality published research in science and engineering having a

significant impact on a particular field or discipline.

Carlson was recognized for a critical breakthrough in Quantum Monte Carlo techniques, methods for simulating properties of quantum systems.

Carlson earned a doctoral degree in physics from the University of Illinois at Urbana-Champaign in 1983. He also has master's and bachelor's degrees in physics from the University of Illinois.

Sickafus was recognized for contributing to the understanding of radiation damage in ceramic materials.

Sickafus earned a doctoral of science degree in materials, science and engineering from Cornell University. He also has a master's degree in materials, science and engineering from Cornell University

Director for Administration named



Richard Marquez

Laboratory Director John Browne has named **Richard Marquez** as the Laboratory's Associate Director for Administration.

The Administration Directorate includes the Business Operations (BUS), Communications and External Relations (CER), Human Resources (HR) and Information Management (IM) divisions, as well as the Audits and Assessments (AA), Diversity (DVO), Equal Opportunity (OEO), Ombuds, Quality Improvement(QI) and Laboratory Counsel (LC) offices.

Marquez's achievements while leading business and administrative functions at the Department of Energy's Albuquerque Operations Office included a variety of awards for innovative management approaches, modernizing business practices, workplace enhancements and championing inclusion of small and minority businesses in federal procurement programs. ALO won four consecutive DOE Secretarial awards for accomplishing socioeconomic objectives in procurement under Marquez's leadership.

In the private sector, Marquez has worked most recently as the deputy director for operations for a local office of national engineering firm Burns and Roe Enterprises Inc., managing its contract for the Accelerator Production of Tritium project and overseeing the work product of upward of 100 engineers and other professionals. He also was an attorney in a general practice law firm and managed his own private business and marketing consulting firm.

Marquez's career accomplishments include a number of significant awards and other recognitions, including the Presidential Rank Award for Meritorious Service, the Hammer Award for Reinventing Government, the President Management Council's "Best Practices" award and DOE's Cultural Diversity Award.

Marquez was born and raised in southwestern Colorado and received his bachelor's degree from Colorado State University in 1974. He has been a New Mexico resident since 1974, earning a law degree from the University of New Mexico in 1977.

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Giday WoldeGabriel, left, **Kurt Sickafus**, second from right, and **Joe Carlson**, right, were honored at a Fellows Prize Colloquium earlier this month. Each of the three 2001 Lab Fellows Prize winners received a \$3,000 check and a certificate from Laboratory Director John Browne. Photo by LeRoy N. Sanchez

In Memoriam

Robert 'Bob' Calhoun Jr.

Robert "Bob" Calhoun Jr., a Laboratory machinist with Experiment and Diagnostic Design (DX-5), died Jan. 29 after a brief illness. Calhoun began his career at the Laboratory in 1981 and was employed with DX-5 from 1995 until his death.

February service anniversaries

30 Year

C. James Elliott, EES-6
Michael Martinez, ESH-4

25 Year

John Flower, IM-4
Anthony Garcia, EES-6
Orval Hart Jr., FWO-IIM
Robert Holder, BUS-5
Geraldine Martinez, NIS-5
Norman Mayne, FWO-FIRE
Bill McCormick, ESA-FM-ESH
Lois McFarland, HR-DR
Robert Naranjo, CER-32
Corine Ortiz, DIR
Valarie Prestwood, NMT-3
Ronald Rabie, DX-2
Yvonne Salaz, QIO
Luis Salazar, ADWEM
James Stine, DX-2
Gary Sullivan, DX-6
Pamela Ulibarri, HR-WDA
Yolanda Valdez, B-2
Laurance Warner, NIS-10
Craig Yost, NMT-13

20 Year

Jacobo Archuleta, NIS-4
Diana Armijo, BUS-3
Ricky Baros, E-ET
George Faulkner, NIS-10
Brad Gallimore, ESH-5
Kay Grady, T-16

Virginia Hamilton, C-INC
Victor Hogsett, NIS-IT
Michael Loibl, ESH-1
David Martinez, ESH-1
Paul Maudlin, T-3
Benjamin Montoya, NIS-6
Thomas Norris, D-7
Larry Pacheco, ESH-1
Virginia Rey, ESH-12
Richard Salazar, NMT-2
David Sanchez, ESH-5
William Scarborough, NIS-2
Richard Wood, LANSCE-1

15 Year

Charles Aldrich, X-8
Mark Backus, BUS-5

10 Year

A. Michelle Cantu, AA-4
Michael Duran, ESH-1
Michael Johnson, NMT-3
David Kilcrease, T-4
John Lyles, LANSCE-5
Edward MacKerrow, D-5
Gregory Rand, ESA-TSE
Dianne Roybal, NIS-7
Matthew Sanchez, ESH-3
Donald Shires, IM-8
Thomas Terwilliger, B-2

5 Year

Wilbur Bergquist, ESA-WSE
Thomas Brettin, B-1
Joann Campbell, X-5
Margaret Casaus, HR-SSR
Jason Cooley, MST-6
Christina Files, NIS-7
Duane Flamig, DX-3
Steven Gonzales, ESA-DE
Isaac Herrera, DX-3
Richard Holmes, X-2
Mary-Beth Inglis, BUS-2
Robert Little, ESA-TSE
W. Gregory Lockwood, CCN-2
Davita Martinez, CCN-12
Rangachary Mukundan, MST-11
Brian Reardon, ESA-WR
Teresa Roberts, IM-8
Corine Romero, BUS-2
Kenneth Rowilson, FWO-IIM
Eric Sorensen, NIS-6
Janet Sprake, IBD
Kyle Stokes, ESA-WSE
Pamela Vigil, NMT-8
Deborah Woitte, LC-GL
Orby Wright, ESA-WMM

Newsmakers ...

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and a bachelor's degree in physics and mathematics from Ohio Wesleyan University.

WoldeGabriel contributed to the understanding of early hominid evolution in East Africa. His work pushed back the origins of early hominids to greater than 5.2 million years, one million years earlier than the oldest previously discovered hominids.

WoldeGabriel earned a doctoral degree in geology at Case Western Reserve University in Cleveland. He also has a bachelor's of science and master's of science in geology from Addis Ababa University in Ethiopia.

This month in history

February

1564 — Physicist and astronomer Galileo Galilei born

1582 — Pope Gregory XIII, enlisting the expertise of distinguished astronomers and mathematicians, issued a bull correcting the Julian calendar that was then 10 days in error, though the calendar named for him, the Gregorian calendar, did not become effective until 1752 in Britain and the American colonies

1847 — American inventive genius and holder of more than 1,200 patents, Thomas Alva Edison born

1877 — The U.S. Weather Service is established

1920 — The New Mexico Senate votes 17-5 to ratify the 19th Amendment giving women the vote, becoming the 32nd state to approve the proposal

1930 — Planet Pluto discovered by Clyde Tombaugh

1936 — The first production of a synthetic radioactive substance, radium E

1945 — Tinian Island is selected as the base of operations for any atomic attack on Japan

1946 — ENIAC, or electronic numerical integrator and computer, the first electronic digital computer, is introduced

1951 — First telecast of an atomic explosion is conducted

1984 — Two U.S. astronauts perform the first untethered spacewalk

1999 — Stardust began its 3 billion-mile journey to collect comet dust

2000 — Endeavour mapping mission spent 11 days in space creating a 3-D map of more than 70 percent of the Earth's surface

From Calcutta with love War seen through a father's letters

by Judy Goldie



Elaine Pinkerton

It was not until Elaine Pinkerton moved across country and started a 30-year correspondence with her father that she grasped the significance of her parents' World War II correspondence and the heart of a book very unlike those she had written before.

Pinkerton, a Laboratory retiree from the Public Affairs Office, inherited a treasure trove of 5,000 pages of letters — 518 days' worth — the outgrowth of her parents' endeavors to main-

tain connection during their wartime separation.

Richard and Reva Beard, like thousands of couples during WWII and wars before and after, separated by continents, oceans and warring countries, stayed close through letters. Richard was an Army Air Force psychologist stationed in the China-Burma-India Theatre of Operations; Reva, an elementary school teacher in Ohio.

"The structure and discipline of sitting down daily to write to the woman he loved — to cheer her — saved his sanity," said Pinkerton of her father. He was an acute observer of human nature and had a gift of choosing words that vividly bring to the mind's eye the CBI experience, she added.

Pinkerton observed that, "I think my father knew he was writing for posterity. There was a reason; they [the letters] were kept in perfect order — even as my mother moved to a nursing home after his death." Pinkerton, who has written guidebooks on biking and walking trails, changed genres to compile the book, which is not only a family memoir, but chronicles a lesser-known chapter of WWII. Pinkerton has a master's degree in English but considers this book, and the in-depth research on WWII that went into it, graduate work in her first love, history.

The China-Burma-India theatre was a strategic foothold in the far east where the U.S. military was charged with

wrestling a supply route, which became the Ledo Road, from the dense regional jungle. The air supply route was considered a "suicide mission," by many of the pilots because of treacherous flying conditions. The road was essential to supply the allies and keep China in the war, said Pinkerton.

The book is built like a sandwich, Pinkerton explained. The front matter, the preface or introduction, gathers infor-

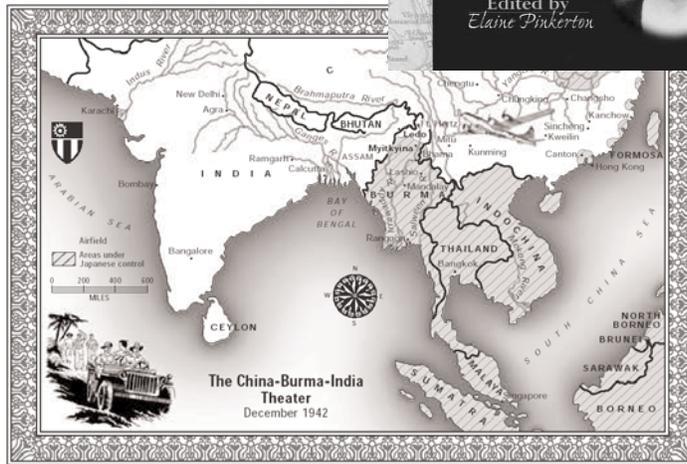
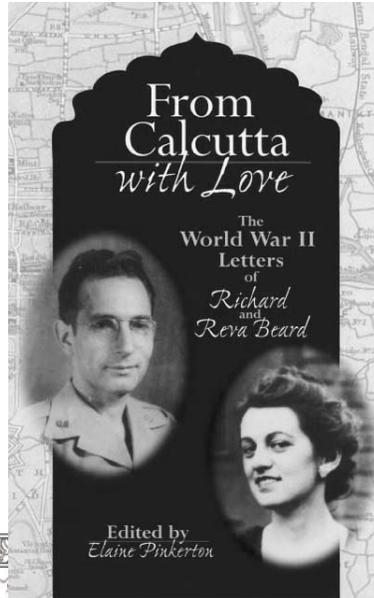
mation from veterans of the CBI theatre, tells of Pinkerton's relationship with her father and sets the context for the letters culled from the massive collection; the center, or filling, comprises her parents' correspondence; and the epilogue, by Pinkerton, is biographical and describes her experiences as she read the letters and worked on the book.

"In the back of my mind, I always thought my father and I would collaborate on this book. In a way, we did," said Pinkerton as she reflected on her efforts to tell her father's story, that of the CBI Theatre and to provide a fitting legacy

for her dad.

Appropriately, this love story framed in a montage of WWII history, "From Calcutta with Love," was released by Texas Tech University Press on Valentine's Day.

For more information about Pinkerton or this book, go to Pinkerton's Web site at <http://www.readsouthwest.com/pinkerton> online.



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