

## Retiree Glen Brandvold Helps Start Africa's First Photovoltaics Factory

When Glen Brandvold retired from Sandia in October 1988, he never dreamed that six months later he'd be helping start up a photovoltaics (PV) panel factory in Morocco.

"An acquaintance of mine at VITA [Volunteers In Technical Assistance] called in February," Glen reports, "to tell me that Roger Remy, a French physicist who lived in the States for a while, had — in 1987 — bought some equipment from a bankrupt company in Phoenix to produce PV panels.

"Roger shipped the equipment to Morocco, with the idea of establishing Africa's first PV-panel-producing factory on the outskirts of Rabat. Trouble was, after he brought in electricity and set up the equipment, it wouldn't run. He finally contacted VITA, and that's how I got involved."

VITA, Glen explains, is a private, nonprofit organization headquartered in Virginia that is a clearinghouse for technical queries from people in third-world and developing countries. Glen joined

VITA's list of volunteers about 15 years ago, when he was manager of the Labs' Solar Energy Dept.

### 'Can You Come Over?'

"When the guy from VITA called me," says Glen, "I told him that maybe I could help because of my Sandia experience in PV-panel fabrication. So I called Roger early in March to learn more about the problems he was experiencing. He asked 'Can you come over?', and I agreed to. Before I

knew it, I was on my way to Rabat for an assessment visit." Remy paid Glen's transportation costs, and Glen stayed with the Remy family while he was in Morocco.

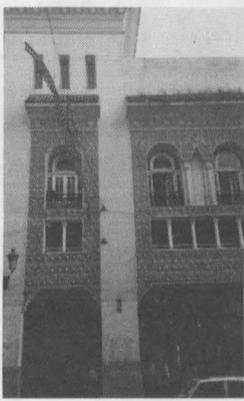
"I think that PV use in Morocco could see a steady increase," predicts Glen. "Only 30 percent of the people there have access to grid electricity. But a large number of the remaining 70 percent have money to buy some sort of a bat-

*(Continued on Page Five)*



GLEN BRANDVOLD (third from left) relaxes at the end of the day with eight of the ten workers at Phoebus Maroc Industries, the PV-panel factory Glen helped start up in Morocco earlier this year.

### Captivating Casablanca



The ornate architecture of Casablanca (see inset) fascinated Glen Brandvold during a weekend trip to the city made famous by the 1943 movie of the same name. "I looked for 'Rick's Place,'" he says, "but couldn't find it. I understand, though, that a few years back,

some enterprising soul built an establishment that looked like Rick's Place and gave it the same name: Rick's Café Américain. Unfortunately, the place closed down — probably because Bogey wasn't on the scene, and Sam wasn't playing the piano."

**ECP Contributions Up Nearly 7% — See Page Ten**



# LAB NEWS

VOL. 41, NO. 23 SANDIA NATIONAL LABORATORIES NOVEMBER 17, 1989



REGAN STINNETT (right), supervisor of Beam Experiments Div. 1264, shows cutaway of the Particle Beam Fusion Accelerator (PBFA) II ion diode hardware to the visiting National Academy of Sciences (NAS) panel on Nov. 3. The hardware is used to generate and focus an intense ion beam on PBFA II. The remaining hardware in the foreground is for creating powerful lithium ion beams. Sandia scientists hope eventually to achieve a beam intensity of 100 terawatts (100 trillion watts) per square centimeter using lithium ion beams. The NAS panel will produce a report next year that will determine how the nation's Inertial Confinement Fusion program should proceed for the next five years. Caltech Professor Steve Koonin (far left) is panel chairman. The 16-member NAS panel toured not only PBFA II, but four other facilities used in the Labs' pulsed-power sciences program — the Hermes III, SABRE (Sandia Accelerator and Beam Research Experiment), Saturn, and RHEPP (Repetitive High-Energy Pulsed Power) machines.

## NAS Panel Reviews Sandia's Fusion Program

Future directions for the nation's Inertial Confinement Fusion (ICF) program are being charted for the next five years by a National Academy of Sciences (NAS) panel that visited here November 3 to review Sandia's ICF program. The panel's recommendations will be published in a final report to be provided to Congress next September.

The NAS review panel is chartered by the US Congress to review work at Sandia and five other major facilities involved in the Department of Energy's ICF Program. The other five are Los Alamos National Lab, Lawrence Livermore National Lab, the University of Rochester, the Naval Research Lab, and KMS Fusion, Inc., a company that develops and fabricates fusion targets.

"I think it's fair to say that the panel was impressed with the quality of the science being done in our ICF program," says Don Cook, manager of Fusion Research Dept. 1260. "Many of these same committee members visited here during the last review in 1985-86 and indicated that they have seen a lot of progress in our program."

### Progress Includes Major Milestone

The progress includes a major milestone achieved on the Labs' Particle Beam Fusion Ac-

*(Continued on Page Eight)*

# This & That

See You in Three Weeks — The LAB NEWS staff has something to be thankful for this Thanksgiving — three weeks between issues. The next issue will be published December 8. We publish again on December 22, then go another three weeks between issues because of the holiday break (Dec. 25-Jan. 1). It's back to business as usual — publishing every two weeks — beginning with the January 12 issue.

\* \* \*

Acronyms Revisited — I mentioned last issue that I hadn't received any "toppers" for my nomination for worst acronym — WIMPs, for weakly interacting massive particles. I'm not so sure now. Roger Assink (1812) sent a long list of acronyms used by NMR (nuclear magnetic resonance) spectroscopists. Here are three that I found particularly interesting: BIRD, for bilinear rotation decoupling; SECSY, for spin-echo correlated spectroscopy; and INEPT, for insensitive nucleus enhancement by polarization technique. Roger has an even stranger one, but you'll have to ask him about it. I need this job.

\* \* \*

OPSEC Gets High Marks — Sandia's Operations Security (OPSEC) program received DOE's highest rating during a review last month. Purpose of the program is to protect unclassified (but sensitive) information that could be used by adversaries or that could weaken the effectiveness of traditional security programs (LAB NEWS, July 14, 1989). The high rating is a result of some diligent work by Sandia's OPSEC working group, lots of folks in Safeguards and Security Services Dept. 3430, and many Sandians who handle sensitive information.

\* \* \*

Maybe They'll Take the SIT Test! — Front-page banner headline in the October 25 *Albuquerque Journal*: "Teachers Appear Ready to Admit Drug-Sniffing Dogs." Makes me wonder — will that raise or lower class averages? Another recent headline in a DOE publication: "John Layton Renamed DOE Inspector General." I think I prefer his original name.

\* \* \*

How 'Bout Some Courtesy? — Excerpting from a note that a Sandian sent several weeks ago: "Courtesy, especially driving courtesy, has degraded on the base over the past several years. When I first arrived [more than 30 years ago], and for some time thereafter, drivers . . . would take turns melding into traffic flow. Not so these days, not so. Cars keep coming at you at full speed. I suspect nothing really can be done except to let off steam this way and hope that if such behavior is brought to general attention that some drivers may be a little more considerate." We can always hope.

\* \* \*

It's Hard to Con a Con Artist — but I think I was "had" on Halloween. Two boys came to my door. One held out two bags. Of course, I asked, "Why two?" "My little brother is in the hospital, and I'm collecting for him, too," came the reply. How can you resist? I put candy in both bags. But I think I detected a sly smile on his face as he turned to walk away. ●LP

## Sandia Payroll Tops \$375 Million During FY '89

Sandia's payroll for fiscal year 1989, which ended Sept. 30, was about \$323.3 million at Albuquerque and \$49.6 million at Livermore. The amount for Tonopah Test Range was about \$2.4 million. Pay for Sandians working at Nevada Test Site and other locations is included in the Albuquerque figure.

The total payroll of more than \$375 million exceeded the FY88 figure of about \$358 million.

Total wages and purchases in New Mexico amounted to more than \$580 million. The total for California was nearly \$182 million. Total Labs purchases from commercial vendors came to \$527 million.

At year's end, Sandia employees numbered about 8400 at all locations. Of those, about 7250 were at Albuquerque and 1050 at Livermore. ●

## Sympathy

To David (1555) and Jennifer (141) Outka on the death of his father and her father-in-law in Ames, Iowa, Sept. 28.

To Darlene Moore (1144) on the death of her father-in-law in Albuquerque, Oct. 3.

To Orie Montoya (1813) on the death of his mother in Albuquerque, Oct. 3.

To Jan Benedict (5147) on the death of her grandfather in Chicago, Oct. 10.

To Jerry Hood (7200A) on the death of his father in Dallas, Oct. 11.

To Jerry Myers (5219) on the death of his mother in Heflin, La., Oct. 20.

To Maureen Eatough (6517) on the death of her father in New York, Nov. 5.

## Recent Patents To Sandians

Bob Bickes (DMTS, 2515), Kevin Marbach (9212), and Paul Wilcox (2515): Smart Explosive Igniter.

Michael Butler (1163) and David Ginley (1144): Optical Fiber Sensor Technique for Strain Measurement.

Thomas Harrison (8451): Proximity Fuze.

Morton Lieberman (9123): Spark-Safe Low-Voltage Detonator.

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LOADING UP DONATIONS from Livermore Sandians to assist victims of the Oct. 17 earthquake are Tim Sa (8272) and Cindy English (8522). Hundreds of items were collected in a truck at Sandia, Livermore, over a two-day period and then delivered to the American Red Cross for use wherever the need was greatest.

**Had Some 'Shattering' Moments****Sandia's First Glassblower Hangs Up His Torch**

George Cosgrove, the first and only glassblower at Sandia, Livermore, retired from the Process Development and Fabrication Div. 8284 on Nov. 1, after 28 years of service at both Albuquerque and Livermore. George, always a popular artisan during Sandia Family Days, attracted crowds who watched him stretch, bend, and shape glass rods over his torch, or heat a tube and blow it into any number of shapes.

Most of George's time at Sandia was spent producing one-of-a-kind glass devices for scientific apparatuses for the chemistry groups, combustion researchers, and even the Strategic Defense Initiative program.

George learned about Sandia in 1957 from an ad in a Syracuse, N.Y., newspaper. He had begun his glassblowing career almost 15 years earlier, working with his father at Corning Glass Works. After 10 years at Corning, he moved on to Westinghouse, where he stayed five years in the same field.

**Moving West**

He and his wife, Marian, had been talking about moving out west, and the newspaper ad caught his attention. He flew to Albuquerque for an interview, but had second thoughts after comparing the green hills of upstate New York (around Elmira) to the very different New Mexico land-

**George has crafted thousands of glass devices — most of them original designs.**

scape. However, after talking it over, the Cosgroves moved to Albuquerque with their three young children.

George set up the first glass lab at Sandia and stayed nine years. "Albuquerque grows on you after a while; it was kind of a laid-back way of life back then, with lots of nice people," George recalls.

As a sideline, he and his wife opened "Ye Olde Glass Shoppe," a small business in Albuquerque's Old Town. Marian operated the shop during the day; George went there after work to craft more glass figurines and fill special orders. "I made mostly artistic animals, ballerinas, swans, and other small figures. One of the most unusual orders came from a Santa Fe man. He wanted a large brandy snifter tilted on its base and a row of pink elephants coming out the mouth of the glass. I found out he was a member of Alcoholics Anonymous, and this was to encourage members to stay on the wagon."

The Cosgroves moved back to New York in 1966 to work for a commercial firm. Two years later, George transferred to a Berkeley, Calif., branch of the same firm. When the company wanted him back in New York in 1970, he declined and returned to Sandia — this time to Livermore, but once again to set up the first glass lab.

Over the past 19 years, George has crafted thousands of glass devices — most of them original designs — for programs in all the technical directorates. Most of his work involves Pyrex glass materials. However, he also works with fused quartz, which must be fired at 2000 degrees F to flow and form the shapes desired. Fused quartz can withstand working temperatures up to 1500

degrees, making it suitable for many high-temperature applications.

**Time, Patience, and Skill**

George's work ranged from glass cylinders several feet long created on the lathe to fine filaments only a few mils in diameter, shaped with the aid of a microscope and pinpoint-size torch flame. "Often, I've undertaken projects and wondered, 'How will they ever turn out?' But you find that glass is the kind of material you can do almost

**"A Santa Fe man . . . wanted a large brandy snifter, tilted on its base with a row of pink elephants . . ."**

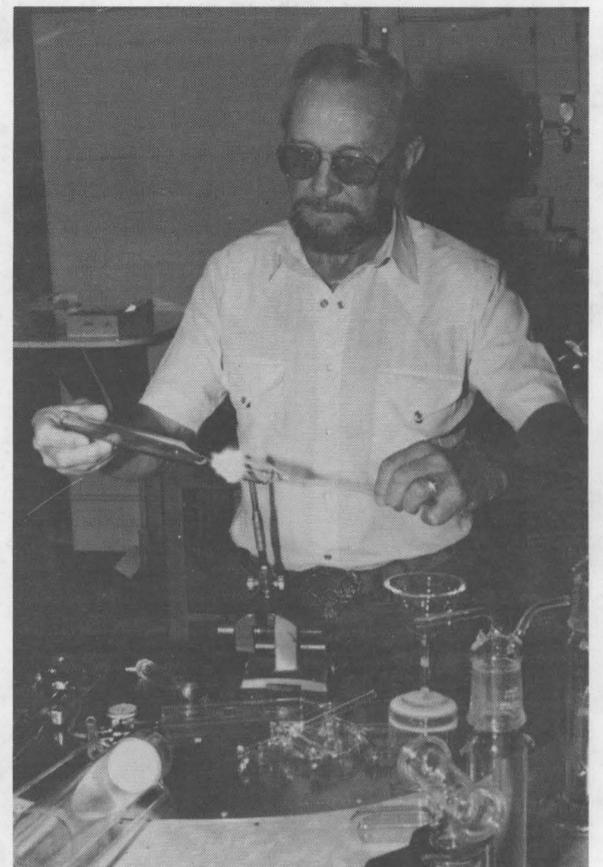
anything with — if you take time and have the patience [and George's skill]."

Life as a glassblower has had its "shattering" moments, George says, such as the time when a customer took a just-completed delicate apparatus, turned around, and walked into the door frame with the glass in hand.

George recalls one instance in Albuquerque after he had spent several days creating a complex glass diffusion pump and weeks testing it. His boss came in one morning and turned on the device, pumping liquid nitrogen into the tubing without first clearing out the moisture. The frozen, expanded moisture exploded the glass tubing. "But since it was my boss, I just went back to the workbench and began designing a second complex glass diffusion pump," George says.

He has the distinction of being not only the first glassblower at Sandia, Livermore, but probably the last as well. Future glasswork will be done by part-time assistance from outside contractors and from Lawrence Livermore National Lab employees using the Sandia glass lab.

George's retirement plans include more artistic glassblowing, traveling with Marian, possibly building a home, woodworking, and furniture-making. With two sons, one daughter,



GEORGE COSGROVE demonstrates his glassblowing technique, using Pyrex tubing over a hydrogen/oxygen-fed flame torch. George, the Labs' first glassblower, ended his 28-year Sandia career on Nov. 1.

and seven grandchildren, George should have lots of orders for his handmade items. ●BLS

**Livermore Retiree  
Dinner — Photos  
On Page Four**



**SANDIA  
LIVERMORE NEWS**



BOB JOHNSEN (8510)

**Supervisory  
Appointment**

BOB JOHNSEN to manager of Plant Engineering Dept. 8510.

Bob joined Sandia at Livermore in 1957 as a project engineer in Weapon Development 8100. He transferred to the Weapons System Control Division, then to the Computation Department, where he became a section supervisor in Systems Programming. In July 1965, Bob was promoted to division supervisor of Management Systems Programming, and later headed the Product Control Division. In 1978, he was named to the 8200 Planning Staff. In 1981, he became assistant to the Director of Combustion and Applied Research. He next moved to Plant Engineering, where he has headed the Facilities Planning Division since 1984.

Bob has a BS in engineering from UCLA. He and his wife Marilou live in Livermore. Bob enjoys hiking and other outdoor activities and spending time with his two grandchildren.

**Congratulations**

To Debbie Ghigliazza and Tim Sa (8272), married in Fremont, Aug. 12.



# Livermore Retiree Dinner

More than 300 retirees and guests came to Sandia, Livermore's, 24th annual retiree dinner at Castlewood Country Club last month. VP John Crawford (8000) greeted them and made a few remarks after the meal. Recognized for coming from out of state were Jim Ackerman from Florida;

Joyce Willford from Washington; Art Kellom and Bud Pearson from Nevada; and Walt Dzugan, Iona Ratcliff, and Don Richardson from Oregon. It was announced that 17 Livermore Sandians retired in fiscal year 1989, up from 14 in 1988.



DOTTIE WIEMKEN (8526) greets retirees Roy Adams (center) and Gil Rhodes.



ENJOYING a bit of conversation are (from left) Nan and Dick Cook, Ken Shriver, and Charles Mauck.



JEAN KAMP (8161, left) chats with John and Carmen Cordial.



RETIREES, SPOUSES, AND GUESTS assemble for the traditional group photo before the Oct. 11 retiree dinner at Castlewood Country Club.



SOCIALIZING at the dinner are (from left) Rick Wayne (8400), Fela and Leo Gutierrez, Jacquie Cezanne, Paul Brewer (8500), and Ruth and Dick Claassen.



GATHERED (from left) are Ray and Lee Shephard, Lori Hammons, Gene Springer, and Marge and Ort Thomas.

(Continued from Page One)

## Photovoltaics Factory

tery power system. And a PV panel is fundamentally a battery charger.

"A surprising number of people in the country have TVs. But in rural areas, those TVs — for the most part — are battery-operated. What a boon it would be not to have to cart those batteries into town on a bike to get them recharged. People are doing that all the time right now.

"Certainly, if Roger can make a go of his plans to produce PV panels inside the country, it would mean a real cost break for people wanting to buy a PV system — for battery-charging, or whatever. That's because there's a substantial tariff on imported solar panels — but not on unfinished solar cells."

### Glen the Troubleshooter

During Glen's first visit (March 18-28), he found himself in a troubleshooter role. "Both the vacuum system and the laminator were out of commission," he says, "so my first job was to get

### 'Hospitable and Handsome'

## Memories of Morocco

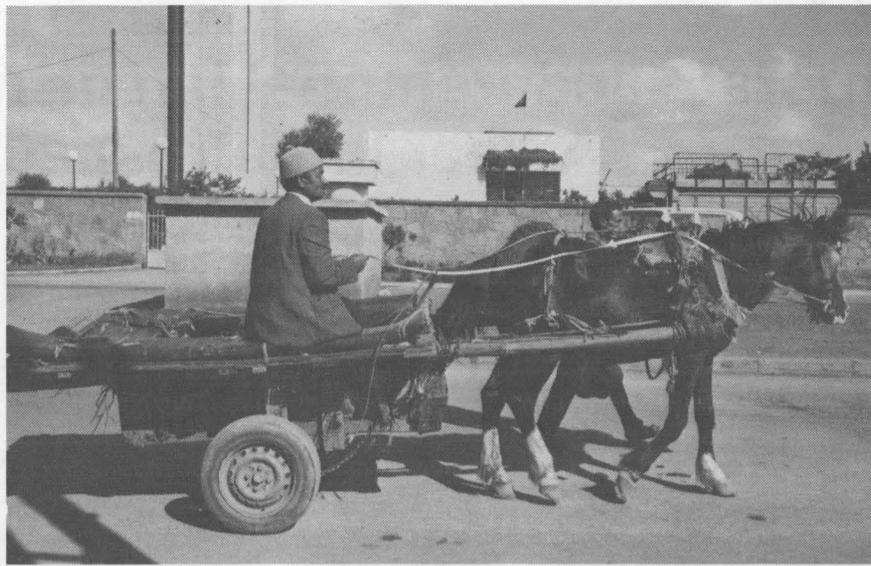
Though Glen Brandvold (ret.) didn't have much time for sightseeing during his two visits to Rabat, Morocco (see main story), he brought back some lingering impressions of the country:

- The people: "Hospitable and handsome. The country is a melting pot — a real variety of diverse cultures: blue-eyed blonds to dark-skinned Mid-Eastern types. Arabic is national language; most people also speak French."

- Climate and topography: "Coastal area quite temperate; ocean temperature about 65 degrees. Inland desert areas hot and dry. Highest mountains in Africa — even a ski resort."

- Architecture: "Everything from exotic Moorish buildings in the city to adobe houses in the countryside. The latter made me feel right at home; looked just like New Mexico."

- Economics: "I'd classify Morocco as an emerging nation — not a third-world country. Agriculturally rich, with a good-sized middle class. Not capital-intensive. Inexpensive labor available. Ongoing government-sponsored public works program to bring electricity, sanitation, etc., to rural areas."



TAXI, MOROCCO-STYLE, is common sight on the streets of Rabat.

them up and running. Once that was done, I developed a set of processing parameters, which involved some experimenting with times and temperatures.

"I felt kind of like a one-man band," Glen continues. "While I was there — during both the first visit and a follow-up one [May 10-June 18] — I worked on everything from draining vacuum pumps to keeping things clean during the lamination process. I had a certain sense of *déjà vu* — I could relate almost everything I did to a Sandia experience.

"Though I'm a mechanical engineer by training, the early solar work at the Labs exposed me to a diverse set of technologies — and a sort of a seat-of-the-pants, if-it-doesn't-work-this-way-try-another-approach way of doing things. Believe me, that was all very helpful while I was in Morocco!"

Glen's most frustrating experience during his Rabat visits was the inability to obtain common equipment: "the sort of stuff you can find at Radio Shack or at any good hardware store in the States — things like junction boxes, insulating film, and soldering irons."

When he returned to Rabat the second time, Glen's job was overseeing production of solar panels — a sort of "trial run," using 2600 5-in.-diam., single-crystal wafers that Remy had obtained with the other equipment from the Arizona company.

### 'Pathfinder' Exercise

"I suggested that we use those leftover cells for what I call a 'pathfinder' exercise," says Glen. "The idea was to identify process bottlenecks and provide the newly hired technicians some experience, using less expensive materials. We were pleasantly surprised by the results: During the four-week production run, the two technicians connecting the cells increased their initial rate of two panels per day to five. Also, we demonstrated more than 10-panel-per-day rates for panel layout, lamination, framing, and final finishing. It was an encouraging step toward the initial production goal of 100 panels per week."

A reliable supplier of solar cells is critical to Remy's operation, according to Glen: "He's totally dependent on a steady supply of standardized

parts, and has experienced some disappointments with promised shipments from a supplier in another country. So when I returned in June, I called around to some US suppliers and found one that would sell Roger 4000 solar cells a week — enough to meet his 100-panel-a-week output goal.

**"I hope I was able to help Roger in some meaningful way — that's what VITA is all about."**

"That was fortunate," Glen continues, "because currently there's a worldwide shortage of solar cells. Cell manufacturing is a capital-intensive, time-consuming process. Though demand right now is high, manufacturers have no guarantee it will remain so. Therefore, they're not investing in more equipment to increase production.

"I hope I was able to help Roger in some meaningful way — that's what VITA is all about. His motives are admirable — he'd like to give something back to the country where he was born. His father was stationed there in the French Air Force until 1956, when Morocco achieved its independence from France. Roger and his wife, Elizabeth, have worked very hard for the last two years to turn this dream into a reality, and I hope they're successful."

Would Glen take on a similar assignment if he's again contacted by VITA? "Sure. I have my suitcase ready to go anytime."

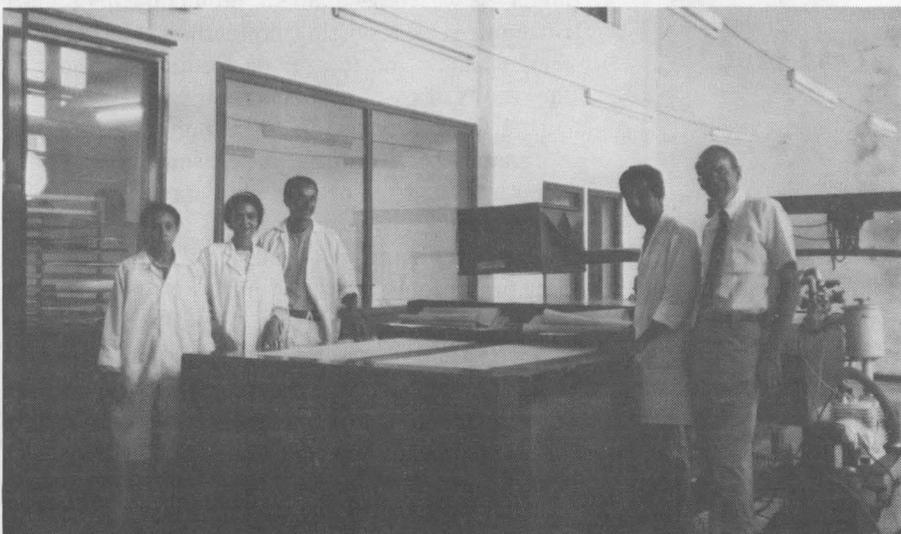
Also, he mentions, VITA would like to add to its roster of technical volunteers. If you're interested, contact the organization at 1815 North Lynn St., Suite 200, Arlington, Va. 22209. ●PW

### Congratulations

To Judith and Marcus (2551) Craig, a daughter, Jessica, Oct. 23.

To Mary and Patrick (3212) Cowher, a son, Mitchell Harrison, Oct. 23.

To Kathy (9213) and Robert (9213) Morris, a son, Justin Adam, Nov. 3.



GLEN BRANDVOLD (right) and several factory workers gather around the laminator inside the Moroccan PV-panel factory that he helped start.



INLAND ADOBE BUILDINGS such as these reminded Glen of New Mexico.

**'A Special Kind of Trust'****Corporate and Personal Integrity Program —  
A Year in Retrospect**

It's been slightly more than a year since Sandia's Corporate and Personal Integrity Program (C/PIP) was initiated. Is the program fulfilling its primary purpose — to encourage the early recognition of potential problems, especially those in areas such as product and service quality and safety, compliance with contractual and other requirements, and management of government assets?

To learn the answer to this and other questions, LAB NEWS recently interviewed Marv Torneby (manager of Personnel Dept. 3530), who's filled the role of Corporate Ombudsperson in the program since its inception.

The ombudsperson, accessible by anyone at any level, is available to receive and investigate

**The ombudsperson, accessible by anyone at any level, is available to receive and investigate reports of suspected violations of Sandia policy.**

reports of suspected violations of Sandia policy. "As ombudsperson, I see myself as a kind of impartial sounding board, where employees can bring their concerns and know that they'll be treated with confidentiality," says Marv.

The ombudsperson job, established when C/PIP was announced (LAB NEWS, Sept. 9, 1988), provides a new channel of communication for employees who perceive a problem that relates either to C/PIP or its adjunct Code of Conduct. The latter covers standards of expected behavior related to specific work habits.

**First Year: 21 Cases**

"During my first year as ombudsperson," Marv reports, "I handled 21 cases — somewhat fewer than I'd expected. However, we stressed when the

**"If an employee . . . sees a problem that cannot, for whatever reason, be handled elsewhere, I'm available."**

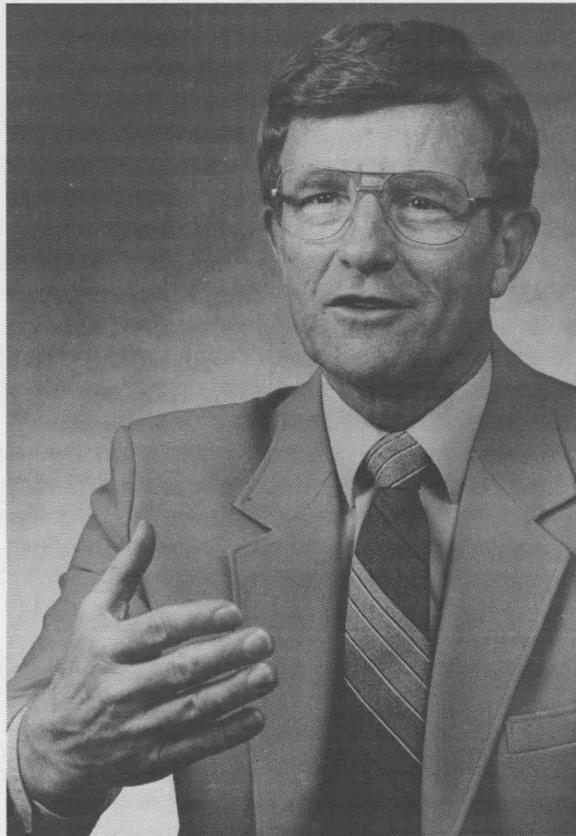
program began that C/PIP shouldn't be used to air personal dislikes and concerns of a petty nature. Evidently, people took that advice to heart."

Also, Marv points out, there are many alternate — and sometimes more appropriate — channels of communication for employees: one's immediate supervision (and management on up the line); a supervisor — at any level — in another organization; the Feedback program; personnel

representatives; or specialists in the financial, medical, security, and personnel organizations.

"However, if an employee — at any Labs location — sees a problem that cannot, for whatever reason, be handled elsewhere, I'm available," says Marv.

Perceived problems may be referred to Marv by phone, mail, or drop-in visit. The majority of the 21 cases he investigated during C/PIP's first year were begun with a drop-in visit.



CORPORATE OMBUDSPERSON Marv Torneby (3530): "If it [C/PIP] makes employees more sensitive to the fact that even 'borderline' questionable behavior isn't acceptable — that the smallest of incidents could have adverse implications — it's fulfilling its purpose."

"It was an interesting 12 months," Marv recalls. "The cases covered everything from alleged time-card reporting violations to concerns about hardware reliability in one of our programs.

"Often the case involves a fairly straightforward, factual investigation; for instance, in a situation involving time-card charges, I simply check records with Payroll and the line organization involved, and usually can reach a decision based on my findings. In about 40 percent of the cases, the investigation reveals unknown facts that put the alleged concerns in perspective and that satisfy the ethical concerns of the reporting individual."

The other 60 percent of cases Marv handled

did have merit, however, and resulted in some sort of corrective action.

"Once I got into this job [ombudsperson]," Marv says, "it became apparent that I would need help on a continuing basis to handle some of the complicated cases requiring more extensive investigations. So a new committee — the Corporate and Personal Integrity Investigative Committee [CPIIC] — became part of the C/PIP process."

Two permanent members of the CPIIC — Bob Park (4010) and Bob Blount (120) — represent the legal and auditing organizations, respectively. Ralph Bonner (3500) represents the Personnel organization; Brick Dumas (9210), the technical side of the house. Marv chairs the group, whose main responsibility is to learn as much about an allegation as possible and then to come up with a plan for investigating the case.

The Committee may also call on other Sandians to help conduct an investigation. For instance, when the hardware-reliability question was raised, the CPIIC called on a group of technical department managers to help resolve the case.

Once a CPIIC investigation plan is determined, it's submitted to the chairperson of the Corporate and Personal Standards Review Committee (CPSRC) — formerly the Conflict of Interest Committee — for approval. Bob Kesten-

**"In cases of merit, procedural changes were made to correct the problem, or an activity was stopped."**

baum (4000) chairs the CPSRC. Other members are Bob Peurifoy (7000), Everet Beckner (5000), John Crawford (8000), Paul Stanford (100), and Ralph Bonner (3500). Upon completion of an investigation, the CPSRC recommends proposed action to Sandia's President, based on a written report from the CPIIC.

**Other First-Year Allegations**

Other C/PIP or Code of Conduct allegations received by Marv during his first year as ombudsperson included several concerns related to Sandia subcontractors (for example, incorrect overtime charges and improper use of scrap materials); environment, safety, and health issues; improper control of classified documents; favoritism toward certain employees (in matters related to promotions or personal time off); and other, miscellaneous one-time events.

"To date, no individuals have been disciplined specifically for C/PIP allegations that came to me as ombudsperson," says Marv. "However, in cases of merit, procedural changes were made to correct the problem, or an activity was stopped. And, in all cases, we've been able to protect the anonymity of employees reporting concerns — if that was their wish — and to provide feedback to them on the results of cases they reported.

"I think feedback is an important part of the program. I believe that's one reason I've had positive reactions from people who've reported alleged problems; they want to — and should — find out what finally happened. And, in all cases, I believe they have been satisfied with the results."

In cases of violations involving theft or other types of serious or law-breaking behavior, yet another group, the Disciplinary Review Committee (DRC), gets involved (see "Seemingly Minor Infractions"). Marv also chairs the DRC, but points out that the two roles — Corporate Ombudsperson and DRC chairperson — don't overlap.

(Continued on Next Page)

**How — and Why — C/PIP Got Started**

The driving force behind Sandia's Corporate and Personal Integrity Program (C/PIP) was a report published several years ago by a commission appointed by President Reagan to investigate alleged overcharges by the defense industry.

"The basic message in that report, the 'Defense Industry Initiative,' " notes Marv Torneby (3530), "was that defense-related contractors — DoD contractors, to be more specific — should police themselves through the establishment of a written statement of business ethics and conduct, and should create an atmosphere in which employees could report

perceived violations of the ethics code without feeling intimidated."

AT&T, an original signatory to the Initiative, established C/PIPs at AT&T Federal Systems, Bell Labs, and other entities in 1986. Though DOE contractors were not included in the Initiative, Sandia management decided — in part, because of the Labs affiliation with AT&T — to initiate a C/PIP last year "to reflect Sandia's long-standing commitment to the highest standards of integrity and quality," says Marv. "Our C/PIP is similar to that of AT&T, though the program here has been slightly modified to fit cultural and contractual differences."

## Seemingly Minor Infractions May Have Major Consequences

Sandia's Disciplinary Review Committee (DRC), formally established in July 1987, investigates cases involving alleged major offenses committed by employees in any of three areas: on Labs premises, on Kirtland Air Force Base, or away from Sandia/Kirtland premises. (An ad hoc committee had handled such cases before 1987.)

According to Marv Torneby (3530), who heads the Committee, a major offense is "misconduct serious enough to be the basis for disciplinary action." At Sandia, it might be a serious violation of the Code of Conduct or the Corporate and Personal Integrity Program (see main story). On KAFB, it might involve failure to follow Base regulations or policies.

### Off-Premises Violations

Off premises, according to the DRC charter, a major offense is an action or behavior "that suggests some threat to Sandia property, personnel, or security; that harms the company's reputation or mission; or that renders employees unable to perform their jobs."

Besides Marv, other voting members of the DRC — all department managers or equivalent — represent Security (Bob Kelly, 3430); Public Relations (Jim Mitchell, 3160); Legal (Harold Folley, 4010); and the manager from the department of the employee being investigated.

Depending on the nature of the case, advisory members of the DRC may include the Equal Employment Opportunity and Affirmative Action, Medical, and/or Benefits department managers; a Labor Relations representative

attends all meetings in an advisory capacity.

From July 1987 through August 1989, the Committee reviewed 42 cases. "Without exception," Marv says, "the DRC ensures that there's a thorough review of the facts in each case, including extenuating circumstances, and that the alleged violator has the chance to respond to charges — to tell his or her side of the story. Employees should — and do — get a chance to explain."

The majority of cases reviewed by the Committee have involved theft, failure to report arrest(s), violation of a substance-abuse medical program in which the employee has been placed, falsifying time records, and misuse of government property. Frequently, cases involve more than one alleged infraction, Marv reports.

Of the 42 cases considered by the DRC, all but two resulted in disciplinary action, including termination (16 cases), 30 days without pay (11 cases), and other less stringent actions (13 cases, ranging from probation to a letter of reprimand). "It's important that employees are aware that even seemingly inconsequential infractions may jeopardize their jobs," says Marv. For example, a termination resulted when it was proved that an employee had stolen a small amount of money in the office.

### Key Issues: Reliability and Trust

"When that sort of thing happens, it's a sad situation all around," Marv continues. "However, reliability and trust are key issues. Sandians are entrusted with the highest of responsibilities — and the most important of the nation's secrets.

Evidence indicating that a person is not trustworthy casts a shadow on that person's integrity. Taking a risk on such a person can't be done; Sandia's national security mission is too important."

### 'A Good Reminder'

"I encourage all Sandians to review the revised Code of Conduct and C/PIP booklet issued last year," says Marv. "Though it doesn't cover every possible situation and is not meant to be a detailed recipe for behavior, it serves as a good reminder of the kinds of behavior that are acceptable — and the kinds that are not."

Once the DRC decides what disciplinary action may be appropriate, the group makes its recommendations to Director of Personnel Ralph Bonner (3500) and Director of Security and Facility Support Services Jim Martin (3400). If approved by Ralph and Jim, the recommendation then goes to the alleged violator's line management — which has the final say on how to close the case (generally at Director level). If termination is recommended, the decision must also be approved by an executive VP or, in the case of an employee with 20 or more years of service, the President.

"As a committee, we don't make Sandia's final decision on a case," says Marv. "We make the most thorough investigation possible and come up with recommendations based on that investigation. Above all, we attempt to handle each case fairly and consistently, regardless of the job classification or the level of the person involved."

(Continued from Preceding Page)

## C/PIP

"The source of the allegation is usually a key to where a case is handled," says Marv. "If an alleged impropriety is brought to me as the ombudsperson, I would most likely handle it. On the other hand, if someone in management voices the concern, and disciplinary action is likely to result, the case will probably go to the DRC."

And, adds Marv, if an allegation involving a serious breach of the Code of Conduct were brought to him as ombudsperson, the matter could be referred to the DRC. As yet, this has not happened.

### New-Hire and Management Briefings

To make sure that new employees, as well as those on roll, know and understand the provisions of the C/PIP, both new-hire and professional-staff orientations include sessions on the program. Management briefings — including a series of ses-

**"The program should not be interpreted as an implication that employees' integrity is not what it should be."**

sions conducted by Purchasing on ethical conduct related to outside contracts — helped clarify C/PIP objectives during the program's first year.

"C/PIP," notes Marv, "seems to be fulfilling another of its objectives: encouraging an environment of openness, where potential problems may be recognized early — and corrected promptly. As I said when C/PIP began, the program should not be interpreted as an implication that employees' integrity is not what it should be. Sandia's reputation for excellence over many years has

been a direct result of the performance and integrity of its employees.

"Rather, C/PIP is a formal reminder of appropriate ways to deal with certain situations. If it makes employees more sensitive to the fact that even 'borderline' questionable behavior isn't acceptable — that the smallest of incidents could have adverse implications — it's fulfilling its

purpose. Because of our work on national security programs, Sandia has been given a special kind of trust to perform a special kind of job — in a way that's beyond reproach.

"During its first year, I believe that C/PIP has been effective in focusing Sandians' attention on issues related to quality, integrity, and doing things right the first time." ●PW

### 'In the Long Run — Our Treasure'

## Ethics: A Special Topic At Sandia DM Conference

Ethics was one of the special topics discussed at the 1989 Sandia Department Managers' Conference Oct. 24-27. Marv Torneby (3530), along with Al Hooper — general attorney for AT&T Federal Systems in Washington, D.C., and former assistant general attorney at Sandia (1981-85) — led the sessions on ethics.

"Al and I were really pleased at the high turnout for our two sessions on ethics," says Marv. "Clearly, there's increasing interest and concern about reputation and integrity — both of individuals and organizations."

### Time Charging, Tech Transfer

"During the sessions, I think we managed to pinpoint some of the more important potential ethical issues at the Labs — and the responsibilities of DMs in handling such issues, should they arise," Marv continues. "Concerns ranged from time charges to purchasing and budgeting matters. Issues related to technology transfer also got a lot of attention — concerns like avoiding conflict-of-interest situations, and not favoring one com-

pany over another when technology is being transferred to the outside."

The DMs agreed, says Marv, that it is up to them to set an ethical tone for their individual organizations — through personal example and by building an awareness of expected ethical standards in the groups they manage.

"They concurred that encouraging employees to voice their questions and concerns about perceived ethics problems is important," says Marv, "and that taking prompt corrective action, if necessary, on a problem is a necessity."

The consensus in the ethics sessions, according to Marv, was that ethical behavior — on the part of individual Sandians and Labs organizations — is imperative in maintaining the Labs' reputation to perform well and to command respect among its customers.

"Maybe it's best summed up by a statement from Orval Jones (20) in the DM conference brochure," says Marv. "Orval said 'Our reputation, our integrity, is — in the long run — our treasure.'"

*(Continued from Page One)*

## Sandia Fusion Program Review

celerator (PBFA) II last spring when Sandia scientists achieved a beam intensity of 5 terawatts (a terawatt is 1 trillion watts) per square centimeter on target, the most intense ion beam ever created (LAB NEWS, May 19, 1989).

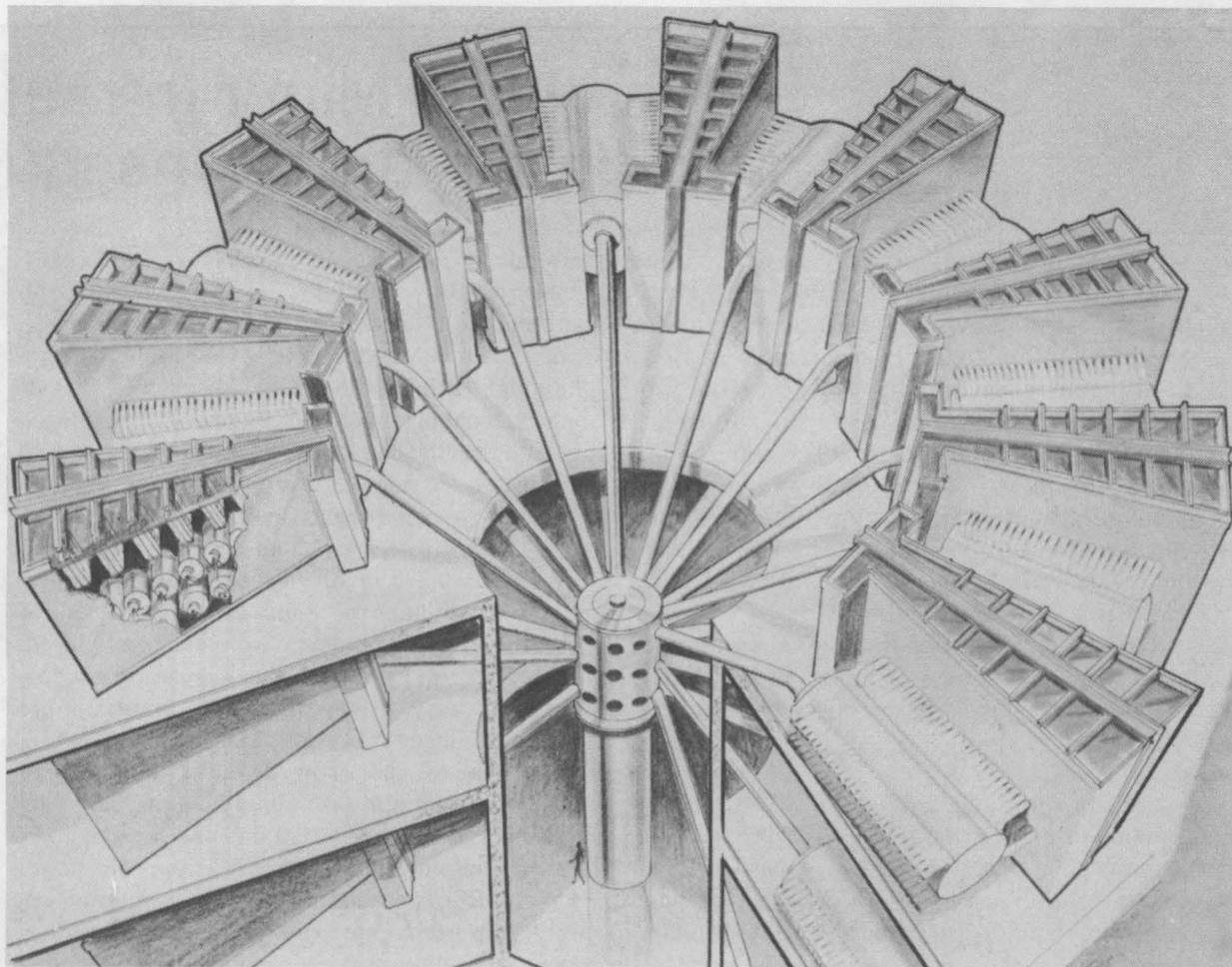
Sandia is DOE's lead laboratory for light ion fusion. The goal of this program is to probe for the threshold of igniting thermonuclear fuel in the laboratory and — if that threshold is within the capability of PBFA II — to ignite. This is expected to require an ion beam with a power of 100 terawatts, an energy of 1 megajoule, a pulse width of 10 to 15 nanoseconds (a nanosecond is one-billionth of a second), and a focused intensity of 100 terawatts per square centimeter.

The NAS panel will produce an interim report by Jan. 15; it will focus on technical accomplishments and future plans at the six fusion laboratories, and on DOE management of the program. Don says this report will be used by Congress, DOE, the fusion labs, and the NAS panel as a basis for discussion and will include much of what is expected to be in the final report that goes to Congress on Sept. 15.

"Regardless of the recommendations from the NAS panel — and I expect them to be favorable — the review was a success for us," says Pace VanDevender, Director of Pulsed Power Sciences 1200. "The quality of our people and their achievements were evident in our presentations."

### Sandia Competing for LMF

Sandia, along with the other labs involved in fusion research, will compete for the job of providing the technology for DOE's planned Laboratory Microfusion Facility (LMF). This next major ICF facility is expected to produce a thermo-



SANDIA'S CONCEPT for the Laboratory Microfusion Facility (LMF), shown here as an artist's sketch (for an indication of scale, note the human figure near bottom center). DOE is expected to decide in the mid-'90s which type of driver (such as laser or ion beam) the LMF will use. Pace VanDevender (1200) says, "A Sandia objective for the LMF is to provide aboveground testing for DOE and DoD military hardware. The facility could leverage an expanded mission for DOE — to provide DoD with large-scale, high-quality x-ray simulations in the laboratory in collaboration with DNA [Defense Nuclear Agency] and the DoD services."

nuclear yield of 1000 megajoules, with a 10-megajoule input energy to the target. A decision about the type of driver — laser or ion beam, for example — to be used in the LMF is currently expected to be made in 1994-96, with construction to start about the same time.

Venky Narayanamurti, VP for Research 1000,

says Sandia's fusion R&D is at an important stage. "The results we obtain over the next few years will be critical in establishing the credibility of the light-ion approach for ICF," he says. "I'm looking forward to seeing the NAS recommendations. They will play a major role in determining future directions for the nation's ICF program." ●LP

## Fortieth Anniversary Issue Wrap-Up

*Editor's Note: The Nov. 1 LAB NEWS issue, which focused on our 40th anniversary of management by AT&T, contained about twice the usual number of pages and was published two days earlier than normal to coincide with the actual anniversary date. Here's a wrap-up, including some reader comments.*

G. C. Hollowwa (3411), the Sandian who has the most service among active employees (43 years, 4 months) sent a note giving more information about the large aerial photo that was on page 14, which showed the Z-Division Technical Area in 1946 or '47.

His comments: "The 'crates of material' were actually the world's atomic bomb stockpile. Except for the high-explosives, which were stored in igloos at Kirtland, all of the spare weapons were in these crates. There was no nuclear material since there was only enough for the two bombs used in Japan.

"The board fence, shown on page 15 [in a drawing], was an afterthought. Someone thought that the 'stockpile' should not be in the direct view of the public (those that were allowed on 'Oxnard Field')."

G. C. continues, "In the photo, immediately above Bldg. 838 by the guard shack, are two white military tanks. One is in side view and one almost head-on. They were used to survey the radioactivity in the blast crater at Trinity. Also in this portion of the Motor Pool was the remains of the multi-wheeled trailer that carried *Jumbo* to Trinity. The trailer had approximately 80 wheels.

"The Tech Area was patrolled by partially trained Military Police. Several Lab employees were surprised at night by warning shots fired in

the air. The story was that the MPs were not certain if their orders were to yell 'HALT' three times, then fire their weapon, or vice versa."

Several active and retired employees wrote or called to ask why we didn't list all of the original Sandians and mention other long-time employees who made major contributions to the Labs over the years. As we wrote in several places in the issue, our purpose was not to present a comprehensive history or to credit every deserving employee; we simply didn't have the space or the time to do that. Sandians who want to read the new detailed history of our early years don't have long to wait. The 850-page *Sandia National Laboratories: The Postwar Decade* is scheduled to be published by UNM Press soon after the first of next year. Additional information is available from the history project office (846-9618).

We did mention every *on-roll* employee who has worked at Sandia for all 40 years since AT&T assumed management of the Labs on Nov. 1, 1949. We didn't try to mention everyone who accumulated at least 40 years of service at Sandia, or all individuals who worked at Sandia during the earliest days, although several were mentioned within the context of some articles.

### Retirees With Forty Years

For the record, here's a list of retired Sandians (one deceased) who accumulated 40 years or more of service before retiring, meaning that they began work at the Labs before AT&T assumed management:

Howard Austin, Clyde Babcock, Val Gene Black, Vernon Brewster, William Caldes, Frank Chavez, Tony Chavez, William Cocke, Walter Drake, Robert Durand, Reynaldo Gonzales, Lyle

Edward Hake, Ira Hamilton, Edward Harley, Billy Hickerson, Leo Jercinovic.

Also, Adolfo Martinez, John Michnovicz, Joseph Muench, Leo Ortiz, Chris Padilla, William Pawley, Ray Powell, Jack Reed, Edward Salazar (dec.), Robert Schowers, Jack Raymond Smith, Leon Smith, William Thomas, Blythe Wemple, and R. E. Womelsduff. [Thanks for the list, Priscilla Spahr (3545).]

### A Question and Some Oopses

In the page of old LAB NEWS ads, we ran one from 1961 that listed a '59 Mustang car for sale. Don Lewis (7231) points out that the Ford Mustang didn't come on the market until the mid-'60s and wonders if there was another automobile with the same name. Any of you car buffs know?

In the rush to get the issue out, we made a couple of errors and, in at least one instance, didn't give credit where it was due. Former Sandia President James McCrae's (dec.) name was misspelled "McCrae" in the old-photo layout. Dave McCloskey's (6400) name was spelled correctly in a story, but was misspelled under his photo. Point Mugu, Calif., was incorrectly referred to on the Sandia, Livermore, page as "Point Magoo" (please, no jokes about our proofreader being "Mr. Magoo"). And we didn't list one of the Sandians who helped write the "Recollections for Tomorrow" booklet — Bruce Hawkinson (3153) — although we did publish the best photo that we could find of him when he was a LAB NEWS "cub reporter."

Extra copies of the 40th anniversary issue are available in the LAB NEWS office, Bldg. 814. Come by or call 844-7841 if you need extras. ●LP

## Supervisory Appointments



**DAN POOLE** to supervisor of Property Reapplication Div. 3414.

Dan joined Sandia's machinist apprenticeship program in September 1968 and graduated in 1972. He joined the Education and Training Division in 1974 as program coordinator for the Apprenticeship, Educational Aids, One-Year-On-Campus, ESA Training, and MAS/MLS Trainee programs.

He transferred to Personnel in 1978 as an MAS trainee and worked in the hiring program for apprentices, guards, custodians, and graded employees. He was technical-institute recruiting coordinator from 1980 to 1982. From 1982 to 1989, Dan was in the Systems and Appraisal Division, where his responsibilities included budget coordination, project leadership for various property-management and security-systems programs, and special studies for Management. He was a recruiting coordinator and Personnel Representative at Livermore for seven months in 1982-83.

He has an AS in administrative technology through Sandia's Technical Institute Equivalency program and a BS in industrial education from UNM, and has done graduate work in public administration at UNM.

He enjoys golf, traveling, and restoring classic automobiles. Dan has two grown daughters. He and his wife Debra (5122) live in the NE Heights.

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**NEITA TUCKER** to supervisor of Payment Control and Accounting Section 154-2.

Neita joined Sandia as a typist in April 1964.



**NEITA TUCKER (154-2)**

A year later, she transferred to the Payment Processing Section, where she worked as a file and accounting clerk. She joined Sandia's MLS Training Program in 1979, and worked in the Payroll, Financial Policies and Procedures, and Budgeting divisions. She completed the MLS program in 1981, and was a member of the Payment Processing, Property Accounting, and Customer and Supplier Accounting divisions until her promotion.

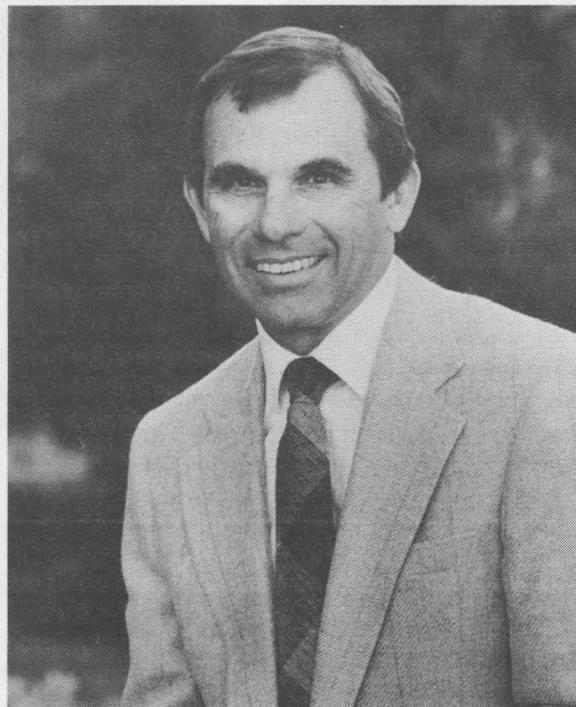
She has a BSBA in accounting from the University of Albuquerque and an MBA from New Mexico Highlands University.

Neita enjoys gardening, camping, and fishing. She and her husband William (9122) live in Peralta. They have four grown children.

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**CRAIG TYNER** to supervisor of Solar Thermal Collector Technology Div. 6216.

Craig joined the Labs in June 1977 as a member of the Process Research Division, where he did oil shale process experimentation and modeling. He transferred to the In Situ Technologies Division in 1980 and continued oil shale process development — including large-scale field testing in Utah



**CRAIG TYNER (6216)**

— underground coal gasification process experimentation, and field-test planning.

In 1985, he joined the Central Receiver Technology Division, where he worked on development and testing of solar central receiver subsystems. He transferred to Div. 6216 in 1989, and was involved with the development of hazardous-waste processing applications of solar thermal technology.

Craig has a BS from the California Institute of Technology and an MS and PhD from the University of Illinois, all in chemical engineering.

He enjoys bicycling, skiing, and golf. Craig and his wife Katherine have two children and live in the NE Heights.

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**SALLY DOUGLAS** to supervisor of Ceramics Section 7476-1.

Sally joined the Labs in February 1981 as a member of the High-Temperature Chemistry Division (later the Inorganic Materials Chemistry Division), where she worked on cesium vapor transport. She also studied the durability of glasses used in lithium battery applications. In 1985, she transferred to the Ceramics Development Division, where her work included surface analysis of glasses and ceramics using x-ray photoelectron spectroscopy.

She has an AS in chemistry from William Rainey Harper College (Palatine, Ill.) and a BS in chemistry from UNM. Before joining Sandia, she



**SALLY DOUGLAS (7476-1)**

worked at the Inhalation Toxicology Research Institute on KAFB. She's a member of the American Ceramic Society, Phi Beta Kappa, and the South Central New Mexico Technician Affiliate Association (affiliate of the American Chemical Society). She was named SCNMTAA Technician of the Year in 1988.

Sally's spare-time activities include jogging, yoga, dancing, reading, and jig-saw puzzles. She has one son and lives in the east Sandia Mountains near Golden.

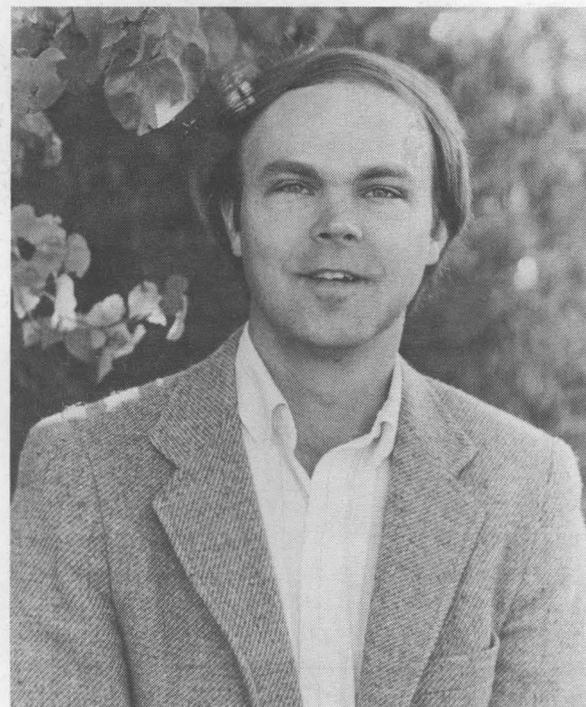
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**CLIFFORD RENSCHLER** to supervisor of Physical Chemistry and Mechanical Properties of Polymers Div. 1812.

Cliff joined the Labs' Chemistry of Organic Materials Division in September 1981, and remained with that division until his promotion. His work has included development of a dyed photoresist to solve a reflective notching problem in lithographic patterning, and development of organic radioluminescent lights. He is currently doing work related to detectors for the Superconducting Supercollider and is investigating the production of thin carbon films from the pyrolysis of polymers.

He has a BS in chemistry from the University of Evansville and a PhD in the same field from the University of Illinois. He's a member of the American Chemical Society and the Materials Research Society.

Cliff enjoys bread-making, cross-country skiing, and church activities. He and his wife Karen have twin sons and live east of Tijeras.



**CLIFF RENSCHLER (1812)**

## ECP Wraps Up 1989 Drive: Pledges Up Nearly 7 Percent

Community needs continue to grow, and Sandians continued the tradition of meeting those needs with \$1,371,099 pledged during this year's Employee Contribution Plan campaign for United Way. The campaign is wrapping up, and preliminary figures indicate that the total pledged is up 6.8 percent over last year's total of \$1,283,977.

The number of employees contributing stands at 88.9 percent; last year's participation was 89.3 percent. Some 48.1 percent of Sandians made Fair Share contributions (one hour's pay per month, or more), up 2.4 percent from the start of the campaign. The directorate with the greatest increase in ECP participation over last year is Org. 3300 with 84 percent of the directorate participating, a 7.3 percent increase.

Employee Contribution Plan Chairman Dick Shepardson (3550) says, "Sandians came through again. And it's really encouraging that our Fair Share participation increased."

At Monday's ECP wrap-up luncheon, United Way President Mike Thompson told ECP committee members and directorate representatives, "The one statistic I'd like to share with you is the number 34,000. That's the number of people helped by the 20 percent of total United Way funds that Sandians traditionally contribute." ●



UNITED WAY of Greater Albuquerque President Mike Thompson (left) presented a Certificate of Appreciation to Sandia at the Employee Contribution Plan Campaign wrap-up luncheon early this week. Kay Sanderville (3340), representing Directorate 3300 (84 percent of employees participating), shows the award as ECP Chairman Dick Shepardson (3550) looks on.

## Dick Brodie Is New Special Assistant for Weapons

Dick Brodie (formerly DMTS, 5100) became Sandia's Special Assistant for Weapons, Dept. 25, effective Nov. 1.

The new position is department-level without managerial responsibilities, similar in structure to the three Research Scientist department-level assignments in Org. 1000. Dick reports directly to Executive VP Orval Jones (20) and is a specialist on Labs-wide weapon-program issues, such as weapon safety. He'll provide technical analysis on a broad range of weapon-program concerns, based on input from Sandia groups and Washington, D.C., agencies.

"Dick's contributions to the nuclear weapon program have been so influential that he is viewed both inside and outside the Labs as a national resource," Orval says. "His appointment as Special Assistant for Weapons is further recognition of that fact."

Dick has worked in the weapon safety area since joining the Labs in 1976. He's been involved in the stockpile improvement program, worked in support of the Long-Range Resources Planning Group, examined nuclear-weapon-use control policies, and developed and taught an INTEC course on nuclear weapon design. He was named a Distinguished Member of Technical Staff in 1983. He received the DOE Award of Excellence in 1982 for recommendations about weapons in stockpile, for his role in the long-range resource planning group, and for his work in evaluating and formalizing weapon-use controls.

From 1986 to 1988, Dick was on special assignment in Washington, D.C., as scientific advisor to the DOE Deputy Assistant Secretary for Military Application. He has led and participated in numerous national weapon-program studies.

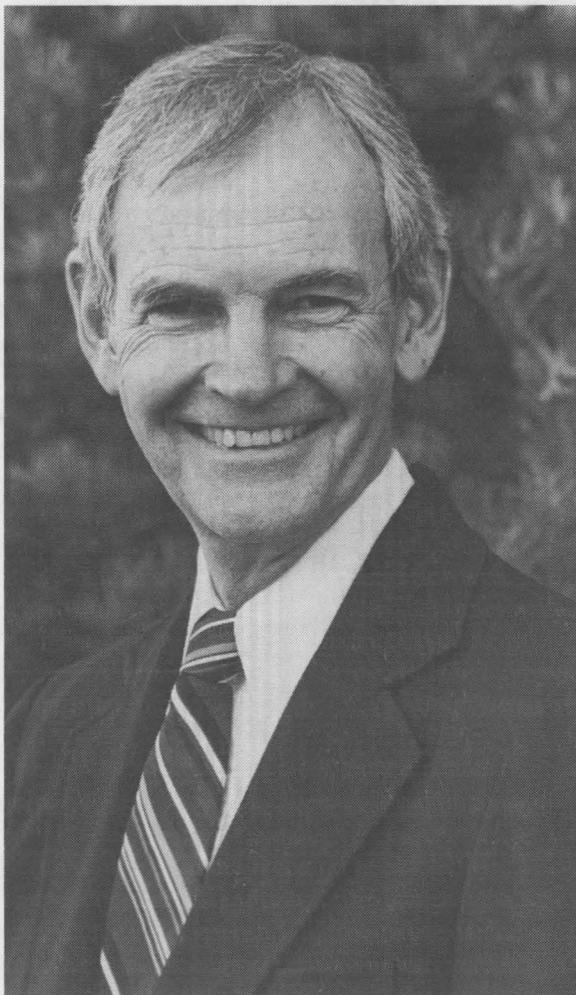
"I consider it a real privilege to work here," Dick says. "Sandia has served the nation well in ensuring the nuclear stockpile is ready — but also safe, secure, and controlled."

Dick served 20 years with the U.S. Air Force, beginning as a fighter pilot. His service included two tours at the Air Force Weapons Lab on KAFB. He was assigned to the Office of the Secretary of Defense at the Pentagon when he retired in 1976 as a colonel.

Dick has a BAA in mathematics from North Texas State University and an MA and PhD in the same field from the University of Texas at Austin.

He enjoys reading and carving miniature wooden figures of ideas — one was of a headache. Dick and his wife Genelia have two grown children and live on the west bank of the Rio Grande.

●JW



DICK BRODIE



## feed *feedback*

*Q. Some employees devote many hours to Sandia recreation activities during the workday. They use company word processors, plus reams of paper for producing copies mailed through the Labs' mail system. Numerous phone calls about sports are handled. This can be very disrupting to co-workers. What is the policy on these activities during the workday?*

A. Employees are expected to perform their work in a responsible manner. Sandia offers many support services to facilitate our work. These services, such as word processors, copiers, and telephones, are to be used *only for business* — and not for personal purposes of any kind. The only exception: Stamped personal mail may be sent through the mail distribution system. Stockroom materials and supplies may be used only for authorized work. Employees are to charge all labor and material costs to the appropriate project or case. Activities such as those you have described should be conducted outside of business hours, using personal resources.

These unauthorized activities should be reported to your supervisor or other members of your management. If you feel such reporting is inappropriate, you may contact the Corporate Ombudsperson on 4-2965. Each instance will be investigated and, if appropriate, corrective action taken. To the extent possible, all reports and investigations are confidential.

Paul Stanford — 100

## Fun & Games

*Horseshoes* — Sandia's 1989 annual Horseshoe Tournament was held Sept. 30 at Los Altos Park. Ringing in wins were: Class A — Tom Towne (5131), first; Leo Bressan (ret.), second; and Robert Schuch (6313), third; Class B — Jim Sanchez (3414), first; Paul Montavon (2648), second; and Johnnie Garcia (DOE), third; Class C — Lyle Davis (2825), first; David Varoz (3428), second; and Fred Shoemaker (ret.), third; Women's — Carnella Town, first; Alice Davis, second; and Leona Dennis (5113), third; Doubles — Leo Bressan and David Sealey (3152), first; and Johnnie Garcia and David Varoz, second; Retirees — Leo Bressan, first; Fred Shoemaker, second; and Jim Reed, third.

# feed back

*Q. Under the new smoking rules, employees who smoke are forced to the doorways at the entrances to our workplaces. Can some type of ash-tray or container be provided for the unsightly butts? The litter problem is really getting ugly.*

A. Custodial Services Div. 3426 and Exterior Grounds Maintenance Div. 7813 are in the process of acquiring additional appropriate cigarette-butt containers for placement at the entryways to our buildings and at selected locations near outside seating areas. Entryway containers will be checked and emptied each day by Custodial Services, and containers at the outside seating areas will be emptied twice a week by Grounds Maintenance. Smokers should respect our improved landscaping, remember to use the cigarette containers, and refrain from throwing butts on the ground outside buildings. Future concerns, suggestions, or questions can be directed to Phillip Vouterin (3426) on 4-4146 or Jim Winter (7813) on 4-6743.

Jim Martin — 3400  
Ward Hunnicutt — 7800

*Q. We who work at Coyote Test Field and other remote areas have a problem with rodents and vermin invading our buildings. The exterminator is as common a sight out here as the copier repairman is in Area I. The rodent-control contract specifies a certain type of poison trap. The problem: After eating the poison, the rodents crawl away to die in hidden, often inaccessible places. The resulting odor and the disgusting*

*chore of finding — and disposing of — the little corpses is left to whichever person has the stomach for this kind of thing. Sandia provides no service for the retrieval of dead vermin and safe disposal of such; nor is there provision for fumigation of the buildings where rodents have died in the walls or ceilings. This is a definite health hazard, particularly with the incidence of plague in N.M. The Air Force has a group that provides this kind of service. Could we not negotiate with the AF to provide us with vermin disposal, or add this to the existing pest-control contract?*

A. Our current pest-control contract includes a variety of control measures. Rodent control, poisoned-bait stations, and/or glue boards may be requested. Special circumstances are handled on a case-by-case basis. Removal and disposal of dead rodents is coordinated with the requester. Requests for pest-control services may be initiated with a Maintenance Service Request or telecon (*Weekly Bulletin*, June 22, 1989).

We recognize special needs at Coyote Test Field (CTF), and we have met with both the pest-control contractor and the KAFB Civil Engineering Squadron to address these special concerns. We are acquiring "holding-type" rodent traps to test at CTF. Trapped animals will be retrieved on call.

Odor-control resources at Sandia are limited to bottles of industrial deodorant available through JIT (JAN BIG-310).

Nestor Ortiz — 3200

*Q. The Air Force recently lowered the speed limit (from 35 mph to 25 mph) on 9th St. between Tech Area I and Tech Area IV. This road has less traffic and fewer cross streets than many nearby roads with speed limits of 30 or 40 mph. There had been a 25 mph limit sign on northbound 9th St. approaching "O" St., but it was lost in the wind several months ago, along with the 35 mph limit sign for southbound traffic at the same location. Is the new posted speed limit simply a mistaken replacement of the 35 mph sign?*

Also, the Pennsylvania intersection with "O" St. is a busy one — especially at rush hour, when the traffic on "O" St. is nearly constant. Crossing or turning onto "O" St. from Pennsylvania is dangerous. Could a fully functional traffic light, rather than a flasher light, be installed?

A. The new posting of 25 mph on 9th St. is permanent, based on a decision of the Sandia Traffic Liaison Committee. The stretch of 9th St. from "O" St. to Tech Area IV is approximately 3/4 mile and has been designated as a service road. The increasing traffic from Area I to Areas II and IV, plus the relocation of the Salvage Yard to Area II, is justification for the reduced speed limit. Also, an increase in construction activity in Area II in the very near future will further add to congestion.

As for the Pennsylvania/"O" St. intersection: The Air Force has a project in the works to install fully operational four-way traffic lights both there and at "O" and Texas streets by early 1990.

Ward Hunnicutt — 7800

## Take Note

Ron Iman (DMTS, 6415) recently won the 1989 Shewell Award from the Chemical and Process Industries Division of the American Society for Quality Control. The award, presented Oct. 26 at the Fall Technical Conference in Houston, denotes Ron's paper, "Modeling Initiating Event Frequency for Assessing Probabilistic Risk," as best paper presented at the Conference. This is the ninth paper Ron has won an award for in national competition.

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Jim Corey (9110) was recently elected to the National Classification Management Society Board of Directors for 1989-1990. The NCMS is a professional society related to security classification, information security, and technology security.

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Frances Stohl (6212) has accepted an appointment as news editor for *Fuel Processing Technology*, an international scientific journal devoted to all processing aspects for coal, oil shale, tar sands, and peat. Fran will be responsible for collecting, editing, and reporting information about upcoming meetings and news briefs on significant scientific accomplishments. The news section will be published at least three times a year beginning in January.

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Eleanor Walther (9114) has been elected president of the state board for the New Mexico Network for Women in Science and Engineering. The organization encourages women to enter careers in science and engineering and provides a network for women in these fields. If you would like more information about the organization, call Eleanor on 6-5158.

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The New Mexico Beta Chapter of Tau Beta Pi (national engineering society) will host the 1990 national convention in Albuquerque next October. This will be the 85th Convention of Tau Beta Pi, and help is needed with organizing and coordinating the activities for an expected 400 attendees.

Alumni members of Tau Beta Pi who are interested in assisting the local chapter in any way are encouraged to call Sherisse Smelser on 265-2474.

### Sandia Colloquium

Dr. Dianne Rekow (University of Minnesota Dept. of Orthodontics) will talk about engineering challenges in tailoring CAD/CAM technology to the demands of dental applications on Friday, Nov. 17, in the Technology Transfer Center (Bldg. 825) at 9 a.m. Work at the University of Minnesota has focused on creating a system using CAD/CAM technologies to automate production of dental restorations. An overview of the system in its current configuration will be presented. For information, contact host Pat Chavez (2814) on 6-5062.

Sandia will co-sponsor the 1990 National Symposium of the Society of Mexican-American Engineers and Scientists March 28-31 in Albuquerque. Papers from Sandians are now being solicited. The symposium will feature sessions for professionals, a papers competition for college and high-school students, a two-day career fair, and presentations on issues of concern to the Mexican-American community. For information, contact Jerry Aguirre (2343) on 4-2777.

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Holiday Sharing Center, sponsored by United Way of Greater Albuquerque and KGGM TV-13, offers volunteers (groups and individuals) an opportunity to share holiday spirit by singing carols at a nursing center, paying visits to the household, addressing cards for the disabled, or sharing some other special talent. The Center matches volunteers with those in need. Phone banks will operate from the UW Volunteer Center Nov. 27 through Dec. 19, Monday through Friday, from 8 a.m. to 5:30 p.m. Call 768-1077 during that time to volunteer. If you have questions before the phone banks open, call United Way on 247-3671.

Technical papers are being solicited for the 12th Annual Ideas in Science & Electronics Exposition/Symposium, to be held May 8-10, 1990, at the Albuquerque Convention Center. General theme is "Innovations and Applications — Emerging Technologies of the 1990s." Papers are invited under 11 topics: Multiprocessor/Parallel Processor Computing, Computer-Aided Design/Engineering, Neural Networks/Artificial Intelligence, Hazardous Waste Technology, Optics/Optoelectronics, Design/Test/Evaluation, Quality Engineering, Instrumentation, High-definition TV, Pulsed Power, and Robotics. Deadline for one-page abstracts is Dec. 31. Send them to Charles Christmann, ISE Inc., 8100 Mountain Rd. NE, Suite 207, Albuquerque, NM 87110. Papers must be unclassified and have unlimited distribution and company/government clearance before submission. For information, call Charles on 262-1023.

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Facilities Directorate 7800 is conducting its third holiday charity drive to benefit the Albuquerque Rescue Mission (2nd & Iron SW). On Nov. 13, collection boxes were placed at 16 locations in 11 Sandia buildings to accept donations of food, clothing, and toys. Donations will be forwarded to the mission, which provides meals, clothing, and other services to homeless and needy men, women, and families. Goods collected by Nov. 21 will be delivered to the mission before Thanksgiving. The drive will continue through Dec. 15. Cash donations for this drive will also be accepted. For information, call June Harrington (7842) on 6-2961 or Mario Garduno (contractor) on 4-0962.

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"Crisis in the Atmosphere," the 10th special in KNME-TV's Infinite Voyage series of adventures in science, will air on Channel 5, Thursday, Nov. 30, at 9 p.m. This program looks at the history, consequences, and proposed solutions to atmospheric pollution.

**For Your Benefit**

# Preferred Dental Program Adds New Providers, Deletes Others

The Preferred Dental Program (PDP), developed by Sandia's Benefits organization in 1988, is designed to lower participants' out-of-pocket expenses for dental care. PDP is a network of dental providers who have agreed to offer their services at a negotiated fee for specific services. Sandia reimbursement rates and covered dental services did not change when PDP was initiated; rather, participating dentists' rates were stabilized at negotiated rates.

In April 1989, all employees received a directory of PDP-participating dentists in various regions of the country. A directory update will be issued next April. Additions and deletions from the current directory in the Livermore and Albuquerque areas and the Nevada region are listed below. Additions were effective Sept. 6, 1989; deletions were effective as noted.

Call Louise Loudon (3545) on 844-3882 if you have specific questions about the PDP or your regional updates.

### Albuquerque Area Newly Enrolled Providers

Dr. S.E. Holbrook  
General and Family Dentistry  
7111-A Prospect Pl. NE  
Albuquerque, N.M. 87110  
(505) 881-1159

Dr. J.H. Noskin  
General and Family Dentistry  
Oak St. Dental Clinic  
200 Oak St. NE  
Albuquerque, N.M. 87108  
(505) 243-2268  
(Alternate Location)  
Allied Dental Service  
142 Truman NE  
Albuquerque, N.M. 87108

### Albuquerque Area Provider No Longer Enrolled

Dr. J.D. Paez (effective Aug. 5, 1989)

### Livermore Area Newly Enrolled Providers

Dr. D.A. Young  
2140 Shattuck Ave. — Suite 801  
Berkeley, Calif. 94704  
(415) 843-5516

*Fremont*  
Dr. S. Hariz  
General and Family Dentistry  
38080 Martha Ave. — Suite C  
Fremont, Calif. 94539  
(415) 796-3913

Dr. J.J. Montane  
General and Family Dentistry  
39572 Stevenson Pl. — Suite 228  
Fremont, Calif. 94539  
(415) 795-0444

Dr. M.R. Ricupito  
Orthodontist  
39572 Stevenson Pl. — Suite 230  
Fremont, Calif. 94539  
(415) 797-6500

*Modesto*  
Dr. L.L. Morris  
General Dentistry  
2429 Condit Court — Suite 102  
Modesto, Calif. 95354  
(202) 522-5227

*San Francisco*  
Dr. D.L. Gogol  
General and Family Dentistry  
One Embarcadero Center — Lobby Level  
San Francisco, Calif. 94111  
(415) 421-4772

Dr. J.F. Jaber  
General and Family Dentistry  
1108 Vicente — Suite 104  
San Francisco, Calif. 94116  
(415) 753-6161

Dr. A.R. Malouf  
General and Family Dentistry  
450 Sutter St. — Suite 2424  
San Francisco, Calif. 94108  
(415) 398-0411

Dr. M.H. Sander  
General and Family Dentistry  
132 The Embarcadero  
San Francisco, Calif. 94105  
(415) 391-9748

Dr. C. Sidi  
General and Family Dentistry  
450 Sutter St. — Suite 2428  
San Francisco, Calif. 94108  
(415) 391-9748

### Livermore Area Providers No Longer Enrolled

*Cupertino*  
Dr. S.W. Oshinsky (effective May 24, 1989)

*Lodi*  
Dr. G.A. Morris (effective March 26, 1989)

*Pleasanton*  
Dr. P. Lacrampe (effective Aug. 30, 1989)

*San Francisco*  
Dr. L.T. Feldbrill (effective Sept. 7, 1989)  
Dr. M.B. Emerson (effective April 13, 1989)  
Dr. W. Hammonds (effective Aug. 9, 1989)  
Dr. J.J. Petrini (effective May 11, 1989)

*San Mateo*  
Dr. M.B. Emerson (effective April 13, 1989)

*San Ramon*  
Dr. S. Russell (effective Aug. 10, 1989)

*Tracy*  
Dr. J.W. Bruns (effective Sept. 7, 1989)

*Walnut Creek*  
Dr. J.C. Carman (effective Sept. 7, 1989)  
Dr. P.J. Picard (effective July 2, 1989)

### Nevada Region Newly Enrolled Providers

*Reno*  
Dr. B.D. Broadhead  
General and Family Dentistry  
3575 Grant Dr.  
Reno, Nev. 89509  
(702) 825-4070

Dr. P.D. Preston  
General and Family Dentistry  
1601 Lakeside  
Reno, Nev. 89509  
(702) 322-2292



MORE THAN 400 SANDIA SECRETARIES attended the 13th Annual Secretarial Seminar Oct 24-26 at the Marriott Hotel. Seminar Chairperson Marlene Smith (right, 7620) greets registrants (from left) Roselyn Baca (7137), Vi Rael (6413), Lorraine Segovia (7520), and Irene Gonzales (6416). Assisting at the registration table are Secretarial Committee members (behind Marlene, front to back) Nancy Glenn (2130 — barely visible), Renee Zittell (150), and Cheryl Duran (1100). Guest speaker Lynn Collins, President of Lynn Collins & Associates, spoke about "21st Century Communication: High Tech Touch." Al Chavez (3543) and Marv Coon (3544) spoke about "Benefits Overview — Planning," and Gary Shepherd (DMTS, 2614) presented a humorous skit, "The Future: What Does It Hold?"

## Earnings Factors August 1989

Savings Plan for Salaried Employees (SPSE)	Earnings Factors
AT&T Shares	.9883
Government Obligations	.9928
Equity Portfolio	1.0277
Guaranteed Interest Fund	1.0072
South Africa Restricted Fund	1.0209
Diversified Telephone Portfolio	
Unrealized Appreciation	.9932
Realized Appreciation	.0001*

### Savings and Security Plan — Non-Salaried Employees (SSP)

AT&T Shares	.9882
Guaranteed Interest Fund	1.0073
South Africa Restricted Fund	1.0245
Diversified Telephone Portfolio	
Unrealized Appreciation	.9937
Realized Appreciation	.0002*

## September 1989

Savings Plan for Salaried Employees (SPSE)	Earnings Factors
AT&T Shares	1.1028
Government Obligations	1.0070
Equity Portfolio	.9933
Guaranteed Interest Fund	1.0069
South Africa Restricted Fund	.9995
Diversified Telephone Portfolio	
Unrealized Appreciation	1.0453
Realized Appreciation	.0051*

### Savings and Security Plan — Non-Salaried Employees (SSP)

AT&T Shares	1.1022
Guaranteed Interest Fund	1.0070
South Africa Restricted Fund	.9997
Diversified Telephone Portfolio	
Unrealized Appreciation	1.0425
Realized Appreciation	.0049*

\* The 1 has been removed from the earnings factor. Current month's DTP earnings may be calculated directly: Earnings Factor x DTP Current Worth = Current Month's Earnings.

## Welcome

*Albuquerque* — Abbas Akhil (2525), Larry Blaich (131), Charles Cote (2626), Jo Cunningham (3723), Robert Dana (3726), Farajollah Ghanbari (3213), Thomas Grasser (1264), Stephanie Hallett (9212), Daniel Hamrick (2362), David Higgins (9114), Duane Landa (3180), Raymond Lemke (1241), Alva Parsons (3202), Kathy Roach (7823), Mark Savage (1272), William Shelton (2855), Carol Skaggs (22-2), Alan Solow (3202), Jose Torres (1273), George Trever (9215).

Elsewhere: *Arkansas* — Darren Talley (6452); *California* — John Butterfield (7264); *Florida* — Ray Garcia (5248); *Illinois* — Paul Corken (2851), Thomas Weber (7526); *Indiana* — Timothy Meisenheimer (2147); *Michigan* — Carla Montoya (5268); *New York* — Phillip Kennicott (2811); *Ohio* — Randal Lockhart (2858), Peter Stangas (1233); *Oklahoma* — Eric Curtis (2343), Fred Nees (121); *Oregon* — Kerry Tweet (2543); *Pennsylvania* — Roy Baty (1551); *Tennessee* — Charles Massey (3202); *Texas* — Roy Fitzgerald (121), Jay Hammond (2362), Samuel Narrow (3212), Vincent Scott (9231); *Utah* — Ray Meyers (1523); *Vermont* — Donald Oatley (7476); *Wisconsin* — Brian Matt (7233).

## Health\$mart Update: CareCall And ReviewPlus

By Jann Levin (3543)

Do you have a question about health care services? Call CareCall on 1-800-221-1471. CareCall, part of the Health\$mart program, is a toll-free medical information hot line designed to help you become a better informed consumer of health care services. More than 1000 Sandians used the CareCall service during the first three months of the Health\$mart program. CareCall's staff of registered nurses, trained to help you understand medical problems, can:

- Provide the names, addresses, and telephone numbers of specialists and discuss other medical services available in your area;
- Explain medical issues in lay terms and discuss ways of communicating specific concerns to physicians;
- Research the compatibility of different medications you may be taking;
- Explain the results of a particular test or discuss possible additional questions you may want to ask your doctor about a test he or she may recommend.

CareCall also provides a CareTIPS brochure, distributed to employees on a quarterly basis. The brochure covers a variety of timely medical topics; back care and alcoholism issues were subjects discussed in the first and second issues.

Also, you're reminded that to avoid a \$300 penalty on medical reimbursement under Sandia's Medical Care Plan, you must call ReviewPlus on 1-800-221-1471 in the following situations:

- Before all nonemergency hospital admissions;
- Before all nonemergency surgeries performed in a surgical facility, e.g., in a hospital or

outpatient surgical center;

- Before the fourth outpatient psychological counseling session;
- Before any psychological testing;
- When a pregnancy has been confirmed, and again within 48 hours of the delivery;
- Within 48 hours of any emergency hospital admission or emergency surgery.

During the first three months of the Review-Plus program, 774 cases were reviewed; in all but 13, a second opinion was waived.

Here's a clarification on another subject — the matter of assistant surgeons. What do you do when ReviewPlus does not recommend that an assistant surgeon is medically necessary?

In many parts of the country, a primary surgeon and a nonsurgical trained assistant — for example, a surgical nurse or a physician's assistant — are performing surgical procedures. Though this arrangement has not been the norm in the Albuquerque and Livermore areas, it's now used occasionally. In the Albuquerque area, for example, orthopedic and cardiac surgeons are using physicians' assistants in lieu of physicians on a regular basis.

ReviewPlus does not deny that an assistant is necessary; it merely suggests that the assisting individual does not necessarily have to be a physician.

ReviewPlus does not determine the benefits payable. If ReviewPlus does not recommend an assistant surgeon, you should call the Provident claims office to determine whether or not benefits cover such an arrangement. (On most procedures, Provident's guidelines allow for an assistant surgeon.)

### For the 32nd Year

## Sandians Invited to Help 'Shoes for Kids'

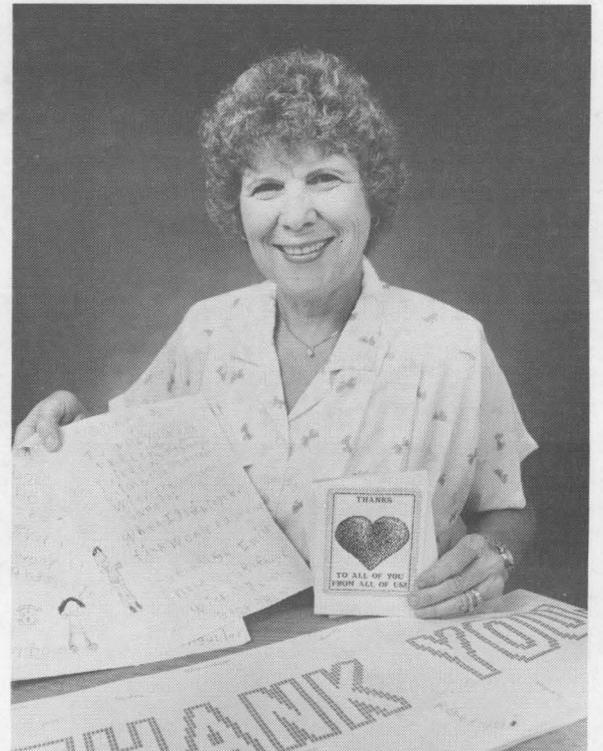
Thirty-two years ago, people in what is now Systems Evaluation Directorate 7200 started buying shoes for schoolkids. They haven't stopped.

The idea was to skip the usual exchange of season's-greeting cards and, instead, help some of the local children who needed shoes for the cold months. Shoes for Kids has always been a no-pressure, low-visibility effort — a program not of Sandia, but of Sandians. Last year it resulted in a warmer winter for about 170 students in Albuquerque Public Schools.

With Sandians' and friends' contributions, Kinney's Shoes in Coronado Center will again this year fit a pair of shoes to each child (at a discounted price of about \$20 a pair).

Recently some of the Sandia folks who help run the campaign talked with principals and teachers from Eugene Field, Mission, La Mesa, Hawthorne, and Emerson elementary schools. The educators — who identify the children most in need — say they will be grateful for the contribution. They also point out that even a donation program as large as Shoes for Kids takes care of only a portion of the APS children who need warm winter shoes.

Members of Div. 7212 are coordinating this year's campaign. Sandians who wish to contribute should make out a check to Shoes for Kids and send it to Judy Mead (7212) by Dec. 8.



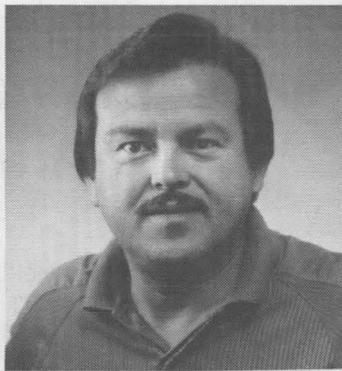
JUDY MEAD (7212 supervisor) shows some of the thank-you letters from kids who received warm shoes through last winter's Shoes for Kids campaign. Judy invites Sandians and retirees to help again this year (see the story).



# MILEPOSTS

## LAB NEWS

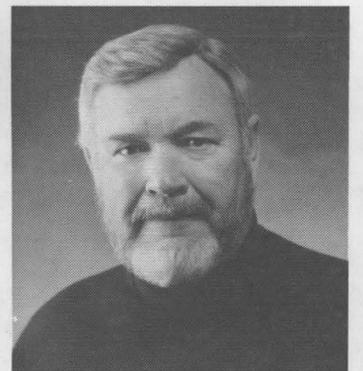
November 1989



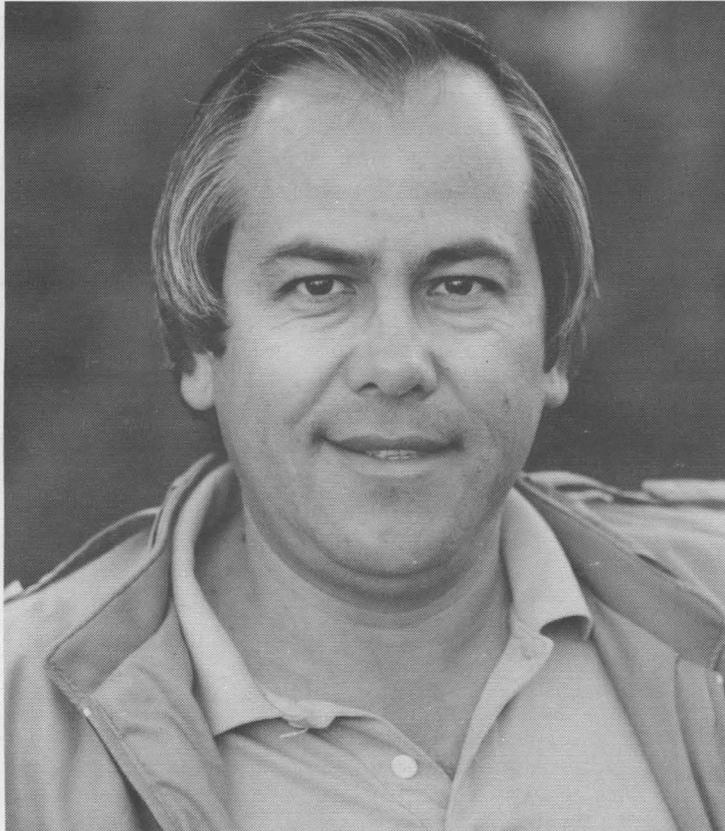
Frank Carrillo (7482) 15



Richard Rogers (153) 25



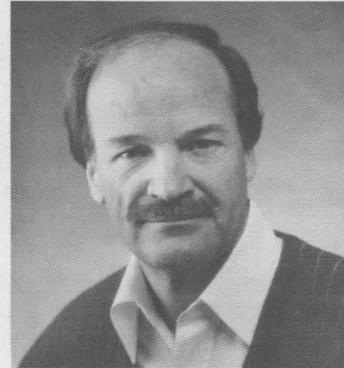
Wil Boyd (2541) 25



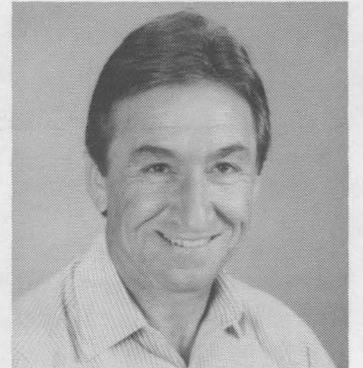
Joe Montoya (7412) 15



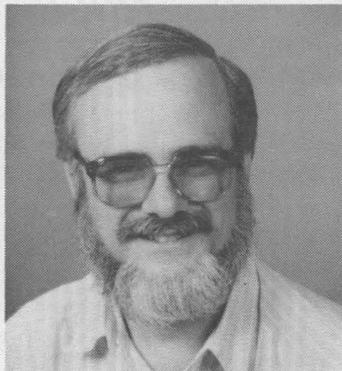
Ernie Marquez (7818) 20



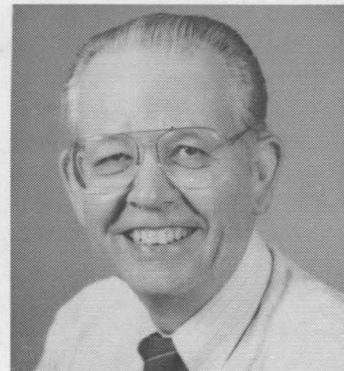
Don Bates (3532) 20



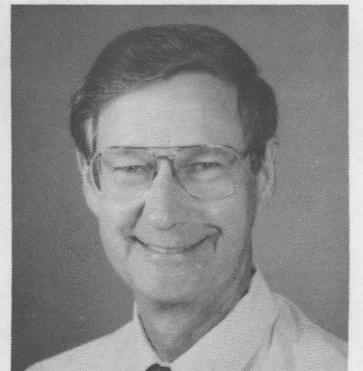
Tommie Bryant (8536) 30



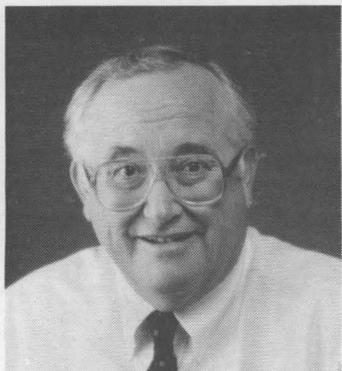
Hilary Jones (8235) 30



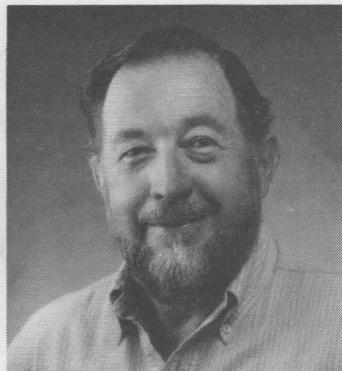
Arnie Rivenes (8132) 30



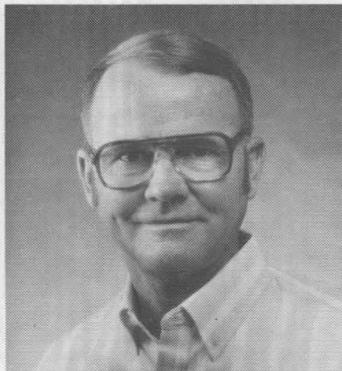
Max Schell (8452) 30



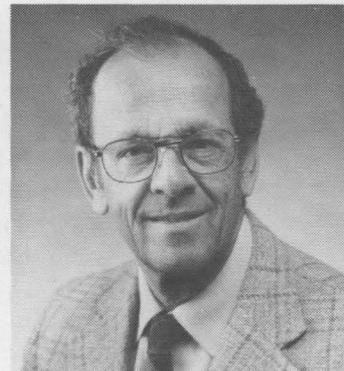
Leo Graham (123) 25



Wayne Ebaugh (5214) 30



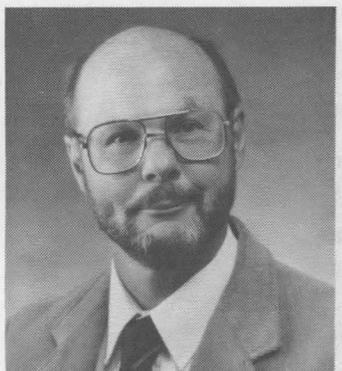
William Kampfe (DMTS, 7535) 30



Dick Vivian (7213) 35



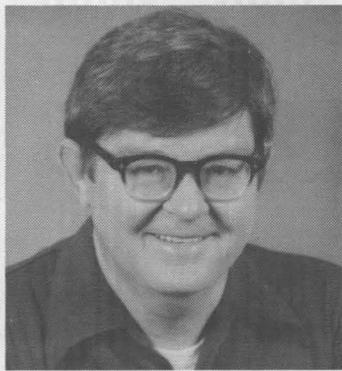
Sandy Anderson (7241) 20



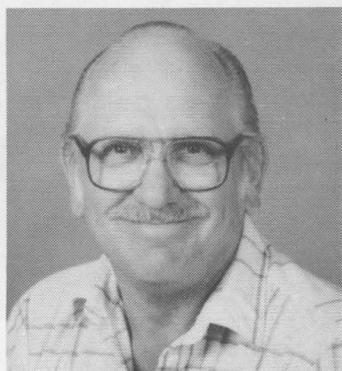
Tom Prevender (9241) 20



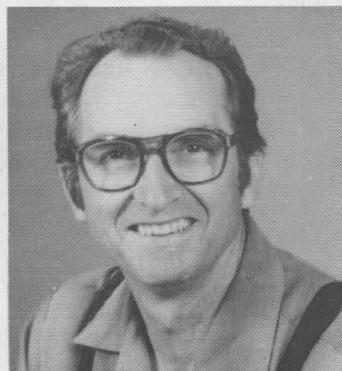
Jim Giachino (3411) 20



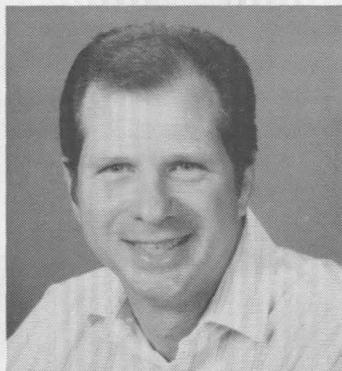
Fred Whitworth (8525) 30



Ollie Rohrback (8285) 25



John Totten (8243) 25



Larry Clark (8271) 20



Marilyn Rozelle (2631) 30

# Fun & Games

**Bowling** — Winners of the 4-Game No-Tap Tournament Oct. 21-22 at Fiesta Lanes were Cheryl and Ken Wiltsie with a combined handicap series of 1620. Second place went to Micki Archuleta and Mike Silva with a combined handicap series of 1602. September Bowlers-of-the-Month: Scratch — Ron VanTheemsche (2857),

709; and Margret Tibbetts, 595; Handicap — Lon Bivens (2833), 685 and 733; and Patty Jojola (3731), 554 and 665.

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**More Bowling** — Bowl USA for Cystic Fibrosis takes place Saturday, Dec. 2, at most bowling centers in Albuquerque, Rio Rancho, and

Bosque Farms. The event is open to teams and individuals, and non-bowlers are invited to join. Pledges are collected for every point scored in a three-game series. League scores may be used. Prizes include everything from T-shirts to TVs. For information, call Barbara David at the Cystic Fibrosis Foundation on 255-7507.

UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS

**Deadline: Friday noon before week of publication unless changed by holiday. Mail to Div. 3162.**

**Ad Rules**

1. Limit 20 words, including last name and home phone.
2. Include organization and full name with each ad submission.
3. Submit each ad in writing. No phone-ins.
4. Use 8 1/2 by 11-inch paper.
5. Use separate sheet for each ad category.
6. Type or print ads legibly; use only accepted abbreviations.
7. One ad per category per issue.
8. No more than two insertions of same "for sale" or "wanted" item.
9. No "For Rent" ads except for employees on temporary assignment.
10. No commercial ads.
11. For active and retired Sandians and DOE employees.
12. Housing listed for sale is available for occupancy without regard to race, creed, color, or national origin.

**MISCELLANEOUS**

SEARS 12" WOOD LATHE, faceplate, chisels, bench, \$190. Grafe, 897-4745.

CAMPER SHELL, wooden frame, metal sides and top, LWB, \$250 OBO. Eisenberger, 877-7041.

GIRL'S CLOTHES: size 8-12 pants, blouses, summer shorts, tops, shoes, 25c/ea.; fireplace screen, \$10. Smith, 299-7151.

HOLIDAY MILK GLASS: 40 punch cups, 16 luncheon plates, grape leaf design, \$25. Rosul, 281-4114.

LEICA M-SERIES LEATHER CAMERA BAG, new, in original box, \$125 OBO. Laskar, 293-0187.

BLACK MINIATURE POODLE, male, has shots, 8 months old, \$50. Sinneros, 898-0156.

WINCHESTER RIFLE, model 70, .270-cal., Redfield scope. Helsel, 256-9676.

KIMBALL UPRIGHT PIANO. Konrad, 294-2807.

HIDE-A-BED COUCH, \$200. Campbell, 294-6000.

SEARS ROWING EXERCISER, \$125. Lee, 298-5871 weekends.

CHERRY-WOOD DINETTE SET, 4 months old, 7-piece, \$1000 OBO; Kenmore heavy-duty washer and dryer, 9 months old, \$600 OBO. Romero, 828-1605 after 3.

SMITH-CORONA XL1000 TYPEWRITER, dual pitch, auto correct and center, 3 extra print wheels, carrying case, used twice, \$100. Tozzi, 828-3976.

STONE GARDEN FOUNTAIN, pedestal basin, lion's head, 4' tall, approx. 300 lbs., you haul, \$25 OBO. Moya, 296-8824.

TEARDROP CAMPER, 11', refrigerator, oval propane tanks, double sink, range w/oven, jacks, \$950. Shank, 877-4497.

CHARLES BRAGG LITHOGRAPH SUITE, "Next Case," court humor, appraised at \$3000, make offer. Duncan, 281-8792.

MAGNIFIER FLUORESCENT LAMP, in box, \$69; home shop vacuum, 16-gal., wet/dry, \$69; attachments, \$15; 40-channel CB, \$49. Brooks, 298-8448.

SAILS: 6.9m<sup>2</sup> NPU, RAF, \$130; 6.2 Mistral camber race, \$230; 6.1 NPU camber race, \$180. Healer, 298-6967.

QUEEN-SIZE WATER BED, padded rails, heater, 6-drawer pedestal base, \$125. DeReu, 275-2336.

WESTINGHOUSE WASHER/DRYER STACK, large-load apt.-size, \$397; decorative wrought-iron gates, 42-1/2" x 42-1/2", \$75. Laffoon, 298-7282.

MAGAZINES: *Popular Science*, 1979-1985, complete; *Mechanics Illustrated*, 1983-1984, complete; bedroom and living room furniture. Pilat, 292-4727.

MINIATURE DACHSHUND PUPPIES, AKC-registered, black/tan, \$200; Green Shield racing homer pigeons, \$15/ea., \$25/pr. Puccini, 873-1703 or 255-0568.

YAMAHA CD PLAYER, 3-beam laser, 4x oversampling, w/warranty, \$150 OBO; Yamaha double cassette deck, Dolby B and C, MPX filter, high-speed dubbing, \$150 OBO. Lunsford, 839-9517.

KONICA FS-1 CAMERA; Hexanon lenses: 40mm f1.8, 28-135mm zoom, 2x teleconverter; filters; Konica X-24 auto flash; tripod; Kiwi case; \$400/all. Martello, 881-7835.

BLACK AND WHITE CAT, named Murphy, neutered male, housebroken, declawed, was abandoned, affectionate, needs friendly, loving home. Schneider, 299-6243.

DIRECTOR'S CHAIRS, natural hardwood frames, flax-color canvas seats and backs, two for \$35. Rainhart, 821-3690.

ALUMINUM STORM DOOR, Sears, crossback, 36" wide, right-side hinged, \$30. Sullivan, 299-6545.

KING-SIZE BED, box spring and mattress, black dust ruffles, bed linen, \$100. Jones, 881-6006.

CHROME WHEELS SET, for GM vehicle, \$30. Padilla, 296-5048 after 5.

KING-SIZE WATER BED, complete, \$100 OBO; above-ground pool, 4' high, complete, \$100 OBO. DeTevis, 897-4081.

ROUND-TRIP AIRLINE TICKETS: Albuquerque/Denver, lv. Nov. 21, ret. Nov. 27, \$240 negotiable; Albuquerque/Minneapolis, lv. Nov. 21, ret. Nov. 27, \$240 negotiable. Schneider, 292-6373.

KING-SIZE WATER BED, bookcase headboard, heater, \$300 or trade for queen-size firm mattress and box spring w/frame. Tooker, 865-7437 after 5:30.

CAB-OVER CAMPER, 8', for full-size trucks, sleeps 4, \$500. Aubert, 296-4173.

DECORATIVE WOOD-PANEL ROOM PLANTER/DIVIDER, w/plants, 37"L x 38"H x 13"D, \$25 OBO. Campbell, 889-0961.

S&W MODEL 58 M&P .41-mag., \$225; S&W model 10 M&P .38-SPL, round butt, 4", \$175. Guthrie, 299-7182.

ROSSIGNOL 100 SKIS, w/Salomon 127 bindings, \$30. McRee, 898-5030.

QUEEN-SIZE SOFT-SIDE WATER BED, uses regular sheets, individual bags, w/heaters, cost \$700, sell for \$200 OBO. Burns, 281-2793.

HIKING BOOTS, Red Wing 8" Irish Setters, woman's size 8A, worn twice, cost \$130, sell for \$65. Dippold, 821-5750.

WHITE MINIATURE POODLE, male, has all shots, \$125. Sanchez, 292-1982.

CD PLAYER, still under warranty, \$95. Smith, 265-4080.

STEREO COMPONENT CABINET, Gusdorf, dark wood w/glass doors, 3 shelves plus record storage, \$60. Anderson, 294-8451.

TURQUOISE/SILVER JEWELRY: squash blossom, \$275 OBO; bolo tie w/1922 silver dollar insert, \$35 OBO. Sikora, 881-4741.

'78 BETHANY FOLD-OUT TENT CAMPER, 3-way refrigerator, stove,

heater, double sink, sleeps 6, awning, new tires, 2 butane bottles, \$2000. Padilla, 831-2114.

ANDREW TOBIAS' TAX-CUT SOFTWARE PROGRAM for last year, new in unopened box, \$15. Schubeck, 821-3133.

ELECTRIC SPACE HEATERS: one Sears, one Manning-Bowman, 1500 watts, automatic fan-forced, \$8/ea. Everts, 822-1767.

AQUARIUM, 45-gal., complete, w/fish, \$150; Craftsman push mower, \$30. Smith, 298-9588.

UTILITY TRAILER, LWB Chev. pickup box, spare tire, wired, painted, \$325. Snelling, 294-5751.

DESK, solid wood upper and lower shelves, swing-out door, matching chair, \$600. Seyfer, 292-0179 after 6.

DINING SET: dark wood, 72" oval table, 6 chairs, china cabinet, \$650 OBO. Joseph, 299-6989.

CHEV. CAMARO BRA, new; reclining chair, rose/beige color; B&W portable TV/radio, new, 5" screen. Carson, 892-9895.

FOUR ANTIQUE CHAIRS, oak, from England, straight lattice backs w/carvings, \$125. Foty, 268-0412.

S&W MODEL 34, 4" barrel, \$300. Greene, 299-4163.

SNOW CHAINS, for 13" wheels, never used. Judd, 294-5347.

GREEN COUCH, \$75; Queen Anne chair, \$55; super-single water bed, \$75; kitchen table, \$50; walnut dresser and mirror, \$75. Purcell, 296-4986.

IBM-COMPATIBLE PC, dual floppy, amber monitor, 512K, Hercules card, new boards, \$500; 5-piece walnut dinette set, \$50. Schofield, 292-7220.

**Next Deadline**

The next issue of the LAB NEWS will be published Dec. 8. Deadline for ads and other submissions for that issue is noon Dec. 1.

SINGER FEATHERWEIGHT SEWING MACHINE, carrying case, \$400 OBO. Riggs, 255-5725.

TOURMALINE MINK JACKET, appraised at \$3200, sell for \$1500; mink stole, appraised at \$1000, sell for \$200. Tibbetts, 293-2856 after 6.

COUCH, contemporary style, \$45. Benedict, 296-4986.

THORENS TD-125 TURNTABLE, w/spare tonearm mounting board, SME-3012 16" tonearm, 2 unmounted 15" Baldwin subwoofer speakers, \$175. Simmons, 281-3590.

BED LINER, Line-A-Bed, fits short bed or king-cab-type mini-trucks, \$75. Luna, 255-2220.

KNITTING MACHINE, Brother 890 punchcard, standard gauge, complete w/accessories, manuals, extras, \$385. Stiegler, 883-0112.

CREDENZA, made by Indiana Furniture, black walnut throughout, suitable for executive, physician, or legal office, \$500. Siegrist, 293-4148.

YAKIMA BICYCLE RACK, 2-rail, new, \$150; bicycle seat for small child, \$15. Garcia, 898-2605.

TWO SEARS FLEX-O-LOUNGER RECLINERS, brown Naugahyde, \$100/ea. or \$175/both. Cox, 299-0480.

THREE SACKS EL REY STUCCO, adobe color, \$2.50/ea. Johnston, 299-1830.

MULTI-FAMILY GARAGE SALE: dining table & chairs, sewing machine, bicycles, tricycles, typewriter, miscellaneous, 2109 Algodones NE, Saturday, Nov. 18, 9 a.m.-4 p.m. Hass, 299-3506.

SECTIONAL HIDE-A-BED, recliner, corner piece, ottoman, gray tweed,

\$500 OBO; 3 matched graphite tennis rackets, \$15/ea. Stichman, 293-6096.

REFRIGERATOR/FREEZER, frostless, ice maker, 21 cu. ft.; drill press, floor-mount, 3/4 hp, 5/8" chuck, 16-spd. Myers, 294-7316.

AJAY OCTA GYM ROWING MACHINE, \$75; oak cane bentwood rocker, \$30; 3-piece mattress set, full-size, \$100. Lewin, 898-2303.

CANARIES, bred for song and color, \$60; free guide for caring and feeding. Jeppesen, 294-4512.

ROUND TABLE, oak, 36" diameter, \$35. Sims, 299-4418.

AIRLINE TICKET, \$400 value, America West Airlines, good until April 1990; ski boots, man's size 11, \$40. Davis, 294-1048.

SOFA SLEEPER, brown plaid design, queen-size mattress, will deliver in the city, \$90. Prins, 823-4484.

MATCHING HIGH-BACK COUCH AND CHAIR, earth tones w/wood trim, \$350. Prins, 821-0490.

NEC MULTISYNC 3-D MONITOR, w/box and warranty, \$570. Stoker, 821-3354.

CHILD'S BEDROOM FURNITURE: desk, chest of drawers, corner table, 2 twin-size beds, desk lamp, hanging lamp. Renken, 296-9713.

**TRANSPORTATION**

'82 AUDI S5000, 4-dr., electric sunroof, loaded, \$3675. Smith, 292-6425.

JUNIOR PEUGEOT RACING BICYCLE, 16" frame, 10-spd., aluminum rims, 600x22 tires, other alloy components, \$225. Weirick, 281-1462.

'79 FORD F-250, 4x4, w/Meyer snow plow, rebuilt engine and transmission (torque converter), new tires, \$5900 (will separate). Schaub, 345-2867.

'80 SUZUKI GS 1000E MOTORCYCLE, 15K miles, Vetter fairing and saddle bags, \$1500. Davis, 298-3277.

'85 CORVETTE, red, Delco-Bose AM/FM cassette, extras, 57K miles, \$15,000. Shelnut, 281-3815.

'81 BMW 320i, 2-dr., 5-spd., AM/FM cassette, sunroof, 82K miles, \$6000. Rosario, 292-2577.

'75 TOYOTA CELICA, new '79 engine w/rebuilt carburetor. Stomp, 298-3824.

'88 SAMURAI, back seat, chrome wheels, AM/FM cassette, \$6000. Chavez, 898-0566.

'89 CLASS A MOTORHOME, 25', basement model, 460 Ford engine, most options, 8 months and 7900 miles left on warranty, \$29,500. Jackson, 821-2012.

'88 FORD MUSTANG GT, black, fully loaded, \$13,000. Howell, 892-4163.

'81 SUZUKI GS-250T, 5.3K miles, stored indoors, Pacific fairing, 2 helmets (1 new), service manual, \$975. Scott, 294-7183.

SCHWINN BICYCLES: man's 10-spd., woman's 5-spd., \$35/ea. Smith, 298-9588.

'87 GMC JIMMY S-15, Sierra Classic package, AT, stereo, extras, \$9050. Hall, 299-0009.

BICYCLES: boy's 16" BMX-style, w/training wheels, \$25; girl's 20", \$30. Erwin, 888-1659.

'72 STATION WAGON, 9-passenger, AT, PS, AC, 400 engine, stereo radio, \$395. Johnston, 299-1830.

'81 CHEVETTE, 4-spd., manual, AC, AM/FM cassette, \$100; man's Huffy 10-spd. bike, \$30. Schnetzer, 292-0733.

'72 GMC VANDURA, 6-cyl., AT, PB, propane heater, stereo, new paint, 80K miles, \$2500. Fleming, 293-9421.

'71 BUICK SW, 455 four-barrel, AC, AT, PS, PB, recent tune-up, alignment, radiator, master cylinder, WW motor, \$1175 OBO. Shaw, 881-4786.

WOMAN'S 12-SPD. BICYCLE, mountain-style, red, Diamondback, thorn-proof tires, used 2 months, \$175. Andersen, 294-8624.

**REAL ESTATE**

5- OR 4-BDR. HOME, 1-3/4 baths, w/family room, on fenced 1/2 acre in Bosque Farms, \$48,000. Stevens, 869-3622.

3-BDR. TAYLOR RANCH TRI-LEVEL HOME, 2 baths, FP, 1600 sq. ft., \$20,000 down, contract on balance, \$86,500. Kirby, 268-8666.

3-BDR. MOBILE HOME, 2 baths, 14' x 80', parked at Four Hills mobile home park, \$500 down and take over payments on \$16,000 balance. Huff, 296-3349.

4-BDR. HOME, 1-3/4 baths, new kitchen cabinets, carpet, linoleum, entry tile, 2-car garage, \$84,500. Riggs, 255-5725.

2-BDR. MOBILE HOME, 1-3/4 baths, off-white interior, almond appliances, storm windows, awnings, covered deck, 12' x 50' carport, NE park, w/security, \$16,500. Thomas, 828-1248.

**WANTED**

LID FOR BLUE TLC CUP, to replace one that didn't survive when dropped off roof onto sidewalk, will pay top \$. Hawkinson, 281-1281.

BOOKS by Jessie Penn-Lewis, Watchman Nee, Jeanne Guyon, F. J. Hugel, DeVerne Fromke, Gene Edwards, and T. Austin Sparks, to borrow or purchase. Levan, 344-9794.

OVERNIGHT HOUSESITTER/BABYSITTER for couple who travel on short notice, children ages 9 and 11, need driver, discipline. Ahrens, 294-8986.

ROOMMATE, non-smoker, share 3-bdr. home. Mulryan, 292-5971.

SHOP/SERVICE MANUALS for '66-'77 Ford Bronco, 302 V-8, 3-spd. Barnette, 292-5186.

EXERCISE BICYCLE, Schwinn Airdyne. Volk, 299-1702.

TREADMILL. Graham, 836-2752.

LIGHTED MINIATURE CERAMIC HOUSES, holiday decorations: "Dickens Village," "Snow Village," "New England Village," "Christmas in the City." Spires, 275-3655.

ROOMMATE, non-smoker, to share 3-bdr./2-bath home, Indian School & Eubank, washer/dryer, \$275/mo. plus share utilities. Hueller, 296-0976.

HOUSE AND DOG SITTER, needed for holidays. Chirigos, 298-3837 after 6:30.

THIRD SEAT for late-model Suburban. Hammond, 281-9354.

WITNESS TO ACCIDENT, 12:25 p.m., Nov. 9, Wyoming and "H" St., involving brown '83 Celica and silver '83 Corolla. Guidotti, 298-8818.

BABYSITTER, w/infant babysitting experience to care for my 6-1/2-month-old daughter, part-time, mainly on weekends, in my home. Neugebauer, 294-1922 after 2.

**SHARE-A-RIDE**

FULL-TIME VANPOOL SEATS AVAILABLE, along N-14 and Frost Rd., \$34/mo., ride every day. Rentzsch (281-5017) or Burns (281-3922).

**Coronado Club Activities**

## Western Night Tonight: Head for El Rancho Coronado

THE C-CLUB KITCHEN HANDS have come up with some elegant chow for Western Night this evening. Tackle a T-bone steak (\$7.95), chomp on chicken breast teriyaki (\$6.95), or try some trout almondine (\$7.95). Afterward, sharpen your stomp skills during free country/western dance lessons (7-8 p.m.) — available to all with dinner reservations, including guests. Try out what you've learned, as those good old Poor Boys from Isleta strum their stuff from 8 p.m. to midnight. Chow-line reservations are recommended (265-6791).

FAMILY MATINEE this Sunday (Nov. 19) features "Who Framed Roger Rabbit?" at 2 p.m. Before the movie, all kinds of kid-pleasin' food items — including burgers, hot dogs, French fries, French dip sandwiches, and ice cream cones — are available at reasonable prices starting at 1. Movie admission is free.

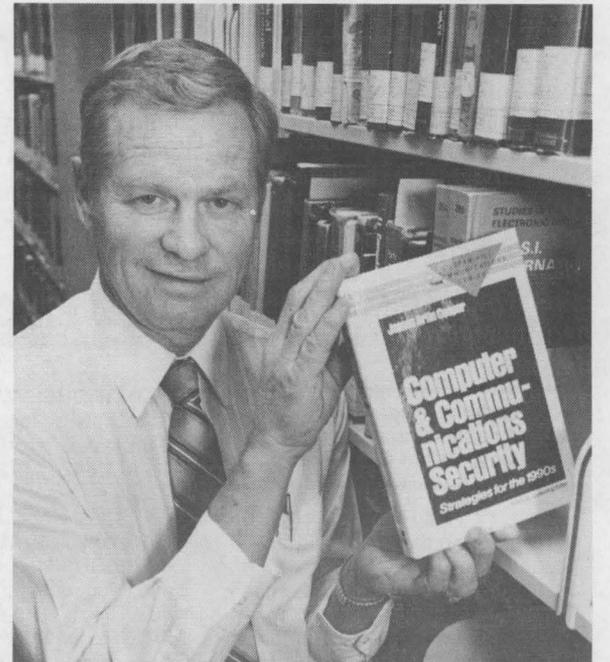
CORONADO SKI CLUB MEMBERS ponder snow possibilities at their monthly meeting next Tuesday (Nov. 21). This gregarious group, keeping its reputation intact, will socialize from 7 to 7:30 p.m., when the meeting starts. Joe Quintana of Ski Rio will describe what's new on his mountain.

GET WARMED UP FOR THANKSGIVING at lunch on Wednesday, Nov. 22, when turkey with all the trimmings is served between 11 a.m. and 1:15 p.m. Price of this bounteous banquet is \$3.95.

T-BIRD CARD SHARKS are seeing plenty of action this month — they'll get together for the third time in November on the 30th, starting at 10 a.m. Plan to be there; Jim McCutcheon has promised to wear his Thanksgiving turkey outfit. Not only that; you get free refreshments, too.

NEXT MEETING OF THE BRUNCH BUNCH is set for Sunday, Nov. 26, from 10 a.m. to 1 p.m. A blockbuster menu features baron of beef, Virginia baked ham, Denver omelets (different from the Albuquerque kind), green chile stew, and all sorts of other tasty treats — plus, of course, a complimentary glass of bubbly. Once again, the price is right: \$6.95/adults, \$3.50/children 3 through 11 years old, and free/toddlers under 3.

BARBECUE OUGHT TO TASTE MIGHTY FINE after all that turkey, so you may want to think about reserving your space at BBQ night on Saturday, Dec. 2. The Isleta Poor Boys will be back in town that night to accompany the sagebrush stompin' after dinner.



ARLIN COOPER (DMTS, 7231) couldn't find the graduate-level textbook he needed for teaching his computer security courses at UNM and Webster University, so he wrote the recently published *Computer and Communications Security — Strategies for the 1990s* (McGraw-Hill). "I think it's essential for everyone in computing to get this type of training while in college," he says. "Computer security isn't covered well in the usual university computer courses. Companies teach employees particular company computer-security procedures, but computer-security education wasn't considered at universities until recently." Arlin says a number of Sandians contributed suggestions for the text.

## Events Calendar

*Events Calendar items are gathered from various sources. Readers should confirm times and dates of interest whenever possible.*

Nov. 17-18 — "The Comedy of Errors," burlesque by Shakespeare, presented by Theatre-in-the-Making; 8 p.m., CenterStage (3211 Central NE), 260-0331.

Nov. 17-18 — "Picnic," slice of 1950s Midwestern life; 8 p.m. Fri., 6 & 9 p.m. Sat.; Albuquerque Little Theatre, 242-4750.

Nov. 17-18 — "Death's Nose" (La Nariz de la Muerte), by Jim Linnel, award-winning play with puppets, masks, music, and dance; 8 p.m., Rodey Theatre, 277-4402.

Nov. 17-18 — Classical Concert III, New Mexico Symphony Orchestra with cellist Steven Doan and the NMSO Chorus, all-Britten program; 8:15 p.m., Popejoy Hall, 842-8656.

Nov. 17-19 — Indian National Finals Rodeo: American Indian rodeo riders from across the US and Canada compete for the title of World Champion Indian Cowboy, Indian arts & crafts, powwow, ceremonial dance competition, Miss Indian Rodeo Pageant; call for times; Tingley Coliseum, 265-1791 or 918-789-2408.

Nov. 17-Dec. 10 — "The Man in the Glass Booth," by Robert Shaw, layers of masquerades peel away slowly and painfully as the search for Nazi war criminals focuses on one man; 8 p.m. Fri. & Sat. (no performance Nov. 26, extra performance 8 p.m. Nov. 30), 6 p.m. Sun.; Vortex Theatre, 247-8600.

Nov. 18 — Holiday Arts & Crafts Bazaar, handcrafted items by more than 90 participants; 9 a.m.-4 p.m.; Cleveland Middle School (6910 Natalie NE), 884-8567 or 881-0050.

Nov. 18, 21, 24, & 26 — "Tosca" by Giacomo Puccini, Opera Southwest performance of fully staged grand opera with national stars, sung in English; 2 and 8 p.m., KiMo Theatre, 266-4379.

Nov. 19 — Arts and Crafts Sale, arts and crafts by New Mexico artisans, benefit for the American Heart Association, presented by Alpha Phi Sorority; 10 a.m.-4 p.m., Ramada Classic Hotel.

Nov. 19 — Fine Arts Series: "The Company," musical comedy vocal ensemble; 4 p.m., First United Methodist Church (4th and Lead SW), 243-5646.

Nov. 21 — Keller Hall Series: featuring world premiere of a work for solo clarinet by UNM composer-in-residence William Wood; 8:15 p.m., Keller Hall, 277-4402.

Nov. 24-25 — Carolina's East Mountain Arts and Crafts Festival: artists and crafters from the East Mountain area and Albuquerque, music by the Village Guitarist, oil-painting and balloon-magic demonstrations, prize drawings; 10 a.m.-6 p.m. Fri., 10 a.m.-5 p.m. Sat.; North Highway 14, 1/2 mile north of Bella Vista, Cedar Crest.

Nov. 24-26 — "Nutcracker Ballet," New Mexico Symphony Orchestra and the Southwest Ballet Company annual performance; 2 & 7:30 p.m. Fri. & Sat., 2 p.m. Sun.; Popejoy Hall, 842-8565.

Nov. 29-30 — "The Rocky Horror Show," by Richard O'Brien, campy period piece from the

late '60s and early '70s, presented by the New Mexico Repertory Theatre; 8 p.m. Sat., 2 p.m. Sun.; KiMo Theatre, 243-4500.

Dec. 1-3, 8-9 — "As You Like It," William Shakespeare's romantic comedy, performed by Theatre-in-the-Making's Youth Performance Workshop; 8 p.m. Fri. & Sat., 2 p.m. Sun.; CenterStage (3211 Central NE), 260-0331.

Dec. 2-3 — Messiah Sing-Along, New Mexico Symphony Orchestra and Chorus with UNM Chamber Singers, conducted by John Clark, audience participation, sheet music for sharing will be available before performance (\$7); 3 p.m. at Popejoy Hall, 7:30 p.m. at Hoffmantown Baptist Church (8888 Harper Rd. NE), 843-7657.

Dec. 3 — UNM Centennial Series for the Arts: guitarists Antonio Mendoza & Ruben Romero; classical, flamenco, and international folk songs; 5 p.m., UNM Conference Center (1634 University Blvd. NE), 277-2527.



BUCK FIFTY FOR DINNER? Editorial assistant Janet Walerow (3162) browses through early LAB NEWS (then known as the SANDIA BULLETIN) issues dated Dec. 2, 1949, and April 28, 1950. The \$1.50 dinner price was featured in an item about the December 1949 annual dinner party of the Albuquerque Section of the Instrument Society of America. Thanks to Phil Nicovich (ret.) for providing these rare copies.