



Lee Bray

Lee Bray Named E-VP, Administration

Lee Bray, presently Government Operations General Manager, Federal Systems Division, AT&T Technologies, Inc., in Greensboro, N.C., will become Executive Vice President for Administration (Org. 30) on July 1. Reporting to him will be Organizations 3000 and 100.

Bray, 48, has held a variety of positions at six different AT&T locations since joining Western Electric as an engineer of switches and relays at the Kansas City Works in June 1959 following graduation from the University of Kansas with a BS degree in mechanical engineering.

He was promoted to Department Chief of Semiconductors at Kansas City in 1965, became Department Chief in the Development Engineering Program on Integrated Circuits in the Allentown (Pa.) Works in 1966, then returned to Kansas City in 1967 where he again served as Department Chief of Semiconductors. He was promoted to Assistant Manager of College Relations for the Southwestern Area in 1969.

In 1971 he was named Assistant Manager of Apparatus Assembly at the Shreveport (La.) Works, and then moved to Newark,

N.J. in 1973, where he was Assistant Manager of Manufacturing Staff Engineering, Station Division, until 1974, when he returned to Kansas City as Assistant Manager of Electron Devices. He was promoted to Manager, Quality Assurance-East in the Corporate Engineering Division in Newark in 1978.

In 1980 he was promoted to Director of Engineering, Inspection and Product Line Planning-Purchased Products in the Purchasing and Transportation Organization in Springfield, N. J. He assumed the position of Government Operations General Manager in Greensboro in January 1984.

Bray has been active in several of the communities where he has lived, serving on the Planning Commission at Lee's Summit, Mo., and on the Board of Directors of the Greater Kansas City Hearing and Speech Center. He is married, and he and his wife Twila have two children — David, a recent graduate in architecture who is employed in Greensboro, and Terri, who will be a senior at the University of Tennessee, Knoxville, this fall.

Patent Awarded

Negative Ion Generator Invented

DOE has received a patent for a technique that produces high intensity negative ions. It may have important applications in the nation's fusion program. Inventors are Regan Stinnett (1261), Pace VanDevender (1260), and Bob Anderson (8354).

One of the approaches now being pursued by DOE at Princeton Plasma Physics Laboratory to achieve fusion is to use a toroidal tokamak accelerator pioneered by Russian scientists. In a tokamak, a plasma is contained by magnetic fields inside of the hollow doughnut-shaped device. Several heating techniques are being tried to heat the plasma to the 100,000,000°C temperatures required for fusion. It is a promising approach, but the breakeven point — where the energy produced equals the energy consumed — has not yet been achieved. The addition of a negative ion-based high energy neutral beam in the tokamak plasma could provide the additional heating necessary for fusion by transferring its energy to the plasma.

"It appears that the creation of such high energy neutral beams may be possible using our new negative ion source," Regan Stinnett says. "Otherwise our negative ion beam is a solution looking for a problem to solve. A high intensity negative ion beam is something new in particle beam technology. We feel that it is a new tool and, as we learn more about how to use it, there will be important applications."

Components developed for Sandia's PBFA-I fusion machine are used to produce the beam of high intensity negative ions — Marx generators, pulse forming lines, and magnetically insulated transmission lines. The new technique has produced negative

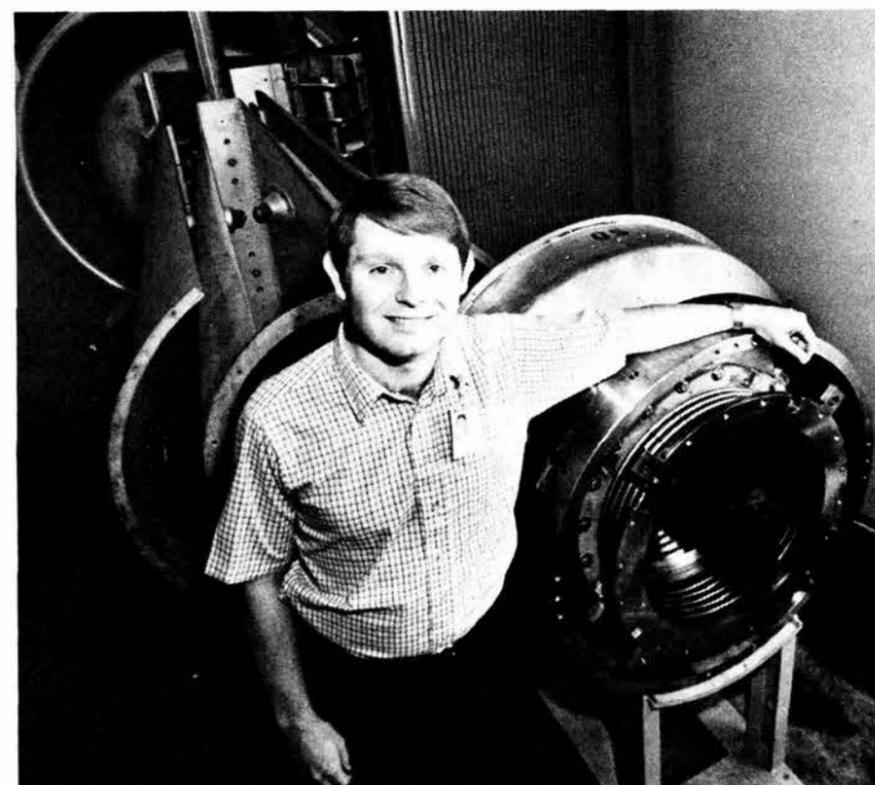
ion power densities of more than 20 megawatts per square centimetre for 30 billionths of a second each pulse.

"Our discovery was made in the typical scientific manner," Regan says. "We stumbled across it while looking for something else. In PBFA we use magnetic insulation to prevent electrons from crossing the anode-cathode gap in very high voltage feeds. While studying the residual losses occurring in these magnetically insulated transmission lines (MITLs), we discovered that some of the losses were caused by negative ions moving across the vacuum gap between anode and cathode. These negative ions are so much more

massive than electrons that they are not significantly affected by the insulating magnetic field."

Several elements and molecules (including hydrogen, lithium, oxygen, and carbon) can form energetically bound negative states by capturing an extra electron to form a negative ion. These negative ions are formed in the plasma that is produced at the cathode of an MITL by electric fields that are usually several megavolts per centimetre. In most plasmas these negative ions do not last long because they are weakly bound and are broken up by the same collisional processes that form them.

(Continued on Page Two)



REGAN STINNETT (1261) is shown with the components of a PBFA module. The magnetically insulated transmission line of the module is a key component in the generation of negative ions. The technique was recently patented by DOE. Co-inventors are Pace VanDevender (1260) and Bob Anderson (8354).

LAB NEWS

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SANDIA NATIONAL LABORATORIES

JUNE 22, 1984

Antojitos

Tautologists Unite! You Have Nothing to Lose But Your PIN Fetters!

If you moved to Albuquerque and wonder whether you're a New Mexican yet, listen to yourself speak of the river that runs through the city. If you still say "Rio Grande River," you're not. The rest of us use that phrase as a shibboleth to decide whether you're one of Us or still one of Them. The redundancy of Rio and River is, of course, obvious. But lately I've become aware of a new oral vice: the redundant acronym--using an acronym as an adjective to modify one of the nouns in the acronym. CHiPS Patrol is a common example on the national scene; after all, the P in CHiPS stands for Patrol.

But Sandians aren't immune. We feel proud if we're VIA volunteers, we never forget the PIN number that the Credit Union assigned us, we send our kids to APS schools, and we may even be a part of the FOG group. I'm told, admittedly by an impeccable source, that some of our folks even refer to the NOS operating system (which, when you speak it aloud, reminds you of a treatment for a deviated septum).

* * *

DO NOT READ For Personal Enjoyment I've chided our Kirtland neighbors about their sign-making artistry in this space before. But, curiously, no one seems to be paying any heed. Mel Olman (2614) called my attention to one of KAFB's signs that's right under my nose--or would be if my nose reached across F Street to the Parade Ground. It reads as follows:

DO NOT USE
For
Athletic Practice

Well, is that supposed to mean "Don't use the Parade Ground. It's being saved for team sports"? (Actually, it's the reverse.)

It reminds me of the equally ambiguous sign on the bridge over Tijeras Arroyo:

NO JOGGERS
USE BYPASS

●BH

* * *

Remember, truth is stranger than fact.

Continued from Page One

Negative Ion Generator

However, the high electric fields of a MITL accelerate the negative ions out of the plasma before they can be broken up. The electric fields accelerate the negative ions to megavolt energies, producing the high power densities typical of this new negative ion source.

"We believe," Regan says, "that this technique is capable of producing power densities of negative ions up to 1000 megawatts per square centimetre. Although this new negative ion source is intrinsically a pulsed source, it could be repetitively pulsed at about 50 pulses per second to achieve average beam powers of several megawatts. Again, because the negative ions are weakly bound, it should be relatively simple to remove the extra electrons from a negative ion beam by subjecting it to an intense photon (light) source. In this way, our negative ion source can produce intense neutral beams."

I'M TOUGH, YOU'RE TOUGH



We are, in real life, a reasonably healthy people. Far from being ineptly put together, we are amazingly tough, durable organisms, full of health, ready for most contingencies. The new danger to our well-being, if we continue to listen to all the talk, is in becoming a nation of healthy hypochondriacs, living gingerly, worrying ourselves half to death. (From *The Medusa and the Snail* by Lewis Thomas, president of Memorial Sloan-Kettering Cancer Center)

Colloquium Report

Computer Security Technology Review



An enormous number of devices are available for making computers more secure, Arlin Cooper, supervisor of Computer Security Division 2612, told a Colloquium audience earlier this month. The ultimate success of a computer security program, however, depends on the

judgment and integrity of the program implementers and computer users.

Cooper reviewed the maze of internal and external computer network interconnections Sandia operates and participates in. These include the basic scientific network, the VAX network, and the upcoming ADNET, Wide Band Communications, and OPMODEL satellite networks. He also cited the proliferation of personal computers. SNLA now has 5500 data circuit connections, 5000 terminals, more than 2000 computers (including microcomputers), and handles more than 10,000 computer connections per day. This rapidly changing environment presents major computer security problems.

There are, however, many new technological products to enhance computer security. Cooper reviewed many of these, emphasizing those used at Sandia and illustrating his points with slides and video film clips.

SNLA divisions contributing to computer security technology include 2633 (under Don Schroeder) for the terminal switching network and fiber optic network; 2634 (Bob Trudo) for technical control centers and interconnection; 2645 (Bill Huntzman) for security controller and network terminal server development; 2631 (Paul Lemke) for software security development; 3643 (Don Pitts) for surveillance and alarm systems;

and Vern Duke (3662) for fire detection and suppression systems.

Cooper discussed some important advanced development work that has potential for future applications -- the factoring work (extremely important in encryption) of Gus Simmons' Applied Mathematics Department 1640, and the access control and personal identifier work of Mike Eaton's Entry Control Systems Division 5252.

After presenting his talk in Albuquerque, Cooper addressed another audience at Sandia Livermore the following day. He is the author of the recently-published book, *Computer-Security Technology*.

THE UPS AND DOWNS OF LEADERSHIP



Studies of vervet monkeys suggest that social status is reflected in the chemistry of the brain. Scientists say the dominant males in colonies of vervet monkeys have twice as much circulating serotonin in their blood as any other males. Serotonin is a neurotransmitter, a chemical used in sending information from cell to cell in the brain. When a dominant monkey was put by himself, his blood serotonin level dropped. In a solitary situation he had no need or opportunity to show dominance. With the dominant male removed, scientists at the University of California in Los Angeles found, another male soon assumed the role. His blood serotonin also rose to about twice the normal level. When the original dominant male returned, the level of serotonin in his blood went up and that of his rival went down. (Harold M. Schmeck Jr. in *The New York Times*)

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Colombian Christmas Customs Intrigue Sandian

One of the fringe benefits of marrying a Colombian native is that you learn the Christmas customs of that fascinating — and politically volatile — South American country.

Dave Dannenberg (8413) married María Eugenia Arenas in late 1971, and they have taken five trips to her homeland. The most recent trip was in Christmas 1983 and included their children, six-year-old Michael and two-year-old Erica.

Bogotá, where much of María's family lives and where they spent most of their time, is located just three degrees north of the equator. Nevertheless, it has a temperature range similar to San Francisco's — 40 to 70 degrees year around — thanks to its 8300-foot elevation, which keeps the climate cooler than in the country's subtropical areas. "We especially enjoyed the sunsets," says Dave. "They last from 30 minutes to an hour, and they're often very colorful."

Dave first met María in 1969 when she was an exchange student in Livermore. They dated through 1970. When she returned to Bogotá in December 1970, Dave made a couple of trips to visit her, then returned to marry her in December 1971. They exchanged their vows in Spanish with her uncle, a Jesuit priest, officiating. "We honeymooned in a tropical village called Girardot where the temperatures reached 90 to 100 degrees every day," recalls Dave. "Unfortunately, so did the humidity."

Perhaps the most memorable of the customs the Dannenbergs enjoyed last Christmas was one observed primarily in Spain and in Colombia — La Novena. Lasting from Dec. 16 through 24, La Novena is celebrated by extended families (30 people in the Dannenbergs' group) who visit a different family home each evening for a holiday feast.

After the feast, the head of the host family reads a new chapter in a small book that tells the traditional Christmas story as rewritten by a nun. Then the host leads the group in special prayers. Following the reading and the prayers, the family members break out their musical instruments — tambourines, maracas, spoons, and other rhythm makers, some of which are homemade — and stage a song-fest of Colombian Christmas carols.

On Christmas Eve, Papa Noel pays a visit. Like Santa Claus, he brings in his big bag some of the gifts the little ones get. Dinner that night is late — after midnight mass. But the celebration continues with dancing and revelry until nearly dawn. That's when the presents are opened. "Then it's finally time for bed, that is, *if* you can get the kids calmed down enough to sleep," reports Dave.

In Colombia as in most countries, all is not always peace on earth and goodwill among men, Christmas or no. "But we sensed less tension on this trip than we found during our 1975 trip," says Dave. "That year, the government imposed martial law and a mandatory curfew. We had a scary ride one night through the streets of Bogotá when we spotted a military roadblock ahead of us. My sister-in-law, Yolanda, who had been driving the family Jeep without a license, quickly traded places with me. The



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CHURCH OF HEALING atop the 10,000-foot Monserrate peak is popular both for tourists and for people seeking to be healed of their physical afflictions. Stalls in foreground are souvenir and trinket concessions.

soldiers checked my American driver's license and searched me, but not, for some reason, Yolanda. They let us through without further incident.

"On our most recent trip we certainly noticed the military presence on the streets of the cities," Dave continues. "But the citizens are understandably more concerned about the number of Cuban infiltrators and terrorists that have slipped into the northern part of Colombia. That's the remote part of the country that is home to some drug 'factories' — which are probably among the world's largest — and certainly some of the world's most extensive smuggling operations. Not the sort of place to head for a relaxing vacation."

Other parts of Colombia, however, are attractive to the tourist. "We visited a famous bridge, El Puente de Boyacá, near the city of Tunja where the liberation agreement between Colombia and Spain was signed in 1819," Dave continues. "The signing was witnessed by such historic figures as Simón Bolívar and Colombian liberator Santander. The anniversary of the signing is during the holiday season, and last year the presidents of Colombia and Venezuela and many other national leaders attended the observance. A perpetual flame burns at a spot near the bridge."

The Dannenbergs also toured the Basilica of Monserrate, a church built atop a 10,000-foot mountain on the site where, many years ago, a miner had a vision of Christ after his crucifixion. People from throughout the country flock to the church to be healed. "You can't help but be moved



HOLIDAY TIME ON BOGOTÁ shows the Dannenbergs: (from left) David, Michael, María, and Erica. The central theme in Colombian homes at Christmas is a nativity scene; the tree is secondary in importance.

by the piles of crutches, canes, glasses, and the like left at the altar by those who were able to leave without the aids they arrived with," notes Dave. "Many of those on pilgrimages reach this mountaintop cathedral by climbing a steep trail on their knees. I have to admit that we took the tram, like most of the other tourists. There's also a cable car to the top.

"I was also impressed with the old town of La Villa de Leiva, which was founded in 1572 by order of first president of New Grenada, the original name for what is now Colombia, Venezuela, and portions of some neighboring countries," says Dave, with a glance or two at his guidebook. "That president was Don Andres Diaz Venero de Leiva.

"The city is known for its colonial architecture, and the region around the city is noted for some significant paleontological finds — the remains of dinosaurs from more than a million years ago, for example. The city's paleontological museum attracts university researchers from all over the world.

"We'll be going back to Colombia, of course," Dave concludes. "María's family naturally wants us to visit as often as we can, and we want Michael and Erica to keep in touch with their grandparents, aunts, uncles, and cousins. I'm looking forward to doing just that."

Congratulations

Janet Fachner (8161) and Michael Brooks, married in Livermore, June 9.

Kathie Hiebert-Dodd Carries Olympic Torch



Kathie Hiebert-Dodd (315) picks up the Olympic torch Sunday at Golden, Colorado. She will carry it in four-mile relays with 15 other cadre runners 835 miles to Mountain Home, Idaho. She will spend a week on the road. Her husband, Henry Dodd (6252), is an alternate runner. Kathie was picked as a cadre relay runner from a field of 3000.

The torch entered New Mexico last Sunday, passed through Albuquerque Tuesday. It will reach Los Angeles and enter the Coliseum to start the 1984 Olympiad on July 28. The flame, kindled in Greece, started its journey across the U.S. on May 8. It will travel 8700 miles through 33 states.

Last week both Kathie and Henry were in Boulder with five other Sandians competing in the regional Corporate Cup event (see Fun & Games). Kathie set a record in the recent Albuquerque Corporate Cup competition in the women's (30-39) 1500-metre open with a 5:36 time. As part of her training regimen, Kathie has been running 50 miles a week. Since December, she's been working with weights and practicing carrying a 4.5-lb. torch anticipating the Olympic run.

Kathie and Henry met through the Sandia Corporate Cup activity. Henry has served as coach and chief organizer for Sandia participation since the event started in 1979. He and Kathie were married in January 1983.

The Olympic torch relay is underwritten and managed by AT&T Communications. Nearly 75 support people will travel with the runners in a 29-vehicle caravan. Teams of cadre runners live on the caravan for one week at a time, each running eight miles a day in four-mile segments.

"As I carry the torch," Kathie says, "I'll be dedicating my miles to all the Sandians who I wish could also have received this honor."



KATHIE HIEBERT-DODD (315) takes up the Olympic torch Sunday at Golden, Colorado, to spend a week with a team of 15 other runners carrying the flame to Mountain Home, Idaho, part of a nationwide effort sponsored and managed by AT&T Communications to carry the symbol of the Olympic Games from coast to coast. Her husband, Henry Dodd (6252), is an alternate relay runner. They display the official AT&T Olympic sponsor flag.

Fun & Games

Golf — SGA's Scotch Scramble tournament, played recently at Tierra del Sol in Belen, saw the winning threesome of Regina Gerchow (122), Thomas Towne (7535), and Leroy Paulson (7556) take the honors. Tied for second were the teams of Helen Gallegos (5252), Frank Gallegos (3533), and Steve Valdez (3417) with Ruth Wright (2122), John Cowie (ret.), and Ember Gunderson (ret.). SGA's next tour-

namment will be the annual romp to Los Alamos on June 29. Additional details on the two-man, best-ball tourney are available from Kevin Linker (6227).

* * *

Arts and Crafts — The Arts and Crafts Center (Bldg. 954, KAFB West) has a full schedule of classes starting in July. Included are instruction in ceramics, pottery, china and porcelain painting, jewelry making, photography, tole painting, and welding. Schedules and additional information available by calling 4-0222 or 4-0425.

* * *

Seven Sandians participated last weekend with the regional AT&T team competing in the regional Corporate Cup event in Boulder, Colo., the first time that AT&T had fielded a team in the Rocky Mountain area.

Overall, the AT&T team placed seventh in the event, but individually Sandians performed well. Marcel Hesch (7481) was first of the AT&T team to finish the men's 10K road race. Ed Dale (2627) took fourth place in the men's masters 1500M race with a time of 4:50. Mark Rumsey (2514), in the anchor leg of the open relay, did a half-mile in 2:13. Mary McWherter (1636), in the first leg of the women's 400M relay, put the AT&T team in first place. Kathie Hiebert-Dodd (315) was fourth overall in the women's open 5K event and fourth in the women's open 1500M race. Henry Dodd (6252) placed fourth in the masters 10K open. The event was marked by rain and a muddy track.

Favorite Old Photo



THIS PICTURE was taken in Seibert, Colo., between 1906-1914 and shows the various methods used to carry the mail at that time. My grandfather, Theodore Finis Bryant, is standing next to the mules and freight wagon that he used to pick up the mail at the train station in Siebert and deliver it to Cope, Colo. Perhaps someone can date the picture more accurately by using the car and the Harley Davidson motorcycle. Ted Bryant (2561)

Take Note

Theater patrons who are interested in attending performances of "Educating Rita" and "Betrayal," starring members of England's renowned Redgrave Theatre, may purchase tickets directly from the box office at UNM's Rodey Theatre and from the box office at the Greer Garson Theatre Center at the College of Santa Fe. The performances of the two award-winning plays are presented by the British American Theatre Institute.

Performances in Albuquerque will run through July 14. The Rodey Theatre Box Office is open from 11 a.m. to 4 p.m., Monday through Friday. All tickets are \$12.50 and all performances start at 8 p.m. To charge tickets by phone or for more information, call 277-4402.

* * *

The South 14 Bookstand — UNM Press now offers *The Aficionado's Southwestern Cooking* in paperback at \$5.95. It's by poet Ronald Johnson, which may account for the "Trout Frosted With Guacamole" and "Tequila Sherbet" but, then, the author also addresses basics: tacos, burritos, tostadas, enchiladas, and tortillas. *Southwestern Cooking* begins with hors d'oeuvres, dips, appetizers, and cocktails and proceeds through side dishes, sauces, entrees, and desserts. The basic sauces and ingredients are cross-referenced, and there is a set of menus keyed to the seasons. You can pick up a copy at the LAB NEWS office in Bldg. 814.

* * *

Irene (5163) and Charles Myers were the grand prize winners of the Keep New Mexico Beautiful contest. The prize was a weekend for two at Rancho Encantado, near Santa Fe. Several weeks ago Irene was listening to KKJY radio and heard a plea for contributions for Keep New Mexico Beautiful. She decided that everyone should help a little and sent in a contribution. The radio station held a drawing on May 29 and Irene's name was selected. She and her husband enjoyed the resort during the June 8-10 weekend.

* * *

The American Lung Association of NM has free brochures on fuel switching/car tampering. The brochure explores the cost of running an unleaded car on leaded gas and dispels myths about this practice being harmless and even improving performance. Enclosed with the brochure is a lead test paper kit that can be used to determine if there are any lead deposits in a vehicle's tailpipe that would indicate use of leaded gas.

According to the U.S. Environmental Protection Agency, there are some gas stations across the country that are selling leaded gasoline and representing it to be unleaded. If a motorist suspects such fuel switching, this simple test is a good way to check. The use of leaded gas in an unleaded vehicle will impair the ability of the car's catalytic converter to remove air pollutants from its exhaust.

To obtain a free brochure and lead test kit, contact American Lung Association at 216 Truman NE or call 265-0732.



A SURPRISE in the form of a plaque of appreciation and the announcement of a presidential scholarship established in his name at UNM went to Gene Reed (2000) recently. The occasion was the INTEC instructors' luncheon. Gene has been chairman of Sandia's Education Committee since 1975. The one-year tuition scholarship, awarded entirely on academic merit of a selected New Mexico student, was made possible by contributions from members of the committee, Sandia training people, and former chairmen and members of the Education Committee. The plaque was presented by Harry Saxton (2500), left, INTEC chairman. Gene retires from Sandia and AT&T in August.

"Summerfest on Civic Plaza," sponsored by the Parks and Recreation Department, offers a variety of activities in coming weeks. Friday evenings feature music on the Plaza from 5-7 p.m.:

June 22 — KRST-Radio presents Duke City Fiddlers

June 29 — Frank Chewiwie Jazz, Latino Dance Fashion Show

July 6 — KRZY scheduled event

July 13 — The Breakers, 50s Music, and

— traditional food, music, and dance; crafts booths featuring books, records, T-shirts, and hand decorated eggs.

July 28 — "Americana Night" from 5 to 9 p.m. — arts & crafts booths, talent show, food booths, blacksmithing workshop with demonstrations of hot-forged ironwork.

For additional information on any of these programs, call the Albuquerque Convention Center at 766-7660 or the Parks and Recreation Department at 766-7856.

* * *

Sandia Mountain Discovery Day is the name of the next project of the Volunteers for the Outdoors. The public is invited to come up to the Sandia Peak ski area on Saturday, June 30, for a day of entertainment, education, hiking, and chatting with some knowledgeable outdoor people. Discussion topics include birdwatching, Smokey Bear, plants of the Sandias, wilderness skills, trail building, ultra light backpacking, geology of the Sandias, and more. Lots of outfits are helping: Game and Fish, Forest Service, Rio Grande Zoo, Museum of Natural History, Audubon, and VFO. It's all free except for the day's final activity — a steak fry from 4:15 to 6:15 p.m. at \$7 for adults, \$4 kids. Call 344-1151 ASAP to reserve tickets. All activities are centered at the new day lodge at the bottom of the ski area. Starting time is 9 a.m. (6 a.m. for birdwatching at the Capulin snow play area). Bring windbreaker or sweater. For more details, call VFO on 344-1151.

* * *

The Easter Seal Society of NM has launched a public education campaign to reduce bicycle accidents this summer. The society has produced a brochure containing safety tips, suggestions for making sure riders have the proper bike size, and regular servicing to keep bikes running smoothly and safely. Copies of the brochure may be obtained by contacting the Easter Seal Society of NM, 4805 Menaul NE, Albuquerque, 87110.

LAB NEWS Schedule Change

Because of the July 4 holiday, all ads and other items for publication in the July 6 issue of the paper must be in by noon on Thursday, June 28. Get them in sooner if possible.

the Jazzercise Dancers

July 20 — KRST scheduled event

July 27 — Mariachi Nuevo

On the weekends, the International Fest takes over:

June 24 — "Japanese Night: 11 a.m. to 7 p.m., Tea Ceremony, Tiki Drum Dance, Japanese street dance, Japanese art, crafts, and other artifacts, food booths.

June 30 — "Scandinavian Night," 5-11 p.m.: crafts for sale, food booths, music and dancing.

July 7 — "German Fest," traditional German food, music and dance.

July 14 — "Alliance Francaise d'Albuquerque," — food booths, model sailboat race (in the fountain), a bicycle race commemorating the Tour de France, fencing demonstration; flea market (books, prints, posters, and other French souvenirs), traditional folk dances, dance lessons, performance by the Cajun Bayou Seco Band, and the street dance, "Le Bal Du 14 Juillet!"

July 21 — "Polish and Croatian Night,"



Danforth (3745)



Wood (3732)

Two Sandians Named Fellows By NCMA Group

Katherine Danforth (3745) and Bob Wood (3732) were recently named Fellows in the National Contract Management Association. The rank of Fellow is bestowed "on those few who have made significant and outstanding contributions to the field of contract management and to the association," according to the letter from the NCMA board of directors that the Sandians received last week.

NCMA, with a membership of 14,000, is a national professional organization for people engaged in contract management and procurement. The local Albuquerque chapter has 120 members. The organization issues Certified Professional Contract Manager rank to qualified members; both Sandians hold the CPCM certificate.

Both Katherine and Bob are active in the local chapter. Bob is currently serving as treasurer. He previously headed the education committee. He has been a member of NCMA for almost 20 years. Before joining Sandia as a purchasing consultant in October 1980, Bob was in Air Force procurement. He retired from the Air Force in 1980 with the rank of Lt. Colonel.

Katherine has served as secretary to the local chapter, edited the group's newsletter, and worked with a NCMA group to establish a course at UNM on government contract administration. She teaches principles of purchasing and contract administration at the University of Albuquerque. She has been a member of NCMA since 1968.

Katherine joined Sandia in May 1976, was promoted to supervisor of Purchasing Division F in April 1982.

MACHISMO REVISITED



Mexican sexual mores are changing rapidly but machismo remains a constant, reports Oakland Ross from Mexico City in the independent *Globe and Mail* of Toronto. "In Mexico City, especially among middle-class residents, sexuality . . . has recently been brought into the open to an extent unprecedented in this conservative, Roman Catholic society." In rural areas in 1975, 15.9 percent of married women used some form of birth control. By last year that figure had risen to 38 percent. In urban areas the use of birth control by married women has risen from 45.7 percent in 1976 to 57.9 percent last year. Mexican middle-class women are caught in a tug of war between strict social and religious norms and contemporary ideas about the independence and equality of women. Ross adds, "Most observers agree that machismo — the Latin tradition of male supremacy — is as potent and as prevalent as ever." He quotes one Mexico City psychologist: "I believe that machismo is simply becoming more sophisticated, not diminishing." (J. Robert Moskin in *World Press Review*)



TOM EDRINGTON (7550) and JUDY MEAD (7213)

Supervisory Appointments

TOM EDRINGTON to manager of Testing Technology Department 7550, effective June 1.

Since joining Sandia in March 1961, Tom has worked on missile systems development, aerospace nuclear safety, radar signal processes analyses, and analytical studies of advanced weapons systems. He was promoted to supervisor of a systems studies division in April 1974. Since 1979, Tom has headed the Advanced Systems Development Division III 5347.

He received his BS and MS in EE from the University of Texas. Tom was a Sandia Doctoral Study Program candidate and received his PhD in EE from UNM. He enjoys skiing, bird hunting, and fly fishing. He and his wife Daphne have two children and live in the NE heights.

JUDY MEAD to supervisor of Weapon Training Division 7213, effective June 1.

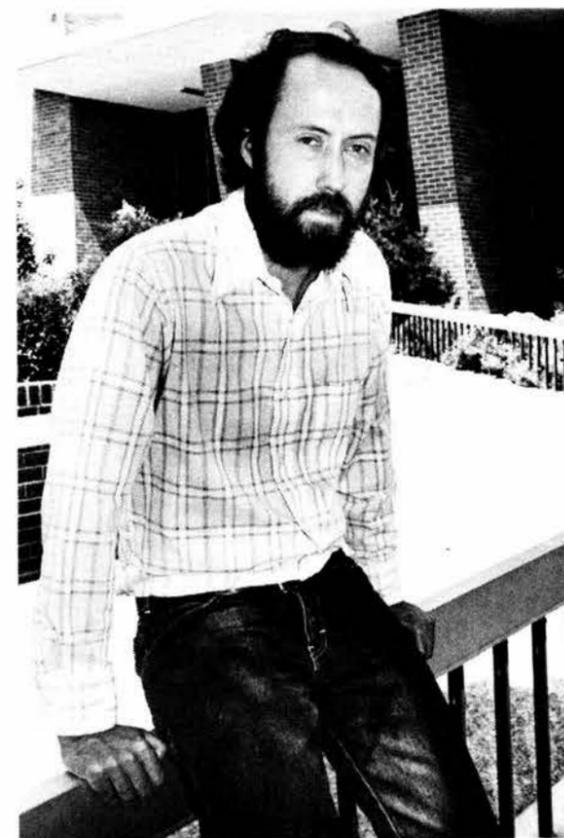
Judy joined the Labs in 1976 in the materials lab where she worked in chemistry of organic materials. Since 1980 until her present promotion, she's worked in Advanced Mechanical Systems Division 5163. Judy was project leader for development of the PLAZA and CALAMUS projects, and for the plutonium aerosolization project that she managed for LLNL, LANL, and Sandia. She also served as the materials consultant for weapon systems. Before coming to Sandia, Judy worked at LANL, and was a teacher in the Los Alamos secondary school system and at the UNM Resident Center.

Judy earned her BS and MS in chemistry at UNM. She is a member of the American Chemical Society and the NM Network for Women in Science and Engineering. She enjoys gardening, boating, water skiing, hiking, sewing, and scuba diving. Judy has two married daughters. She and her husband Keith (1811) live in Peralta.

ROGER CLOUGH to supervisor of Chemistry of Organic Materials Division 1811, effective May 14.

Roger has been with the same division he now heads since joining the Labs in 1977; his work has been primarily with polymer degradation and polymer chemistry.

He received his BS in chemistry from the University of Utah and his PhD in organic chemistry from the California Institute of Technology. Before coming to Sandia, Roger completed two one-year postdoctorates: he was a NATO postdoctoral Fellow at Munich, West Germany, working under Nobel laureate E. O. Fisher, and was a National Science Foundation Fellow at UCLA. Roger is a member of the American Chemical Society. He and his wife Dody enjoy traveling. They have one daughter and live in the NE heights.



ROGER CLOUGH (1811)

Sympathy

To Betty Osborne (310) on the death of her husband in Albuquerque, June 5.

To Don Hoke (2513) on the death of his father, June 12.

To Edna Fowler (152) on the death of her mother in Las Vegas, N.M., April 5, and on the death of her brother in Albuquerque, May 31.

To Alice Vancil (152) on the death of her mother in Lodi, Calif., June 19.

Events Calendar

June 22-23 — "Kosmos & Kalypso" presented by Albuquerque Ballet Company, 7:30 p.m., KiMo, 766-7404.

June 22-24 — NM Arts & Crafts Fair, Fri. & Sat., 10 a.m.-10 p.m.; Sun., 10-6, admission \$1.50, State Fairgrounds.

June 22-24*, 29-30 — Albuquerque Civic Light Opera Association, "Gigi," 8:15 p.m., *2:15 p.m., Popejoy.

June 23 — "Saturday Night Wild at the Zoo" (benefit to fund security lighting at the zoo), exotic food booths, crafts and game booths will line the walks; lots of live entertainment, 6-10 p.m., admission: adults, \$3; 65 & over, \$2; 12 & under, \$1. Children 12 and under, wearing original animal masks, admitted free and may compete for prizes in the "animal parade."

June 24 — "Caught in the Act," music and variety show, 8 p.m., KiMo, reservations, 266-8041.

June 24 — San Juan Pueblo: Annual San Juan Feast Day, Comanche dance, information, 1-852-8041.

June 25 — Lecture Under the Stars, "A Program in American Music," Cajun and NM music, 8 p.m., Central Mall, UNM.

June 28-29 — Santa Fe Dance Company presents "Body & Soul," jazz-ballet dance with guest artists from Kansas City Ballet, 8 p.m., KiMo, 766-7816.

June 29 — Chamber Orchestra of Albuquerque, concert version of "Mozart and Salieri," 8:15 p.m., Albuquerque Little Theatre, 247-0262.

July 1-4 — Mescalero: Ceremonies — Annual Mescalero Apache Maidens Puberty Rites, Mountain Spirit dance at dusk, all-Indian rodeo, information, 1-671-4495.

July 5 — "Norman Blake and the Rising Fawn String Ensemble," NM Folk Music Society, 8 p.m., KiMo, 766-7404.

July 6 — Crownpoint Navajo Rug Auction, Crownpoint Rug Weavers Assoc., 7 p.m., Crownpoint Elementary School, 1-786-5302.



FAITH PERRY (3523) and some of her Oriental brush paintings that she's showing this weekend at the NM Arts and Crafts Fair.

At Arts and Crafts Fair

Faith Perry's Oriental Art on Display

When the NM Arts and Crafts Fair opened at 10 this morning at the State Fairgrounds, Faith Perry (3523) was set up in Booth number 40 with her display of Oriental brush paintings and watercolors.

The Arts and Crafts Fair, in its 33rd year, is one of the largest juried shows in the Southwest. More than 200 artisans were selected to participate this year.

This is Faith's first public showing of her work. "I'm honored to have been chosen, but I'm scared," she admits. "I've never even tried to sell my work. Six months ago when I entered the work for consideration, I hoped to be selected, but I was still surprised. I've been painting constantly since I was notified that I had made it."

Faith has been doing Oriental brush painting for only two years. She has a fine arts degree from Indiana University, but her interest then was in textiles and ceramics. She enrolled in a continuing education class at UNM and enjoyed the work so much that she continued to study and to paint. She studies with local Chinese painter Ou-Mi-Shu.

Faith uses traditional methods for her brush painting — she places drops of water on an ink stone, then grinds it with an ink stick, which contains pine tar. This produces an ink that is applied with Oriental brushes to rice paper. "There are two schools of Oriental brush painting — northern and southern," Faith says. "The northern school uses detail — a subject is recognizable by its outline. The southern

school method, which I use, captures the essence of the subject — the style and shape are created with a single brush stroke.

"Emotion and strength always show in the brush stroke," Faith continues. "If you hesitate, that hesitation shows in the stroke. There is a saying that goes like this: 'Paint bamboo when you're angry; paint an orchid when you're happy.' Bamboo requires sharp, disjointed strokes, and orchids are painted with a kind of lilting stroke."

Faith highlights some of her paintings with watercolor or uses a soft watercolor as a background wash for the picture. In addition to the traditional brush paintings, she paints flowers and landscapes in the Oriental fashion. "The landscapes probably fit the Japanese style rather than Chinese," she says. "They have a little more detail and brighter colors."

Whatever style of brush painting she's doing, she loves it. "I'm completely enthralled with the painting, and with that comes an interest in Oriental culture and philosophy."

If you attend the Fair, stop by Booth 40. Faith may be nervous about her first show, but her paintings are lovely.

Congratulations

Robert (5254) and Ana Martinez, a son, Jacob Robert, June 1.

Leslie Berky (7657) and Gary Ashcraft (7483), married in Colorado, June 16.

Barbara (7135) and Ernie Garcia, a daughter, Elaina Diane, June 14.

Here is a current volunteer opportunity for employees, retirees, and family members. If you are interested, call Karen Shane (4-3268).

SANDIA MOUNTIAN DISCOVERY DAY, sponsored by Volunteers for the Outdoors, is set for Saturday, June 30. Volunteers are needed to build trails, to train persons for this task, and to sell tickets and serve at the day's steak fry.

Retiring



Bob Brooks (7211)



Henry Guttman (7223)



Josephine Arnold (3461)



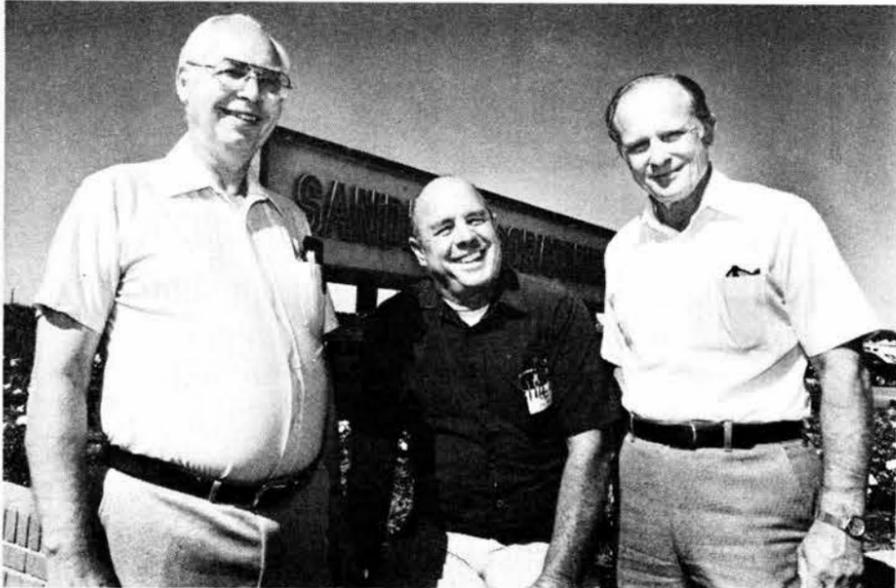
Dorothy Calloway (7625)



Woody Woodall (7622)



Dan Callahan (3743)



Ralph Fisher (1833), Richard Starkey (3612), and Winton Pafford (7137)



Barbara Champion (3543), Mina Carnicom (1633), and Jeanne Goetsch (3413)

National Safety Council Honors Jerry Jercinovic



Jerry Jercinovic, manager of Safety Department 3440, was notified this week that he is to receive the National Safety Council's highest award — the Distinguished Service to Safety Award. It will be presented

during a national meeting Oct. 14 in Chicago.

Jerry is currently a member of the Council's board of directors and has served in a number of positions in the organization, including program chairman, chairman of the R&D section, and general chairman of the industrial division. At Sandia, Jerry has headed Sandia's Safety organization since 1976, but has performed safety-related assignments for nearly 18 years.

A pioneer in the nuclear weapons program, Jerry was part of the Manhattan Project at Los Alamos during WWII. He transferred to Sandia in 1946, did facilities engineering for handling and assembly of nuclear weapons (including stockpile sites), was a resident engineer for Sandia at Norfolk Naval Shipyard during the conversion of the aircraft carriers Midway, Franklin Delano Roosevelt, and Coral Sea to handle nuclear weapons. He was special assistant to retired Sandia Vice President Bob Henderson, participated in a number of



OCCUPANCY of new four-story Bldg. 891 containing light laboratories and offices for 340 members of the 2000 organization starts today. Plant Engineering team responsible for the occupancy phase of building construction include (from left) Bill Hendrick (3643), project leader; Mark Ralph (3643), electrical engineer; Jerry Lipka (3631), communications and computer connections; and Bill Gamberale (3664), layout and planning. Bob Perryman (3643), mechanical engineer, is not shown. Ground was broken for the building in April 1982. Construction cost was \$8.5 million; occupancy construction, which included installation of telephone and other utilities, preparing laboratories with special utilities, interior partitions, and computer connections, was another \$2 million. Move-in should be completed in August.

early atmospheric test programs in the Pacific, and later devised a system for

administrative support services for technical directors.

MILEPOSTS

LAB NEWS

JUNE 1984



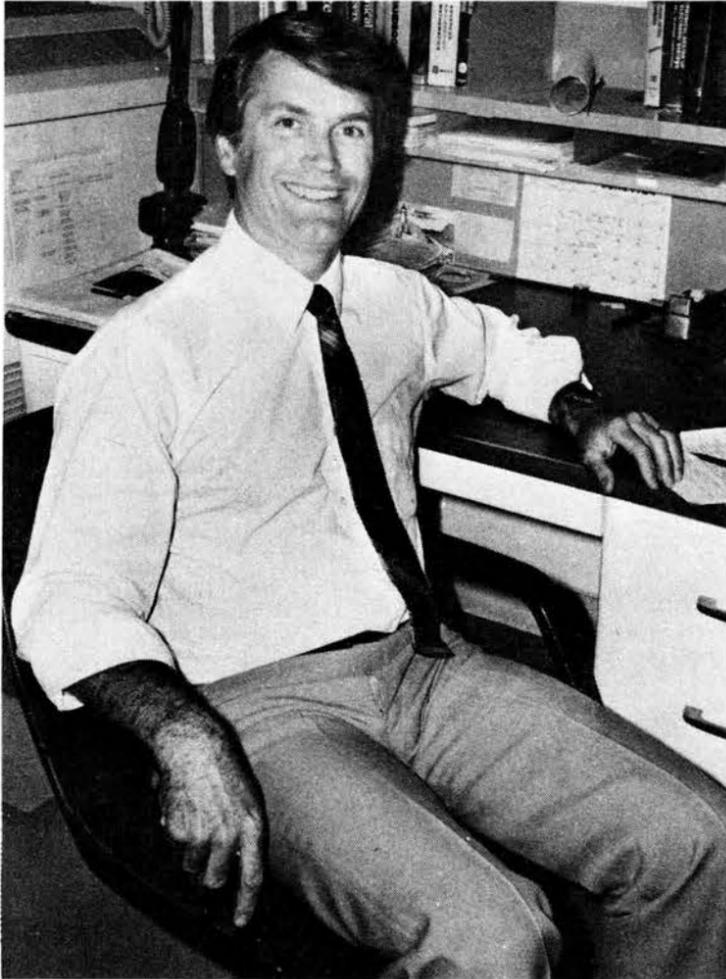
Larry Yellowhorse (5216) 10



Earl Minor (6041) 30



Greg Soo (8444) 10



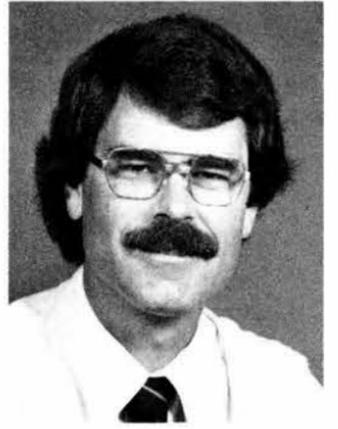
Joe Abbin (2541) 20



Robert Barton (3421) 15



Jack Hudson (2113) 10



Bill Delameter (8453) 10



Hal Norris (8452) 25



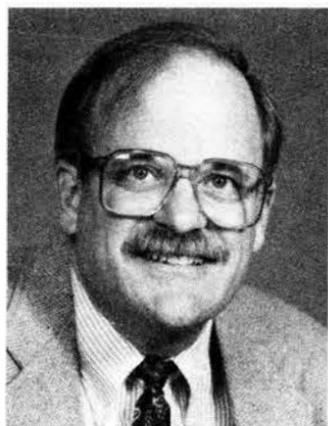
Bob Stinebaugh (6314) 25



Gene Arnot (7657) 20



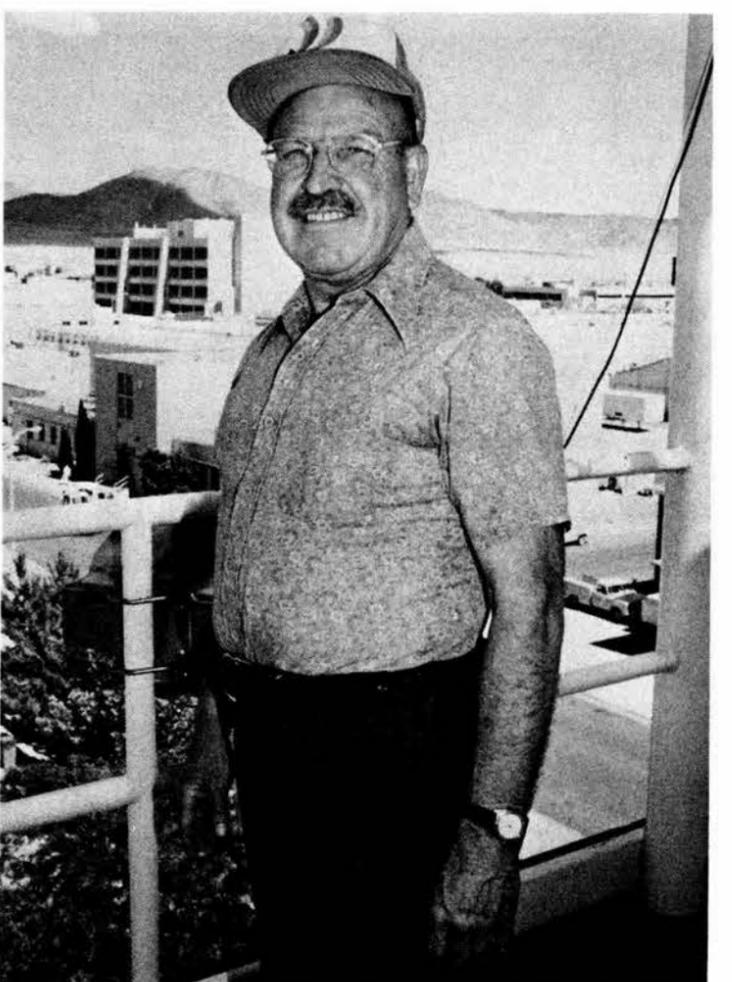
Tom Hoover (5215) 30



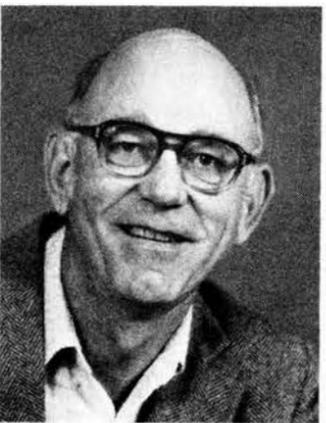
Bill Robinson (8360) 20



Max Schell (8463) 25



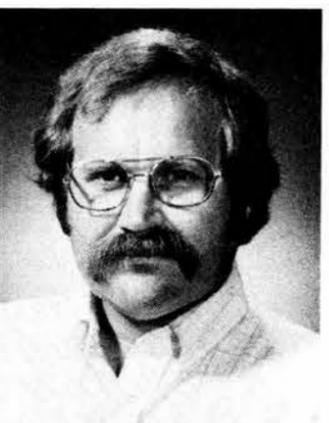
Ed Sanchez (3612) 20



Ed Williams (8153) 25



Fred Cericola (7542) 25

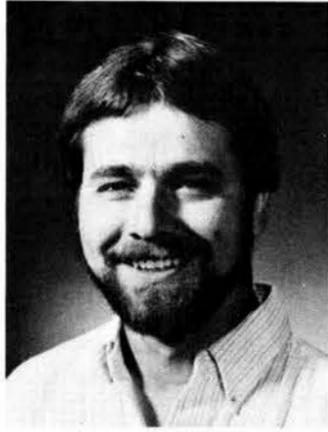


Ron Tucker (1622) 15

MILEPOSTS

LAB NEWS

JUNE 1984



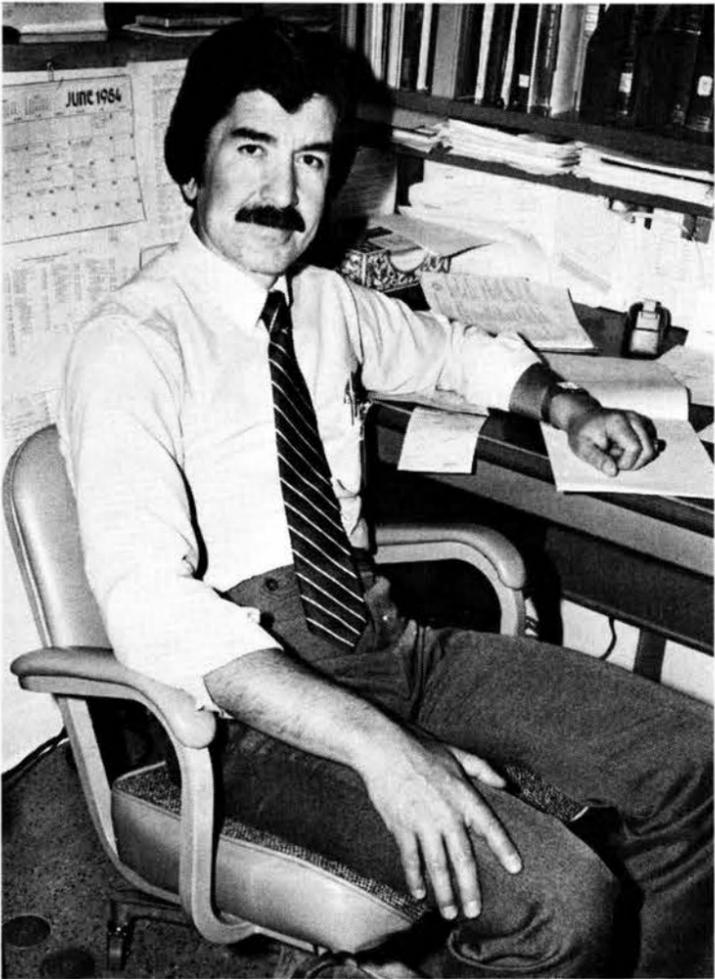
Ron Vantheemsche (7651) 10



Bob Kee (8231) 15



Gail Bryan (8236) 15



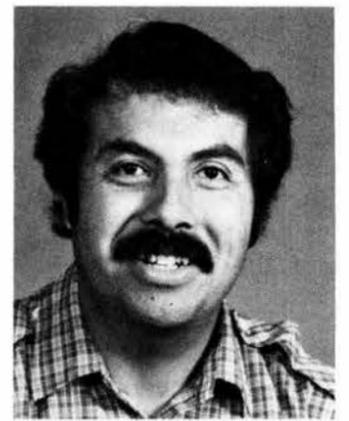
Al Bustamante (1652) 25



Bob Moyer (7242) 25



Marlin Kipp (1533) 10



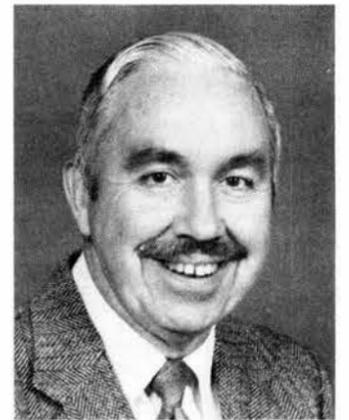
Ray Baldonado (8445) 15



Clay Mavis (8453) 25



Dick Shaum (7556) 30



Glenn Dietel (8131) 25



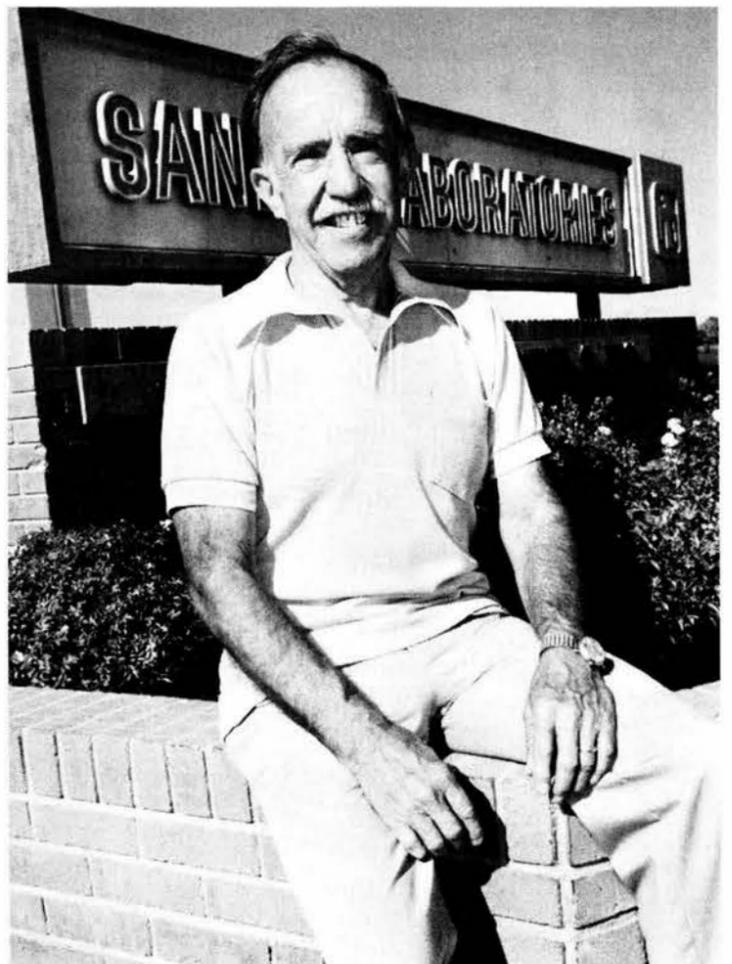
Don Bohrer (8160) 25



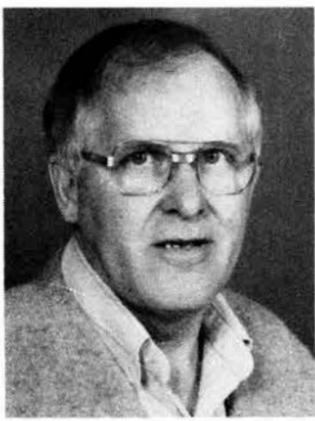
Dick Kavet (5213) 30



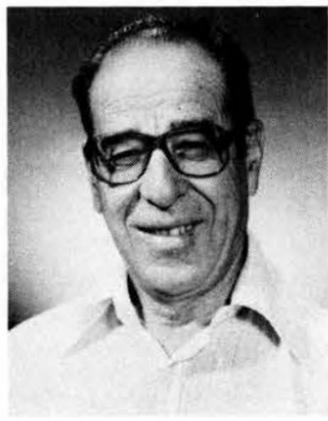
Dwayne Mozey (5213) 30



Paul Chavez (7482) 30



Darrell Christensen (8131) 25



Willie Romero (7482) 15



Johnny Baca (7655) 10

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LEWIS SISNEROS (3731) greets Peterson Zah (right), chairman of the Navajo Tribe, during the recent First National Indian Industrial Trade Fair. In the center is Clara Jones, NM secretary of state. During the fair, Sandia announced awarding an increase of \$3.1 million to its current \$6.2 million contract with Kirk-Mayer Inc., an Indian-owned business that provides technicians to work at Sandia's Center for Radiation-Hardened Microelectronics.

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1. Limit 20 words.
2. One ad per issue per category.
3. Submit in writing. No phone-ins.
4. Use home telephone numbers.
5. For active and retired Sandians and DOE employees.
6. No commercial ads, please.
7. No more than two insertions of same ad.
8. Include name and organization.
9. Housing listed here for sale is available for occupancy without regard to race, creed, color, or national origin.

MISCELLANEOUS

- HITCH, Reese equalizer, bolt on, 10,000-lb receiver, 500-lb. equalizer bars, complete hitch, \$170. Arning, 256-9229.
- 4-1-PC replacement chair cushion for patio furniture. After 2 p.m. Sedillo, 255-0669.
- BED, queen size, \$85. Swahlan, 294-2126.
- WATERBED, king size, soft side, waveless mattress, uses standard king-size bedding, drawer storage beneath, \$650. Martinez, 821-8692.
- MOTORCYCLE trailer, three rails, red, \$250. Hesch, 821-3768.
- YASHICA electro 35 camera w/flash, 2 additional lens & carrying case; Penny's Pinto 23B CB base station w/mike. Mason, 281-3052.
- ATARI 2600 with 16 cartridges, \$125; Frisbee collection (over 150), \$150. Douglas, 281-9504.
- SLEEPER sofa, 67", rust color, \$175. After 5:30 p.m. Weitzel, 831-9454.
- ELECTRIC range, G.E. Americana double oven, needs repair, \$65. Coleman, 884-5009.
- MANURE spreader, \$200. Tucker, 869-3469.
- HEATILATOR fireplace with fans, ducts and some triple wall chimney, \$300 OBO; Oriental cabinet/bar, \$20. Jones, 281-3617.
- 23" B & W TV, needs picture tube, \$25; Phone lineman handset, \$60; '72 Dodge radio, \$10; Other electronic parts. Scranton, 869-6589.
- AVON collectibles. Huston, 265-1831 or 898-7948 or 299-3888 between 7:30 and 10:30 p.m.
- SINGER Sewing machine in wood cabinet, best offer; Sears mini washer and dryer, make offer. Padilla, 831-0330.
- ACCORDIAN, Organold, German made, professional model, original purchase price \$800, now \$250. Curlee, 299-6772.

- NEW Almond dishwasher; Electric garage opener; Electric fan; Jenn-air grill; Garbage disposal; Range hood; Electric fixtures; Used fish tank. Raisen, 298-9344.
- TAPPAN Stove top (gas) and hood, \$40. Benton, 877-2473.
- BOOTS, technical mountaineering plastic, double koflach, size 10, used once, \$100. Smith, 243-5368.
- SAILBOAT super Sunfish, 14' w/trailer, fiberglass hull, aluminum mast, \$1250. Slusher, 268-0238.
- 3-DOOR, side by side refrigerator/freezer combination, frostless, Ward's 20.1 cu. ft., gold color, \$400. Rodriguez, 296-3277.
- COLOR TV, 25" Heathkit, walnut cabinet, best offer. Mozey, 822-0296.
- CLUB aluminum cookware, 8 piece set. Davie, 296-3950.
- ELECTRIC train table, wood 4' x 8', 25"; 4" thick polyurethane foam 5' x 10', \$37; 20" girls Columbia bike, \$65. Sherman, 292-3297.
- FRIGIDAIRE washer, large capacity, jet action, \$150. Newman, 765-1233.
- RANGE hood, \$10; Midland CB, \$20; Pioneer turntable, \$20; Genie sprinkler controller, \$10; Sunbeam gas wall heater, \$20. Patrick 265-4569.
- SUITCASES, matched set, 27 x 19 x 7 and 24 x 17 x 6, plastic, unmistakable color. Haaker, 293-1077.
- BLACK Nikon FE 35mm camera body, new \$190, Nikon 36-72 zoom lens, \$110. Harris, 892-6281.
- UTILITY trailer, 2 x 4 x 8, \$300. Sanchez, 296-8533.
- MOTOROLA mobile phone, complete with mounting bracket, wiring and antenna. After 7 p.m., Walker, 281-9587.
- MATCHING pair, leather armchairs, cinnamon, contemporary, hardwood frame, \$275 each. Dalphin, 265-4029.
- TELEVIDEO 910 video terminal 50 to 19200 baud, \$599. Boyd, 281-2275.
- LAWN mower, very used Lawn Boy needs some work, \$40. Roeschke, 298-0365.
- LUGGAGE rack carrier w/cover, \$35; 1/2" & 3/4" plywood, all sizes; 1/4" wall x 5" diameter x 12' long steel gal. pipe, \$1.25/foot. Garcia, 888-4735.
- TWO wood dressers (3 drawer) with matching desk, opens with mirror, \$75. McCaughey, 822-0325.
- WEBER made kettle grill, 22 1/2", \$30 OBO; 4 antique, handmade, wooden chairs, \$25 ea. Garst, 884-5176.
- FLYROD, H-I split bamboo, Ocean City reel, aluminum case, extra tip, \$65. Manhart, 266-1068.
- ELECTRIC range, G.E., 30 inch, white, \$95; Vent hood, self contained, 30 inch, \$15. Sandlin, 299-8786.
- TOWBAR, fits Honda and some other cars. Stevens, 821-6167.
- GARAGE sale: Saturday, 6/22/84, swingset, toys, clothes, window screens, storm door and many other items. 2824 Espanola N.E. Aragon, 881-4795.

- FREE — International Harvester transmission for .304 engine. Burgess, 298-5061.
- MOVING Sale. Living room, bedroom, dining room furniture, outside yard equipment, carpet, and many misc. items. French, 821-3711.
- UMBRELLA Tent, sleeps 6, \$75; Heavy sleeping bag, \$35; Bedroll, \$10; Grothe, 299-4395.
- DOG kennel, portable, made for air travel, fiberglass, sturdy, \$30. Moss, 298-2643.
- JAYCO soft side camping trailer, propane, 3 burner stove, ice box, water storage, sink, carpet, portapotty, sleeps 6. Wilhelm, 298-2855.
- GARAGE sale: June 22/23. Sofa, chair, child's car seats, clothes, typewriter, bird cage, more. 3920 Garcia NE. SW of Montgomery/Eubank. Werling, 298-0562.
- STEREO speakers, ultralinear studio comparators 4 2 8, 14" x 15" x 34", \$250/pair. Lizon, 892-0145.
- GOLF clubs: 5 irons, 2 woods, covers, bag and balls, \$65. Klett, 884-8354.
- CLEAN soil, free, you load, you haul. Phillips, after 5:30 p.m., 821-9633.
- MAGNAVOX record player/AM-FM radio, walnut cabinet, \$75; Full size bed w/frame; 50" x 50" movie screen. Freyermuth, 299-2053.
- COLOR TV, Curtis Mathes, 25" console, remote control, wood cabinet, \$275. Thompson, 884-4883.
- DRY bar (48" x 21" x 42") built in AM-FM stereo radio, 8-tk cassette player & record player; Tan carpet (9' x 12'); Plaid hide-a-bed couch, queen size; Harvest gold chair; 2 table lamps (3'). Filusch, 299-5932.

TRANSPORTATION

- MENS 10 speed bicycle, French built, 23" frame, 30 lbs, \$2.50/lb. Sullivan, 299-6545.
- '79 MAZDA RX, 4 speed, AM-FM cassette, new radials and clutch, 53,000 miles. Ahr, 281-9026 evenings, 821-1000 day.
- '80 KAWASAKI, 440 LTD, low miles, \$750. Royalty, 293-4314.
- '76 PONTIAC Ventura, original owner, PS, PB, A/C, AM-FM cassette, small V8, \$2500. Longfellow, 268-0523 or 299-7062.
- '78 KAWASAKI KE100, dirt or street, with helmet and manuals, \$325. Wengert, 294-5373.
- '75 20' mini Winnebago cruise, swamp cooler, generator, full bath, sleeps 4, \$7800 negotiable. Parker, 831-1690.
- '81 HONDA GL500 silver wing, Honda saddlebags, 1000 miles, \$2150 OBO, will consider trade. Abbin, 883-8665.
- '62 INTERNATIONAL Scout 4 x 4, \$1095. Carnicom, 281-3421.
- '69 VW van, needs engine work. Davis, 281-1248.
- CLASSIC T-bird, 1966 town coupe, \$3800. Tucker, 877-1140.
- 2 USED dirt bikes (BMX type), boys, make offer. Padilla, 831-0330.
- '68 FIREBIRD convertible. Hymer, after 5 p.m., 293-6029.

- '74 TRIUMPH spitfire, convertible with both canvas top and hard top, yellow, \$1700. Rodriguez, 296-3277.
- '77 MONARCH, 4-door sedan, AT, AC, PB, PS, AM/FM tape, \$2195 OBO. Garcia, 293-3937.
- '75 FORD Granada, AT, AC, PS, PB, 4-door sedan, 302 V-8, \$2000. Berg, 898-2100.
- '73 PORSCHE 914, new engine, transmission, paint, \$9200 invested, \$4600 firm. Malm, 293-2127.
- DIRT bikes — 1972 Honda SL 70cc, \$100; 1976 Penton 400cc MC5, \$500. Wright, 296-3850.
- '75 SUZUKI trail motorcycle, \$550. Roeschke, 298-0365.
- '72 AMC Gremlin, 6 cylinder, automatic, AM-FM cassette, 63,000 miles, 25 mpg, \$500. Atchison, 265-0729.
- '69 RENAULT, \$800 OBO. Berg, 831-3269.
- EXOTIC racing bicycle, Bridgestone diamond, sun tour/sugino. Clement Paris robaix tublars. 54 cm, \$275; Schwinn superior 24", \$175. Passman, 821-4999.
- '71 VW Dune Buggy 1600cc, street legal, tow bar, \$1585 or will trade for small compact Datsun, etc. Gabaldon, 256-0288.
- '83 JEEP Wagoneer limited, loaded, cruise control, power accessories, 19,000 miles. Broyles, evenings and weekends, 898-6130.
- '80 DODGE Colt, 2-door, 4-speed, manual transmission, 1.4 liter, \$3000. Douglas, 281-9504.
- '70 OPEL GT, new battery, paint, upholstery, dash, carb. \$2800. Salmi, 294-3022.
- '60 WILLYS utility wagon, needs work, \$1300. Knight, 836-7149.
- '81 SUZUKI 850, 16K miles, has extras, \$1700 or best offer. Schuller, after 5 p.m., 299-2968.
- '81 FORD F150 supercab, AT, PS, PB, AC, cruise, step bumper, running boards. Beasley, 298-3398.
- '76 YAMAHA 360cc street bike, \$450. Lizon, 892-0145.
- '71 240Z, new paint, no rust, rebuilt engine, \$3500. Hefner, 294-8327.
- BICYCLES: Schwinn 16" boys/girls convertible, \$30; Schwinn 20" girls sting-ray with banana seat, \$65. Miyoshi, 821-9118.
- '75 VW Rabbit, new valve job, \$1000. Brown, 873-0401.
- '74 GMC 1/2 ton pick-up, LW 350 4-speed, power and air, hi-mileage, clean, \$1800. Toy, 898-0491.
- '74 VW bug, AM/FM cassette. Baca, 884-4622 or 268-2526.
- '74 CELICA Toyota: AC, AM-FM tape, overhauled engine, new struts, clutch, brakes, vinyl roof, \$1400. Hayden, 292-3334.

- 3-BDR Ranch house, 2 fenced acres off Frost Road, 25 minutes from Sandia, room for livestock, \$89,900. Rockwell, 281-3037.
- N.E. HEIGHTS 4-bdr., 1 1/4 bath, living, den, kitchen, dining, utility, landscaped, 1550 sq. ft., \$62,500. Refinance, call after 5. Borrego, 294-5612.
- TOWNHOUSE, 2-bdr, 1 1/4-bath, fireplace, 1 1/2 car garage, brick patio, custom Mossman in N.E. heights near A. Academy. Montgomery, 821-5827.
- 2.5 ACRES, N-14, 6 miles from I-40, 3 miles from Bella Vista, heavily wooded, \$33K, terms negotiable. Lassiter, 299-1492.
- 15 ACRES, 12 miles south on NM 14, woods and meadows, proven water, \$75K, 9.5% REC. Meikle, 299-4640.
- BELLAMAH, 3-bdrm., 1-bath, 1-car garage, 1020 sq. ft., near Lomas and Eubank, terms available. Schuler, 821-8944.
- 5 ACRE tract east of Santa Fe, near Pecos River, access from I-25, electricity and telephone at property line, \$17,500. \$3,500 down, 10% REC. Diem, 294-3503.
- 5 ACRE lots — 50 mi. south highway 14, electric, water available, view of Estancia Valley-Manzano Mountains, \$2000/acre. Will finance. Brummell, 898-0867.
- 1/2 ACRE lot — Rio Rancho Estates, electric and water to property, \$8000. Dalton, 293-6085.
- WOODED mountain lots (2) in Pine Lake Park Estates, 7 mi. from Sandia Ski Area, solar, water, access, views, \$32K/acre. Cowgill, 298-1357.

WANTED

- PIANO, pre-owned upright, any brand, good condition; call late evenings. Cygan, 298-3628.
- PERSON To share cost of Albuquerque Fitness (formerly International Fitness) two for one membership. Bustard, 296-5993.
- HOUSE SITTING for July or longer — student completing M.S. work, with family. Haaker, 293-1077.
- VIOLIN for 12-year old male student of the art. Onell, 892-6754.
- HORSE equipment-breaking bosal, circling, and bridle; after 7 p.m. Walker, 281-9587.
- RESPONSIBLE person to drive car to Rochester N.Y. or vicinity. Leave Albuquerque by July 10th. Sublett, 884-4426.
- TWO tires, C78 x 14 or equivalent. Hall, 298-8617.
- IMPLEMENTS for Massey-Ferguson 35 tractor, 3 PT hitch. Thunborg, 898-0863.

WORK WANTED

- LAWN mowing, trimming, rototilling, general yard maintenance and some landscaping. Holt, after 6:00 p.m., 294-6928.

REAL ESTATE

- 5 ACRES land off Frost Road, 25 minutes from Sandia, wooded, water, access. Rockwell, 281-3037.

Fourth of July Celebration Set

TONIGHT at Happy Hour, carved roast turkey tops the buffet spread at \$8.25 with soup and salad bar, \$5.75 without. Food service from the Club's regular menu is also available. Deputy Dan plays arresting country and western music, and Karen Edwards instructs free western dance lessons from 7:30 until 8:30. Special prices (very reasonable) are in effect from 4:30 until the band starts playing at 8:30.

Next Friday, June 29, The Coronado Club's famous shrimp peel is the buffet feature while the Isleta Poor Boys hold the bandstand — a hard combination to beat. More country western dance lessons are on tap as well as the best bar prices in town.

A TRAVEL PROGRAM, slides and discussion, is scheduled Monday, July 2, at 7 p.m. in the ballroom. Speaker is Chet Fornero (ret.) of TransGlobe Travel who will discuss travel in Mexico, particularly the upcoming Coronado Club trip to Mazatlan. The trip, scheduled Nov. 12-19, includes airfare, transfers and bellman tips, seven nights on the beach at the luxurious Playa Mazatlan resort hotel, a poolside cocktail party, and all taxes. Price is \$399 (double occupancy).

INDEPENDENCE DAY, the Fourth of July, is best celebrated at the Coronado Club. It's a great day for families and kids. The gates open at 11 a.m. along with the twin pools for recreational swimming. The Albuquerque Municipal Band plays the *Star Spangled Banner* then proceeds to deliver a big band concert until 1 p.m. A luncheon buffet will be spread under the patio cover where you can get barbequed chicken, beef, hamburgers, hot dogs, assorted salads, and a special sirloin steak for \$5.25. There'll be a horseshoe tournament, a blueberry pie eating contest (for the first 10 adults to sign up), diving for treasure contests for adults and kids, a barrel race, and a balloon toss. Along about 2 p.m. the WDC band will play country western music under the gazebo. Fifty cent beer will be available from a beer wagon and a portable bar will be in operation. Members with pool and patio tickets are admitted free; other Club members pay \$1 while guests pay \$1.50 admission.

THE BIG ONE, the really big one, is the Club's annual Luau scheduled this year on Saturday, July 7, in the new covered patio area. The Pearls of the Pacific, the national show band that presented an outstanding performance at the Club a couple of months ago, returns with a full troupe of singers and grass-skirted dancers. Manager Mitch and Chef Henry plan a feast — roast pig, sweet and sour white fish, Hawaiian chicken, spicy Szechwan beef, Polynesian crabmeat salad, baked bananas, Waikiki peas, tropical salad, and wild rice. Make your plans and reservations now — call 265-6791. The tab is \$12.95 and includes dinner, entertainment, and dancing.

SEAFOOD NIGHT, Thursday, July 12, offers an all-you-can-eat special on fish and chips for \$5.65. Or choose broiled halibut for \$6.95 or scallops Mornay for \$7.25. On Thursday, July 26, a crab night special is

planned. Snow crab, Dungeness crab, and king crab will be featured.

SUNDAY AFTERNOONS in July will see a little extra jazz on the patio. For relaxing and sipping time from 1 to 4 p.m., entertainers Jim Trost and Paul Vuchetich will alternate Sundays starting July 2. Jim plays fine piano, usually accompanied by bass-man Rick Fairbanks, while Paul does a down-home blues bit on guitar and vocals. On Sunday, July 22, the Sandia Jazz Corporation with Jim, Rick, Arlen Asher on reeds, and a drummer will play for dancing. A portable bar will be in operation offering frozen daquiris or margaritas for \$1.

LUNCHEON SERVICE at the Coronado Club adds a new and attractive extra dimension for the summer — dining on the patio. With the addition of new furniture and a roped-off area, diners may take their lunch outside and enjoy it under the skylight of the patio cover. Also, the area can be partitioned for private luncheon meetings. A new patio garden area addition has been added to the staff room. The Club's staff room is a private dining area, also available for meetings and special luncheons, and can seat up to 25 people. Call the Club office, 265-6791, to make arrangements.



THE STAR SPANGLED BANNER played by a 60-piece Albuquerque Municipal Band opens the Independence Day celebration at the Coronado Club patio at 11 a.m. July 4. Recreational swimming, fun, games, and contests for kids and adults, a luncheon buffet, and 50-cent beer are planned.

Retiring This Month

Retiring this month and not shown in LAB NEWS photos are:

- Lois Hayes (5213),
- Gene Igel (7556),
- John McKelvey (3311),
- Candido Montoya (3417),
- Palma Oliva (7631),
- Don Perrette (7543),
- Vera Romero (7470),
- and August Binder (5219).



THE C.B. SAWYER AWARD for outstanding contributions in the field of quartz crystals and devices was presented to Bob Graham, left, and Bill Benedick (both 1131) at the recent IEEE Frequency Control Symposium in Philadelphia. A third recipient, Frank Neilson, formerly manager of Testing Technology Department 7550, died April 15 and the presentation was made to his son David. The award was for fundamental studies of the physical properties of crystalline quartz under conditions of extreme pressure and rates of loading — work the three Sandians performed in the '60s that subsequently revolutionized the measurement of shock wave loading. Single crystal quartz (Bob is holding a large crystal and others are on the table) produces an electric current that equals the impact or shock stress. This discovery led to the development of the Sandia quartz gauge, a standard instrument for measuring shock wave stresses up to 600,000 psi. It is capable of stress-time resolution to within a billionth of a second, or the response time of the supporting electronics.