

Morgan Sparks: Diversification, George Dacey, Pensions . . .

After nearly nine years here as president, Morgan Sparks will be leaving the Labs next week as he retires. Those nine years have been eventful, and Mr. Sparks discussed them with LAB NEWS.

"I'd say our '74 decision to diversify—while at the same time continuing to focus on weapons work—has proven to be wise. We're healthy now, with some 70 percent of our work related to weapon or other defense programs, and the remaining effort largely in the energy area. With this mix, we've been able to handle the various budget losses and gains because we've been able to shift our technical people appropriately among our programs. The point is that we have been able to diversify, yet we haven't lost sight of our mainstream activity—weapons work."

The situation wasn't particularly good when you came here in 1973.

"No, it wasn't. We faced our third layoff—an experience I don't care to repeat—and we'd been told by DMA in Washington that we couldn't expect to have the same level of support we'd had in years past. And, for about half a dozen years, activity in the weapon programs did diminish. Fortunately, after reaching a low point, the pendulum has begun to swing the other way—upwards."

What about George Dacey? You've known him for a long time . . .

"Yes, in fact I was best man at his wedding. He has the one indispensable quality for a person in this job: enthusiasm. In an R&D lab, you have to expect to succeed in difficult things . . . that's the nature of the business. Of course, George has also had 15 or so years of managing programs at a high level, and he has a good technical background for this job. He and Sandia will do well together."

On the people level, what achievement do you feel best about?

"That would have to be getting us under the Bell System retirement plan. There's been some grumbling, but the fact is that we're all better off . . . the concern, I guess, is that some are better off than others. You know, we could have done nothing, just kept the old plan and we'd have avoided the controversy . . . that's the irony. I'm pleased, too, with the progress we've made in affirmative action. At the outset, a lot of people were edgy about it, but that's not the case now."

How does the Labs stack up nationally, in terms of recognition?

"We've come a long way in that area, too, and I suppose that's due in large measure to our increased activity in unclassified work—energy, reactor safety, and the like. I can recall getting a puzzled look in Washington and elsewhere when I'd tell people that I came from Sandia. That's the exception today . . . and being designated a national laboratory will certainly enhance our national recognition."

How about a few predictions for the rest of the decade?

"We'll continue to be primarily a weapons lab. I'm confident we'll be deeply involved in major new technologies, but I won't even try to guess what they will be. It's our business to work at the forward edge of technology . . . if we could predict the outcome of our exploratory work, then we probably shouldn't be doing that work."

How about DOE?

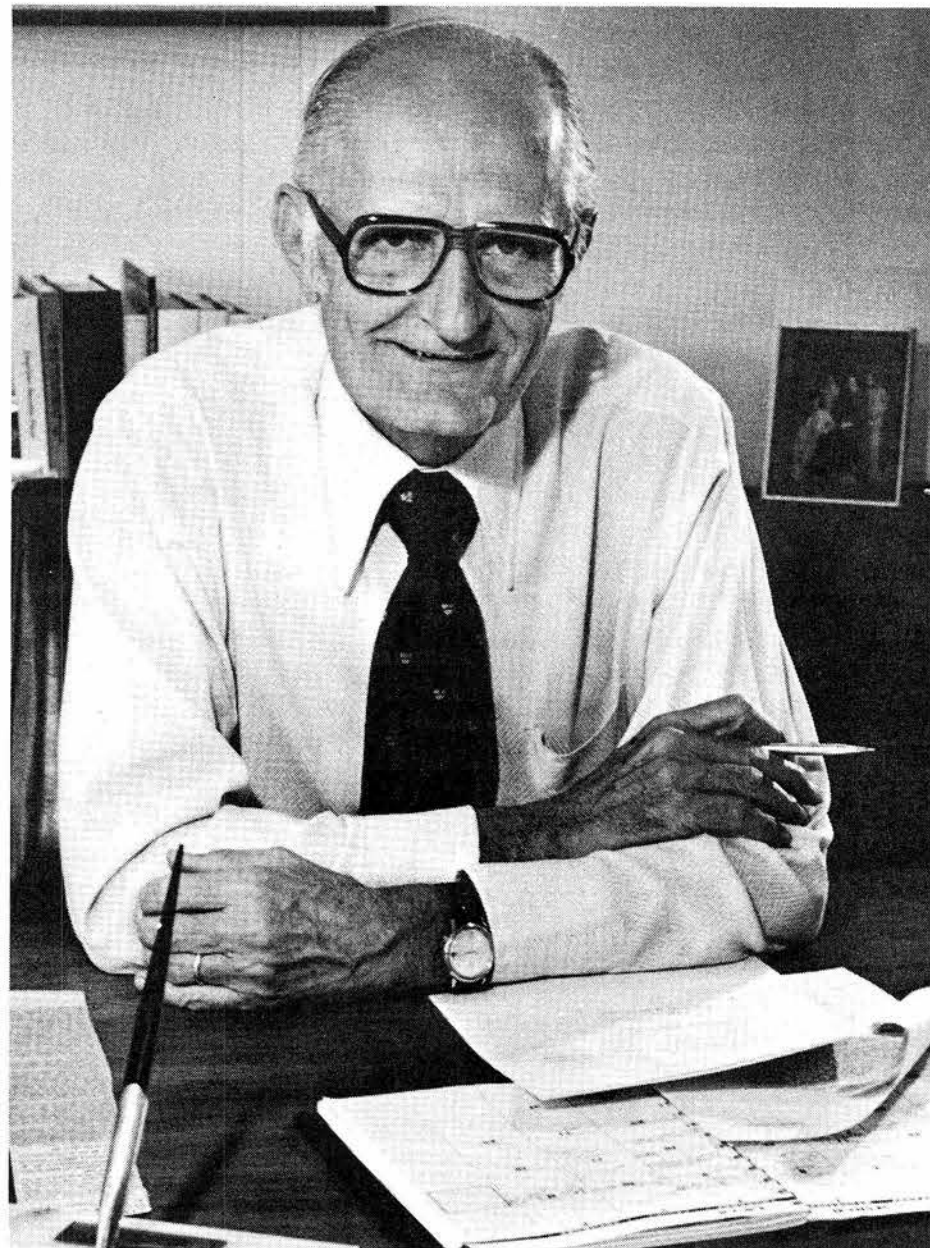
"If the predicted reorganization takes place, I hope that we and the other national labs will be dealing with a smaller sponsoring agency, not unlike ERDA and AEC, that will have as its principal focus the research and development work being done at the Labs. The national labs also

need a crisper definition of purpose. The weapon labs already have this, but the others tend to be collections of purposes. It's appropriate that the national labs work on high risk programs, but we need to develop a better way to transfer the fruits of this work to the private sector."

And what will Morgan Sparks do with all his free time?

"We'll stay here . . . this is home. I've found that most of the interesting possibilities from a professional standpoint tend to be full-time jobs . . . and I wince a little at that prospect. I will be working with volunteer groups, for example the United Way, and I'm on the boards of several companies and educational councils. And we'll do some traveling. I've had lots of travel in this job but it was mostly concentrated on a few locales—Washington and places like that. You know, I haven't even been to Carlsbad Caverns yet . . ."

[Ed. note—An open house is scheduled for Mr. Sparks in the cafeteria on July 27, 2 to 4 p.m.]

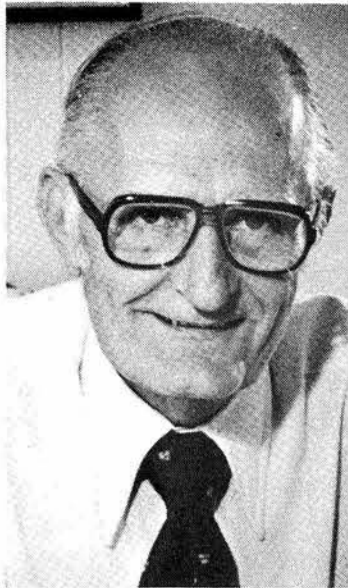


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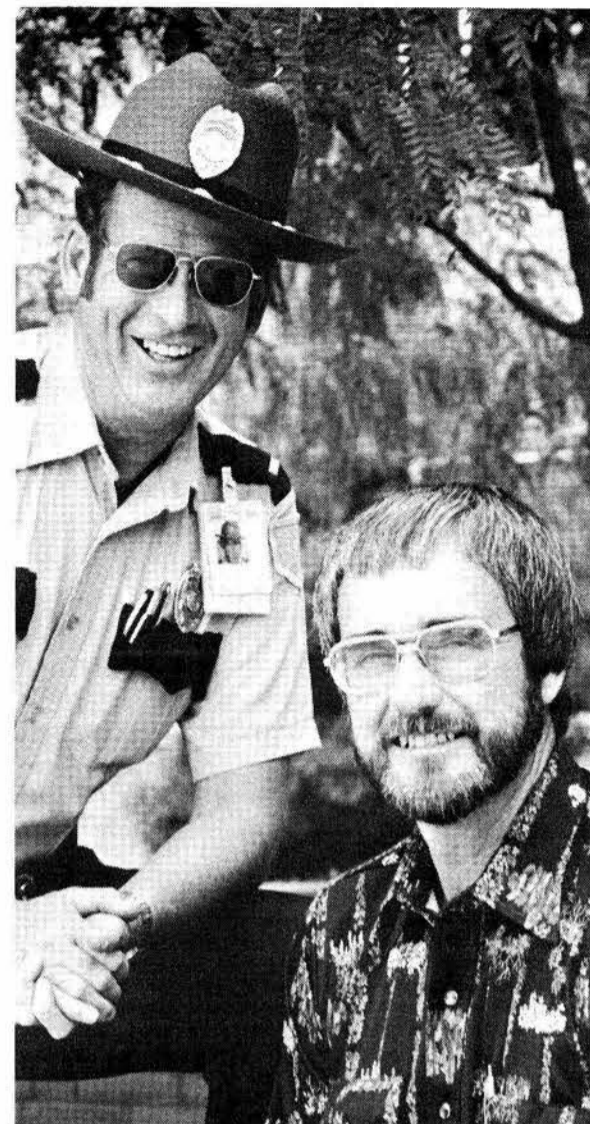
Morgan Sparks--I greeted Morgan and Mrs. Sparks as they arrived at the Albuquerque Airport in 1973 and have since closely observed this man in a variety of situations. These are my perceptions of him, as man and as president.

His salient quality is an easy self-confidence that shows in his relaxed manner, whatever the circumstances. One effect of this is that he succeeds in placing others at their ease as well, a valuable trait when you're trying to get the best out of people. That self-confidence also permits him to say "I don't know" when he doesn't, where someone less secure will pretend to know.

Discussing his retirement, a friend remarked, with emphasis, "He's a gentleman," a description not often heard in these days of institutionalized egalitarianism. But if you accept as a definition of that word one who is considerate of others, then Morgan Sparks is indeed a gentleman, evenhanded in his courteous exchanges with custodians, staff people, his own executives, and with members of the press.

As to his style of management, I think he realized early on that executive authority is not so much a matter of fiat but rather one of persuasion, especially in a laboratory. Most of us prefer suggestions as to the course to take--not the iron command--and, done properly, the persuasive approach achieves ever so much more. In the practice of persuasion, I would note only that Morgan Sparks is in the same league as Bjorn Borg executing an overhead smash. He makes it look easy, but just try it sometime.

Adios Morgan Sparks. Welcome to Sandia, George Dacey. *js



NEW SUPERVISORS--Garland Tilley (3435) and Ray Bland (1471).

Supervisory Appointments

RAY BLAND to supervisor of Development Labs Division 1471, effective July 1.

Ray joined the Labs in March 1960 in the materials and processes organization. For the next 15 years his work was concerned with surface and thin film physics. In 1974 he transferred to his present organization, working as a process engineer in the glass labs. Since 1978 he has been supervisor of the Physical Electronics Section 1472-4. Ray's current division has responsibility for the physical electronics and neutron tube development labs, for hybrid microcircuits, and for electronic testing.

Ray came to Sandia after graduation from the University of Dayton Technical Institute. He received his BS degree in physics from the U of A. He is a member of the American Vacuum Society and the American Ceramics Society. Ray, his wife Louise (3322), and their four children enjoy skiing, bicycling, motorcycle touring, rafting and backpacking. They live in the University Heights area.

* * *

GARLAND TILLEY to Lieutenant, section supervisor in Security Operations Division 3435, effective July 1.

Garland joined Sandia as a security inspector in January 1974. He retired from the Air Force in 1972 after serving 20 years in the security police. His last tour was at Kirtland AFB, and he and his family remained in Albuquerque.

Off the job, Garland enjoys golfing, hunting and fishing. He and his wife Gwen have two daughters and live in the NE heights.

Events Calendar

July 24, Aug. 6--Santa Fe Opera, "La Boheme"; July 25, 29--"The Rake's Progress"; July 31--"Daphne"; Aug. 4--"Il Barbiere Di Siviglia," 9 p.m., Opera Theater.

July 24-26--"Godspell," Albuquerque Civic Light Opera, 8:15 p.m., 2:15 matinee 26th, Popejoy, 345-6577.

July 24-26, 30-31, Aug. 1-2, 6-9--Adobe Theater, "Arsenic and Old Lace," 8:30 p.m., 898-3323.

July 25--Chamber Orchestra of Albuquerque, 8:15 p.m., Keller Hall, UNM.

July 25--Acoma, Cochiti, Laguna, San Felipe, Santo Domingo Pueblos: Santiago's Day, Grab Day; Taos Pueblo: Santiago's Day, corn dance.

July 25-26--Spanish Market, all day, downtown plaza, Santa Fe.

July 26--Santa Ana and Taos Pueblos: Santa Ana's Day, corn dance.

July 26--Arts in the Parks: Bataan Park, "Experience Day," workshops and poetry; Aug. 2--Old Town Plaza, "Fantasy Day," two theater companies, Aztec dancing and Latin-American music, 2-5 p.m., no charge.

July 27--Lecture Under the Stars: "Food Power: How Foods Can Change Your Mind, Your Personality, And Your Life"; Aug. 3--"The Quiet Answer," 8 p.m., Central Mall, UNM.

Aug. 1--Mr. New Mexico & Miss New Mexico Contest, Convention Ctr., 7:30 p.m., tickets at Pro Gym, 294-1221.

Aug. 2--Jemez Pueblo: Old Pecos Bull Dance, morning, celebration for descendants of former Pecos Pueblo.

Aug. 2--Rancho de las Golondrinas, open house, Old Cienega Village Museum, 10 a.m.-4 p.m., La Cienega.

Aug. 6-9--Annual Inter-Tribal Indian Ceremonial: Indian dances, rodeos, arts and crafts, parades; Red Rock State Park, Gallup.

LAB NEWS

Published every other Friday

SANDIA NATIONAL LABORATORIES

An Equal Opportunity Employer

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LIVERMORE, CALIFORNIA
TONOPAH, NEVADA
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FTS 532-2447

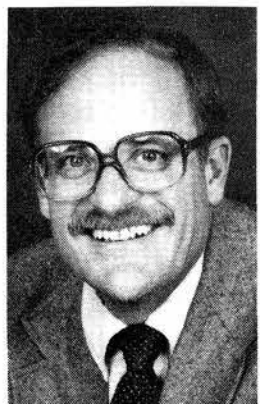
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Supervisory Appointments



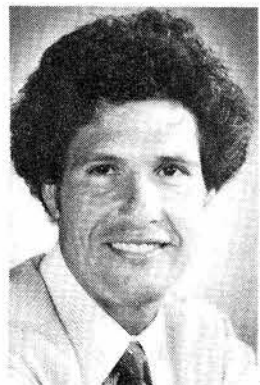
BILL ROBINSON to manager of Combustion Technology Department 8520 (newly created), effective July 1.

He came to Sandia Livermore in 1964 as technical staff member to work in the structural research group and, in 1969, was named supervisor of that division. Bill transferred to Sandia Albuquerque in 1973 as a member of Management Staff; then, from 1974 to 1976, he was supervisor of a component development division. From 1976 until the present he has been supervisor of the Combustion Applications Division at Sandia Livermore.

Bill earned his BS and MS degrees in civil engineering at the University of Colorado, a professional degree in engineering mechanics at Columbia, and his PhD in applied science at the University of California at Davis.

Bill, his wife Jo and two children—John and Sarah—reside in San Ramon.

* * *

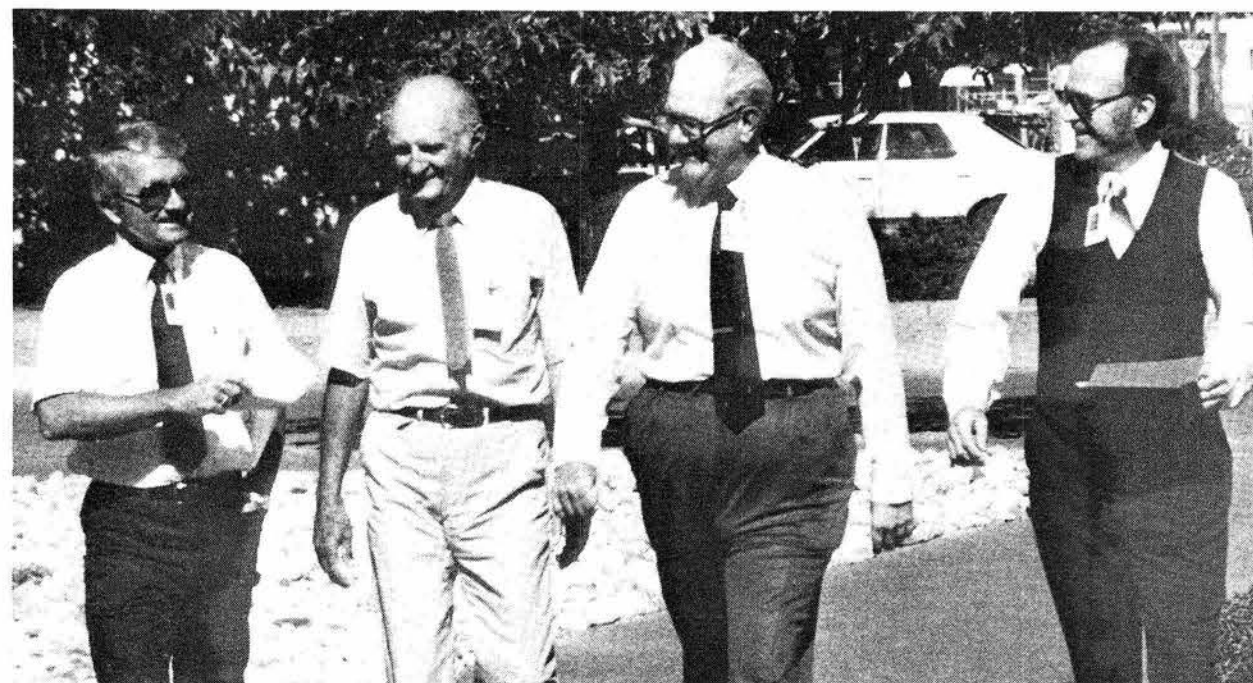


MIKE BIRNBAUM to supervisor of Plant Engineering Division I 8254, effective July 1.

Since joining Sandia in 1967, Mike has worked in applied mechanics, command, control and communications, systems analysis, advanced components, and, for the

past year, on the planning staff.

Mike earned his bachelor's in aerospace engineering, master's and PhD in applied mechanics, all from the Polytechnic Institute of New York. He and his wife Fran have three children and reside in Danville. Mike's hobbies include jogging, tennis, soccer, plus coaching and refereeing youth soccer.



AT LIVERMORE—Retiring president Morgan Sparks brought his successor George Dacey to Sandia Livermore on July 10 for a briefing and tour of the site. Shown on a walking tour, left to right, are Tom Cook (8000), Morgan Sparks, George Dacey, and Arlyn Blackwell (8200). While at Livermore, Mr. Dacey addressed management people in Sandia's auditorium and later met with LLNL director Roger Batzel.



SANDIA LIVERMORE NEWS

VOL. 33, NO. 15

JULY 24, 1981

Emergency Communications

Sandia RACES Team Organized

Following last year's earthquake, Sandia Livermore, like many, increased its efforts in emergency preparedness and planning for future disasters.

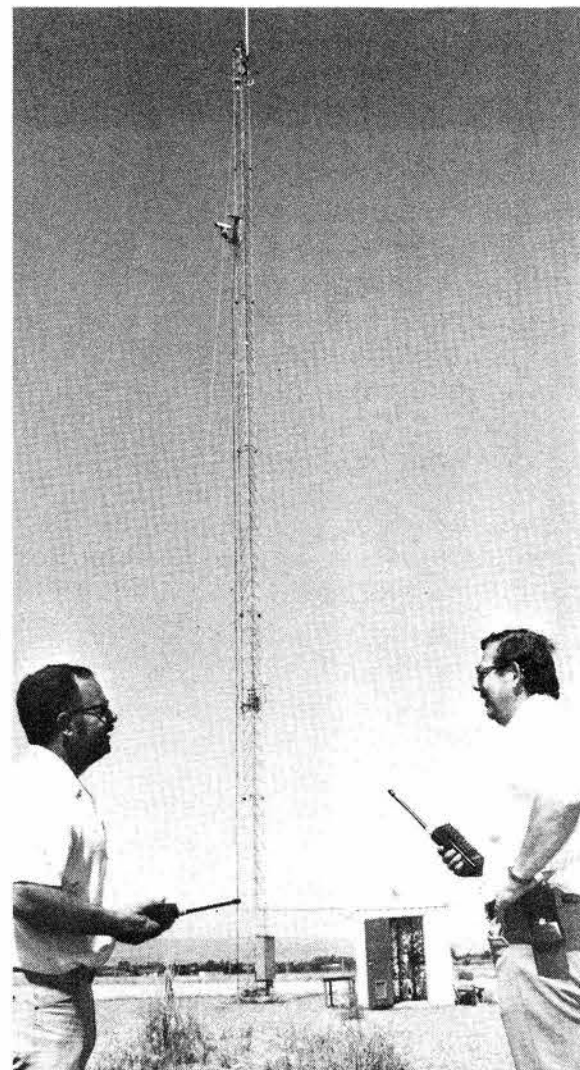
One part of the upgraded plan is to utilize licensed amateur radio operators who are employed at Sandia, and 12 of these have volunteered to serve as SNLL's Radio Amateur Civil Emergency System (RACES) communicators. The trained radio operators can keep communication lines open with their portable equipment even if power is out or phone lines down. They also have access to a nationwide network of other operators who can assist in communications.

Coordinators for the Sandia RACES group are Doug Hanson (8271) and Tom Jones (8322). Ten others serve with them on the committee that functions under Security Division 8261.

This emergency communications plan ties in with the Lawrence Lab and with Livermore's Office of Emergency Services. Sandia's radio amateurs take part in regular drills with the city, the most recent of which included the evacuation of Lawrence and Sandia Labs during an exercise in which there was an assumed release of toxic fumes as a result of a railroad crossing accident.

To bolster range and power, the Labs has installed a VHF amateur radio repeater close to its 120-foot antenna tower. The repeater enables radio operators with a low-power handheld transceiver to communicate over many miles.

The three VHF repeaters in the Valley supplement each other in the event of one being disabled. The handheld units can also key into the telephone system.



DOUG HANSON (8271), at right, and **Jim Duggar (8162)** test the new repeater at base of Labs antenna.

A recently acquired van will be equipped as a mobile command post and communications center for Sandia to use during emergencies. Plans include installing a HAM base station in the vehicle so that operators can assist Security if phone lines and other communication channels are overloaded or out.

Other Sandians in this activity include Ralph Clark (8463), Jan Collins (8442), Jim Duggar (8162), Red Hollenbach (8353), Jim Sheley (8161), Cliff Skoog (8153), Merle Snyder (8412), John Seuser (8423), Bob Weaver (8411) and Mitch Williams (8413).

Congratulations

To Manuel and Gina (8250) Lamons, a son, June 10.

Cindy Jensen (8262) and Donald Miguel, married in Pleasanton, June 27.

Martha Macadaan (8413) and Rich Campiotti (8466), married in Livermore, May 23.

Sympathy

To Bob Marmon (8335) on the death of his wife in Livermore on June 22.

Take Note

At next month's annual meeting of the American Statistical Association, Ron Iman will lead a two-day course on nonparametric statistics, along with Prof. W. J. Conover from Texas Tech. The course is based on the recent book on this subject by Conover, who is also a consultant to Sandia. The annual meeting for this year is being held in Detroit in early August.

* * *

If you believe that your car's alternator is the thing that switches tires, then you're probably ready for the Automotive Class/Basic Maintenance being offered by the Base Arts & Crafts Center. There's no special starting date—the Center organizes the class when enough (five or more) people call in expressing interest. You can reach the Center on 4-0222.

* * *

The Chamber Orchestra of Albuquerque continues its summer season with a concert tomorrow, July 25, at 8:15 p.m. in UNM's Keller Hall. Director/conductor David Oberg leads the group in compositions by Haydn, Respighi, and Saint-Saens. Pianists Margaret Wright and Dorenda Morse will play as a team. Tickets, at \$6.50, are available at Ticketmaster locations and at the Keller Hall box office before the performance.

* * *

If you're planning ahead, then note on your calendar that Energy Conservation Day will this year be observed on Friday, Nov. 27 (the day after Thanksgiving), as a holiday. This gives all of us a four-dayer.

* * *

Arsenic and Old Lace comes next to the Adobe Theater in Corrales, and Sandian Dolores Graving (6011) is one of the principals in the comic drama. The play runs for this and the next two weekends, Thursdays through Sundays, with curtain time at 8:30. Reservations: after 2 p.m. Wednesday through Sunday on 898-3323.

* * *

Colloquia coming up: on July 29, "Active Experiments—Hypothesis Testing in the Magnetosphere," Morris Pongratz of Los Alamos National Lab. On Aug. 5, Jonathan Mann, MD, assistant director of the NM Office of Health Promotion and Disease Prevention, presents "New Mexico and Public Health in the 80s," covering the evolution of changing disease patterns in the state. Both colloquia begin at 10 a.m. in Bldg. 815, outside the Tech Area.

* * *

From the VLA west of Socorro comes an invitation to Sandians to attend a lecture by astrophysicist Phil Morrison of MIT entitled "Cosmic Waterfall, Whirlpools & Fountains." It will be given at the new Conference Center at New Mexico Tech (north of Socorro) or Aug. 5 at 7:30 p.m. The lecture is part of the program in a symposium on extragalactic radio sources being held at UNM that week.

* * *

New Branch Office, New Loan Rates

by Red Turner, Credit Union Manager

New Branch Office

Have you visited our new branch yet? It's located at Wyoming and Candelaria in the old Fidelity Bank building. The off-base location is especially convenient for retirees and family members not working on Kirtland itself. Hours are 10 to 5:30 and, on Saturday, 9 to 1.

Since our space at the branch is limited, please use one of the three drive-up windows where you can make these transactions: deposits and withdrawals, cash drafts, buy money orders, pay utility bills, buy bus passes, make loan payments, or get the status of your accounts. We can send any necessary forms out to you through the windows.

Transactions to be done inside are those involving extra time: buying certificates, opening new accounts, or buying travelers checks. Try to have your account number at hand when you appear at the window for service. If your spouse is transacting business on your account, please be sure he or she has the account number (spouse must be joint or may have his/her own account). It takes time to look up account numbers and other customers may be waiting.

New Loan Rates

The goal of your Credit Union is to offer its members the best possible dividend rates along with the best possible loan rates—but these two must balance each other. In order to have sufficient funds available for loans, we must have adequate money on deposit in our various types of savings accounts. And to persuade our members to keep their money invested with us, we must pay dividend rates competitive with rates offered by other financial institutions. That means our loans must produce adequate income to pay competitive rates on savings. Since our cost of funds has been increasing, our Board of

Directors found it necessary to raise our loan rates and to encourage shorter term loans. Even with the increase, we still offer some of the lowest loan rates in town. Listed below are the types of collateral accepted for loans, along with the annual percentage rate and maximum term for each type of collateral (effective July 9, 1981):

COLLATERAL	INTEREST RATE (APR)*	MAXIMUM TERM (MONTHS)*
Aircraft	16%	60
Automobiles & Pickups	15%	New—48; Used—36
Boats, Motors & Trailers	16%	36
Certificates (SLFCU)	+ 2%**	***
Certificates of Deposit (Outside)	+ 3%**	***
Life Insurance	16%	60
Mobile Homes	16%	60
Motorcycles	16%	36
Passbooks	16%	48
Real Estate (1st & 2nd Mortgages & Title I)	17%	60
Recreational Vehicles	16%	48
Shares (SLFCU)	+ 2%	60
Signature	17%	36
Stocks, etc.		
a. Stocks, Bonds, Mutual funds regularly listed in Wall Street Journal; bank stocks and securities	16%	36
b. All other securities	17%	36
Student Loans	16%	60
Travel Trailers & Campers	16%	36

* 1% will be added to the annual percentage rate [APR] on any loan with a term that is longer than 36 months [unless the collateral is shares or SLFCU certificates].

** Interest rates on loans secured by certificates will be determined by adding 2% [or 3% if it is not an SLFCU certificate] to the dividend rate being paid on that certificate and then rounding the answer upward to the nearest quarter percent. Loans on outside CD's will have a minimum 16% rate.

*** The maturity date of the loan cannot go beyond the maturity date of the certificate used as collateral.

How many Sandians motorcycle to work? Used to be only a handful, nonconformists to a man. Now the machines have electric starters, murmur quietly, have AM, FM, CB and sculptured saddles, look like a Las Vegas casino and have gained respectability. And a lot of riders—a recent check by Safety of the cycle parking lots counted 203.

* * *

Speaking of commuting, on Saturday morning, Aug. 1, a seminar will be held here at the Labs on bicycling—techniques, maintenance and repair, using the gear mechanism, the right bike for you, and how-to-get-to-work in one piece. The seminar will be held only if enough people sign up, and the fee—\$2—goes to the S. Hwy. 14 Village Project. (The fee is meant to discourage no-shows.) Call John, 4-1053, if you're interested.

Retiree Deaths

April-June 1981

Jesse McBride (89)	March 7
John Kirby (67)	April 18
Ray Mitchell (65)	April 22
Bill McCormick (84)	April 27
Thurman Moyer (63)	May 4
Einer Morterud (70)	May 7
Dorothy Brink (56)	May 9
Filomeno Chavez (72)	May 15
Carl Nylander (73)	May 26
Leroy Cole (63)	May 28
Zena Ivey (83)	May 30
Axel Peterson (80)	May 30
Aileen Moran (81)	June 5
Audrey Sutton (73)	June 10
Louis Fair (74)	June 11
Dan Freshman (70)	June 16
Norman Zirwas (59)	June 21

Being A Crusader Is Hard Work

If you have any interest in the nuclear power controversy (and you should), then you know who Dave Williams is. Dave, a nuclear chemist in Advanced Reactor Safety Analysis Division 4424, is the guy whose letters to the editors of the *Journal* and *Tribune* have become a fixture—a frequent fixture. Each letter is usually a carefully crafted rebuttal to a statement or position taken by a member of an anti-nuclear group or to some reportorial goof. More often than not, the anti-nuclear view has been given splashy treatment in the newspaper, and Dave has the uphill task of countering the headlines with an undramatic recitation of technical data.

"It's like responding to a cry of Fire! in a crowded theater when there is no fire," Dave noted in a recent LAB NEWS interview.

"Take, for example, the *Tribune's* series earlier this year dealing with hazardous wastes—the 'Lethal Legacy' as it was entitled. The segment dealing with uranium mining waste bore the headline 'Navajos build radioactive homes; offspring may be bearing burden,' and the accompanying photo showed a youngster with a birth defect who lives in one of the homes. Pretty strong stuff—how can you not be against the malevolent force that does this to the newborn?

"Yet the fact is that the levels of radioactivity found in these homes—they were built using discarded rock from nearby uranium mines—could in no way account for birth defects. Many other socioeconomic factors are the probable cause, but this more scientific, less melodramatic explanation of the birth defects is nowhere to be found in the *Tribune* series."

Dave got into the nuclear activist business in 1975 when he attended hearings relating to the environment here in New Mexico. At the hearings, a representative from the Friends of the Earth gave, Dave felt, a highly biased statement. State Senator Echols invited him to present the other side of the argument and, after some preparation, Dave did so and he was off and running.

Why does he do it?

"Two reasons. I have a conviction that nuclear power offers a safe and economic answer to some of our energy problems. Second, by training and vocation I do know something—not everything—about the subject and, in a sense, feel I have a responsibility to try to set the record straight when I see some distortion or plain untruth about nuclear power. After all, if we people who are knowledgeable about the subject don't speak out, then who will?"

It's been a lonely road for Dave. Sandia Labs follows a policy of non-advocacy in nuclear matters so that its work in this area will not be considered biased. As a consequence, Dave makes a point of identifying himself as a nuclear chemist representing Americans for Rational Energy Alternatives (AREA) and disassociating himself from the Labs.

We asked Dave why more Sandians aren't involved. "They're busy people—this stuff is time consuming. You know, just

because you're a physicist doesn't mean you can expound on, say, the effects of low level radiation, so you have to spend personal time boning up. Our opponents have the luxury of saying just about anything that pops into their minds. We can't . . . we can't even make an honest mistake because this would be proof of our 'conspiracy.' Another reason more technical people don't join in is the business of confrontation. These exchanges or debates with the anti-nukes can get very dicey—I've been called a 'paid liar,' even threatened once, things like that. Scientists and engineers enjoy technical exchanges, but these often turn into harangues with none of the niceties of courteous debate."

After six years of grappling with his opponents, Dave has reached certain conclusions about the anti-nuclear faction. "They have a characteristic ideological slant that is hostile to the mainline activity of government and industry—we scientists are merely paid tools of the government/industry complex and, as such, are part of the 'conspiracy.' Logic doesn't seem to trouble them—they ignore the fact that we would be endangering our own lives and those of our families if indeed we were actually covering up some risky nuclear adventure. Many anti-nukes don't understand how science works, how peer review of technical presentations weeds out the spurious. Their scientists—and they have a few—usually publish their findings in press conferences, thereby short circuiting the peer review process."

What about AREA?

"We organized in 1977 here in New Mexico and now have 200 or so members, most of them from Albuquerque and Los Alamos. We're not just a nuclear lobby—we promote other energy sources as well when there's some rational basis for believing a source will contribute to the energy package. We try to reach the public through the media—writing letters, holding news conferences, appearing on talk shows, rebutting nonsense, etc. We also make public presentations, and we take part in public hearings on things like WIPP. Lately, we've been making an effort to have a more balanced energy picture presented in the public schools.

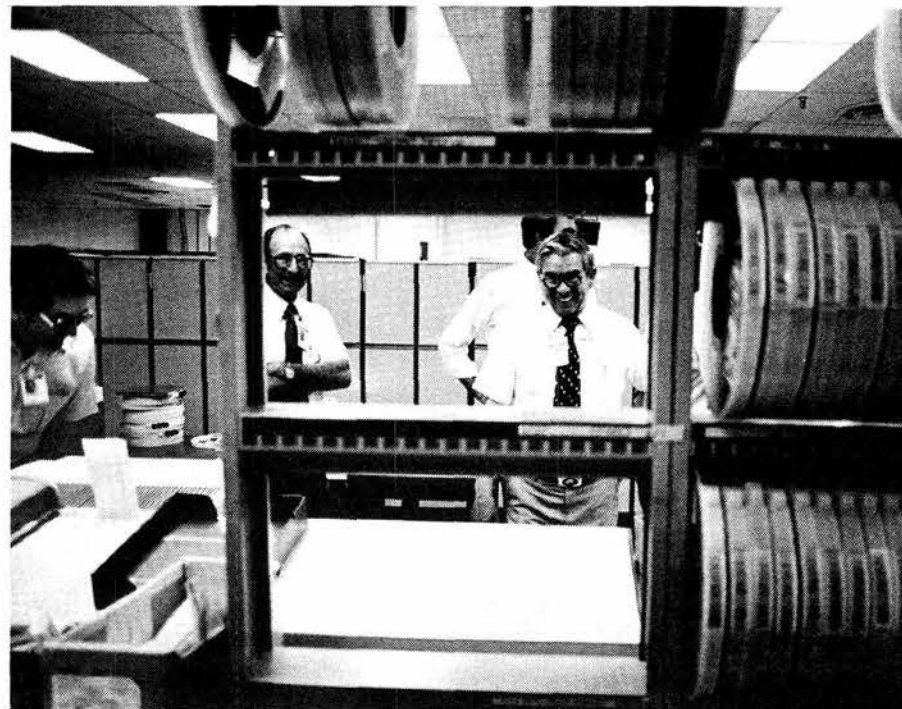


MAN & CAUSE—Activist Dave Williams (4424) has become a skilled typist in the course of many letters to the editor. Besides his literary effort, Dave promotes nuclear power in speaking engagements and in debates.

"One project we're particularly proud of is our hour-long video rebuttal to ABC's hatchet job on the uranium industry in New Mexico (last year). It's pretty hard to counter a network TV presentation, but our rebuttal has gotten wide circulation and been very well received.

"We would, of course, like more members in AREA and more support. And I'd like to emphasize that we've got jobs for both technical and non-technical people. We'd fall apart if it weren't for Pat Wainwright and Evelyn Saucier—two women in AREA who had no technical background before they got into this thing. Being a member doesn't mean you're going to have to face down the militant mobs—unless you want to. We have a need for people who can, for example, develop position papers on different technical aspects of the energy problem. We even need envelope stuffers and telephone callers. . . ."

If you're interested, annual dues for AREA membership are \$10 (\$15 family), and you'll receive a quarterly newsletter. Send your application to P.O. Box 11802, Albuquerque, 87192. •js



BIG REEL—A familiar face peers through the racks of reels in Sandia's Computer Operations Center in Bldg. 880. Congressman Manuel Lujan was being shown the sights by Kelly Montoya (at left, 2630) during a recent visit to the Labs. The Congressman also talked with President Sparks and President-to-be George Dacey.

Patent Awarded For Solar Tracking Device

DOE was awarded a patent recently for a simple solar collector tracking device invented by Bob Stromberg, supervisor of Solar Technical Liaison Division 4714.

Bob built the device as part of a home solar hot water system (LAB NEWS, May 26, 1978). He needed something to focus his trough-type solar collector on the roof of his home in the SE heights.

"First of all, it had to be inexpensive," Bob says, "Which means simple. It also had to be reliable—I didn't want to spend a lot of time climbing up on the roof to fix it."

The resulting device, which activates an electric motor to drive the collector into focus, consists of two parallel bimetallic strips separated by a shade plate. The strips, about two inches by one-half inch and similar to those found in many thermostats, are attached at one end to a horizontal shaft. One strip is also anchored at the other end, but the end of the second strip is an electrical contact suspended midway between two fixed contacts.

When the two strips are equally exposed to the sun, the collector is in focus and the electrical circuit from the sensor is open. However, when the strips are unequally illuminated, indicating the collector is not in focus, the circuit is closed by the flexing action of one of the strips. Closure of the overhead contact drives the motor in one direction, while closure of the bottom contact drives the motor in the other direction.

The shade plate is sufficient for coarse tracking. For fine tracking, a shadow bar, located along the collector axis about 12 inches above the centerline of the two strips, provides better definition of sunlight and shadow to expand or contract the bimetallic strips.

Thermal lag in the strips permits the collector to be driven squarely into focus before the circuit is broken, stopping the tracking motion. Tracking also stops during periods of cloudiness because



TRACKING DEVICE which activates a drive motor to focus a solar collector is demonstrated by inventor Bob Stromberg (4714). Flexing of two bimetallic strips, reacting to sunlight or shade, closes contacts to the drive motor. When sunlight is equal on the two strips, the circuit to the drive motor is inactive and the collector is in focus.

insufficient heat is created to flex the strips.

Bob is currently on a three-months assignment as the DOE representative at a solar thermal power plant site near Almeria, Spain. The plant is partially funded by DOE and utilizes some US-built components.

Congratulations

Tom (1522) and Mary Cathren Barger, married in Albuquerque, June 27.

To Berweida (3522) and Lacey (1415) Learson, a son, Brandon Lacey, May 22.

Sympathy

To Charles Coffin (2458) on the death of his mother in Florida, July 9.

Retiring



Cecil Fitzgerald (3425)



Harold Riley (1485)



Jan Kowalski (3731)

Monumental Task

The pile of uranium mill tailings, some 35 ft. higher than the surrounding flats and covering more than 100 acres, is located in South Salt Lake City about four miles from downtown. It represents the remains of 1.7 million tons of uranium ore processed at the site from 1951 through 1964. Abandoned since 1968, the site was the scene recently of renewed activity as a mobile drill rig took core samples from the pile and the ground under it. The cores were checked for radioactivity at the time of removal by a team of Sandians in an instrumentation van, then catalogued for a complete chemical and mineral assay by a contractor firm.

The Salt Lake City location is only one of 25 similar sites that are the particular concern of John McKiernan's Project Engineering Division 4542, which is providing technical assistance to DOE's Uranium Mill Tailings Remedial Actions Project (UMTRAP).

Under UMTRAP, the sites are being surveyed and characterized. Some of the mill tailings (those that contain economically valuable minerals) are being considered for reprocessing; at nine sites, the tailings may be relocated; and at all sites the tailings will be stabilized in a safe and environmentally sound manner.

According to Harold Rarrick (4542), responsible for UMTRAP radiological measurements, the tailings come from uranium mills that operated from the early 1940s through 1960s processing ore to produce "yellowcake." This was further refined at government uranium enrichment plants to provide uranium for defense programs. After the 1950s, uranium was also needed for commercial nuclear power plants. On average, only three pounds of yellowcake is removed from a ton of uranium ore, and some 25 million tons of tailings were left in the open at the abandoned sites.

"Radioactivity in the tailings is two to 100 times greater than average natural background radiation," Harold says, "and there is a release of minute amounts of radon gas. Radon is released naturally from all rocks and minerals that contain

Labs Supports Disposal of Uranium Mill Tailings



WITH DOWNTOWN Salt Lake City four miles in the background, a Sandia team directs core sampling from an abandoned uranium mill tailings pile. Sandia's radiological instrumentation van is in right foreground.

radium but is more readily released from tailings because they have been finely crushed. Since radon is radioactive, although quite low-level, it's probably best to avoid any long-time exposure to it."

In 1978 Congress passed a law directing that every reasonable effort be made to provide for the stabilization, disposal and control of the tailings in a safe and environmentally sound manner—the mission of UMTRAP. (Today's regulations for uranium mill tailings disposal are much more stringent than those in effect when these sites were abandoned.)

UMTRAP is almost literally a monumental undertaking. Of the 25 sites

requiring remedial action, one is in Pennsylvania while the remainder are in the western states: New Mexico, Texas, Colorado, Wyoming, Utah, Arizona, Idaho, Oregon and North Dakota. The smallest sites cover an area of about 20 acres, while the largest exceed 250 acres.

Nine of the tailings piles may be moved to new disposal sites. The others will probably be stabilized in place. As a result of the remedial actions, the piles will be protected from erosion by wind and water and will not release significant amounts of radioactive material. At sites where reprocessing is economically worthwhile,

residual uranium or other minerals may be extracted before the piles are stabilized.

The tailings can be disposed of in several ways. One proposed method calls for a large trench, lined with at least two feet of clay or other impervious material as a barrier to ground water seepage, filled with the tailings and then covered with 10 feet of topsoil and a layer of rocks.

Other methods of stabilization are being investigated under a technology development program headed by Paul O'Brien (4541). Tests of the various disposal methods will be conducted at a pile at Grand Junction, Colo., starting next month.

Stabilization work at the priority sites is planned to start in 1983, and the cleanup of all sites is expected to be completed by late 1988, based on schedules prepared by Mike DeWitte (4542). He prepared initial schedules and cost estimates for each of the sites to show how the work may be accomplished in the seven years specified by the Public Law.

In the meantime, the field assay work continues under the direction of Lou Hanchey (4542). Lial Brewer of Industrial Hygiene Division 3311 is the Sandia field representative. Radiological instrumentation was developed by Rarrick and Doug Minnema (3312), who is also performing statistical analysis of radiological data.

A large environmental documentation effort to support UMTRAP is being performed by a team headed by Mel Merritt (4514).



AT SALT LAKE CITY site, core samples from the uranium mill tailings pile are prepared by a contractor drill rig crew directed by Lou Hanchey, second from right, and Harold Rarrick, right, (both 4542).



INSIDE SANDIA INSTRUMENTATION VAN: Doug Minnema (3312), with arm resting on core sample counter, Lial Brewer (3311) and Harold Rarrick (4542) operate radiological instrumentation. Samples and measurements will be made at 13 UMTRAP sites.

Motorcycling Through Three Countries

—by Don Porter [4713]

[Ed. Note: The LAB NEWS staff customarily writes these accounts but, in this instance, the account came to us already written. It passed our standard for LAB NEWS copy, and we are pleased to run it substantially as submitted.]

My motorcycle rests on its center stand in a rest area alongside Interstate 94 somewhere in the middle of North Dakota. I share a shelter from the wind with a woman and her two small children and am glad for the company.

I've been on the road for only two days, but it seems like a week. The North Dakota weather is miserable, with winds blowing about 50 miles an hour out of the southwest, trying their best to keep me out of Montana. I know now why all the roadside shelters open toward the northeast.

My motorcycle, a '76 vintage Gold Wing, has brought me here without a whimper. From Albuquerque I had gone to northwest Indiana to visit Mother and Dad, aunts and uncles, and a charming, aging grandmother who only hesitantly accepted my mode of transportation. Then on to Hartford, Wisconsin to visit the rest of the family.

But, for now, the destination was not California, but Vancouver, British Columbia. As my bike leaned on its stand and I ate some hard cheese and summer sausage from my pack, I had no way of knowing that the weather here could not compare with the wind I would experience in western Washington a few days later.

The wind there would pick up the grayish powdery aftermath of Mt. St. Helens and the road would eventually be closed because of reduced visibility. For nearly six hours I saw the road only occasionally, following the tail lights of an 18-wheeler, which was only visible during sporadic lulls in the dust storm. The truck driver and I would later meet in a truck stop diner.

But it was not all like that. The highlight of the trip across the northern part of the United States was Glacier National Park. Unless you have experienced scenery from the vantage point of a motorcycle seat, you may not appreciate the exhilaration of touring the highways and backroads of such a masterpiece of creation. It's sad to note that in a few short years the glaciers will be gone with the rest of the ice age that built them, and our grandchildren will see only the remnants of such gigantic natural forces.

But then the second leg of the trip was over. As I rode into the parking lot of the hotel in Vancouver, I knew I had the right place. Four hundred motorcycles converging on one place are not easy to miss. The common draw was a road rally starting here the next night, August 29, and ending in Ensenada, Mexico, on Labor Day. Seventy hours to ride 1650 miles down the coast of the continent.



CROSS COUNTRY motorcyclist Don Porter (4713).

Three days, three countries, a Three Flags Classic.

Most of the riders came from California. My trip would eventually total 6700 miles before I could put my body back to bed in Albuquerque, some 22 days after I left.

Most of the mounts were large touring machines, including Hondas, BMWs, and several Harley Davidsons that looked and sounded vaguely like motorcycles. There were a few small-bore machines, including a Vespa 200, and two tricked-up three wheelers that would start but not finish.

Motorcycle packing systems varied from the elegant to the absurd. A couple of chopper riders were content to carry extra gas in plastic Prestone jugs carelessly slung to the rear shocks. They were given a wide berth. My kit included a two-man tent, ground pad, sleeping bag, and camp stove all fitted snugly into an army surplus duffle bag. A food pack, packed at home with cheese, crackers and summer sausage, restocked in Wisconsin with fresh fruit and vegetables, and fortified with smoked salmon jerky from an Indian reservation in northern California, clung to the backrest.

The rally began at 8:00 p.m. Friday night, and the pace was quick. The people of Canada were hospitable, but the territorial police were glad to see 400 motorcycle riders headed for home. The ride to the border was a three-abreast road race, with the border patrol doing its best to stay out of the way, and the police clearing the road in front of us.

The first night's sleep was taken in a rest stop just south of Portland in an all-night rain that tested the integrity of the tent. The ride down the coast highway next day was spectacular—the Redwood National Forest was created for a motorcycle ride. The road drifts through beautiful valleys, then twists up into the big tree country, then back into valleys of tall grass and clear streams.

By dark, the campsites all through the forest were full. That night was spent

parked behind a large oak tree not far from the side of the road. Sunday was spent in the vineyard country of the central valleys, but with no time to stop for the winetasting. Besides, we must be sober, for standing between us and our destination was the inevitable meeting with the freeway people of Southern California.

Our third night was spent on a patch of lawn beside the Mexican tourist bureau in Ensenada. The bureau people assured us that hotel accommodations were all taken care of.

On our arrival late Sunday night, we found that our rooms were indeed available, but the proprietors had long since gone to theirs. The margarita party thrown the next evening for the rally participants, by the same folk, was a huge success, except that they had forgotten the tequila, and the room they had reserved was mysteriously not available at the last minute. So the party was held on the bureau's parking lot with warm beer and mariachi music played from the back of a '48 Dodge pickup.

The affluence represented by the group of bikers was in sharp contrast to the life style of many of the inhabitants of our host city. The abject poverty suffered by the people left one with the feeling that while we may have double-digit inflation, an uncomfortable tax burden, and what seems at times to be an unresponsive government, we are still privileged to live in one of the best countries on earth.

As we loaded our tents and belongings back on our bikes and headed for the border, we felt like an old saddle horse with his head turned toward home, the taste of oats in his mouth and the smell of hay in his nostrils. Only one more long day and we would be home. We'll relive the trip over and over, forget the wind and cold and the full campsites, and remember only the friends, the fun, and the sunsets on sandy beaches.

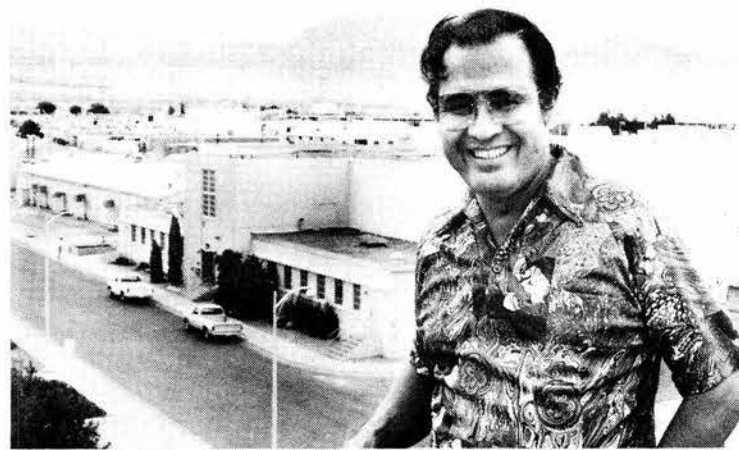
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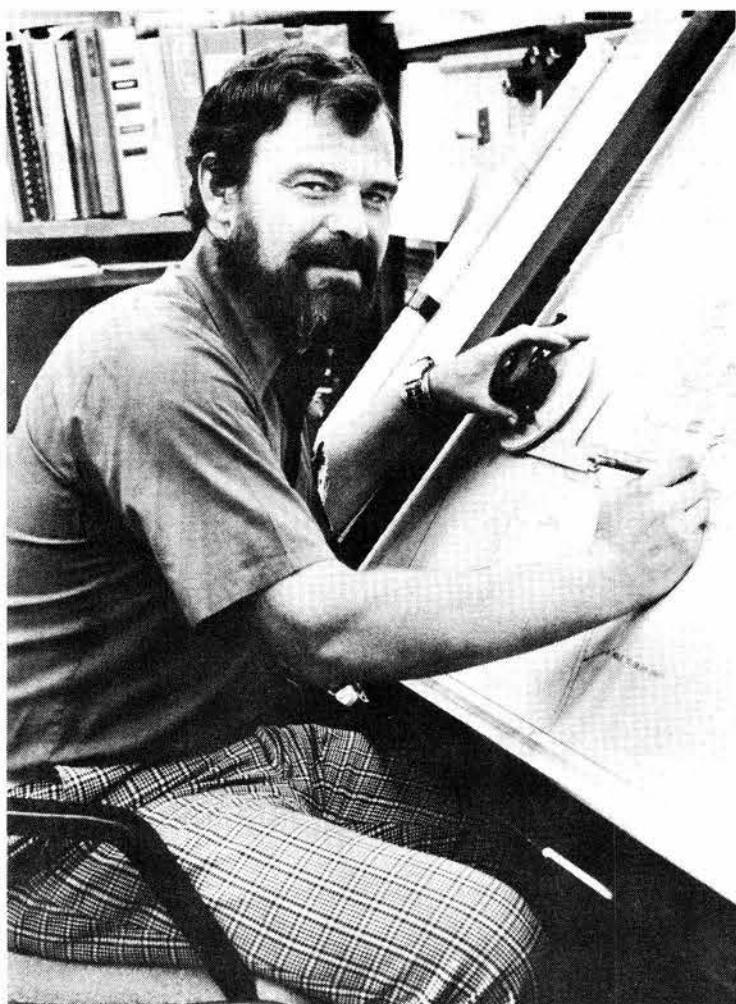
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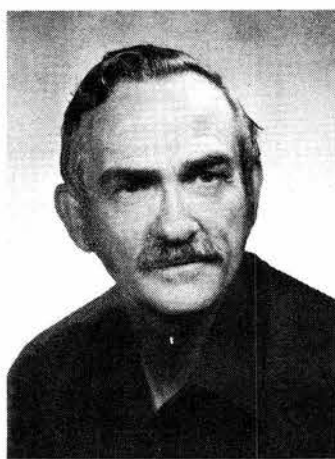
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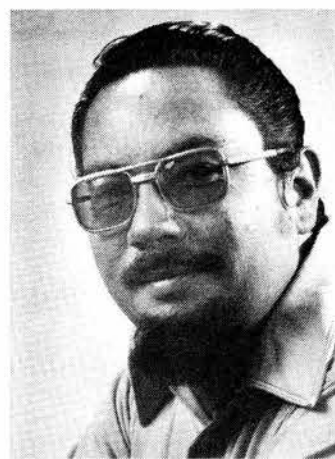
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Don Keener - 2452 15



Richard Griffith - 2342 25



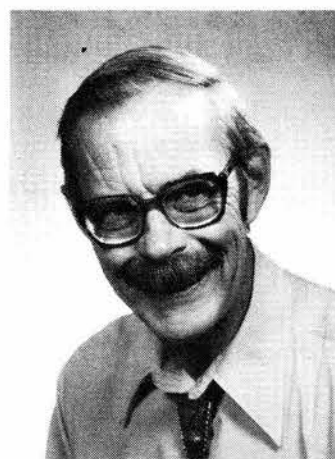
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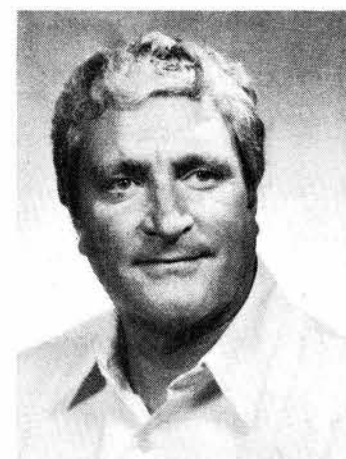
Bill Whitney - 8412 25



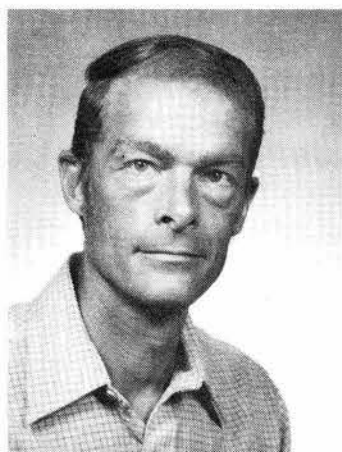
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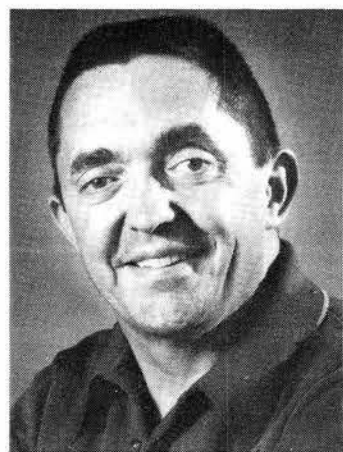
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Ed Graeber - 5822 25



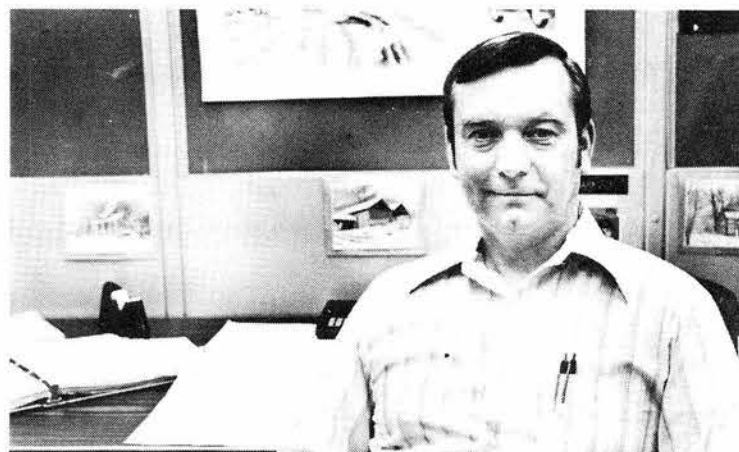
Tom McConnell - 4742 20



Rodger Page - 8152 20



Dick Wilhite - 8254 20



Ed Barkocy - 1545 20



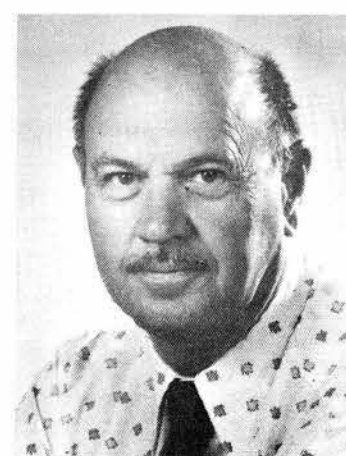
Larry Grube - 2454 15



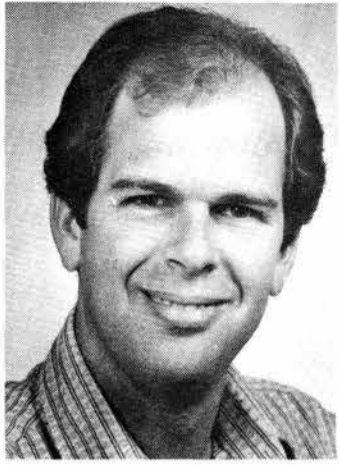
Martin Gonzales - 4755 15



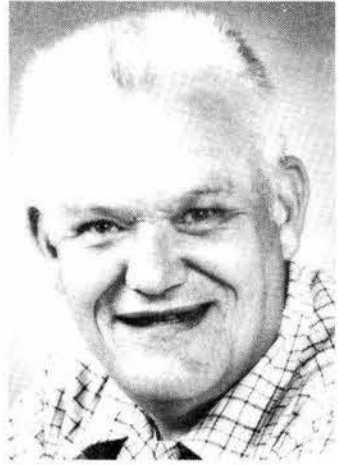
Robert Davis - 4221 20



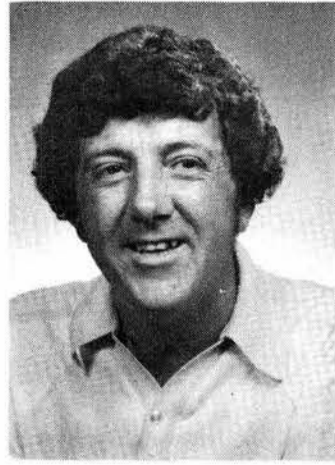
Bill Little - 8270 30



Bob Anderson - 8442 15



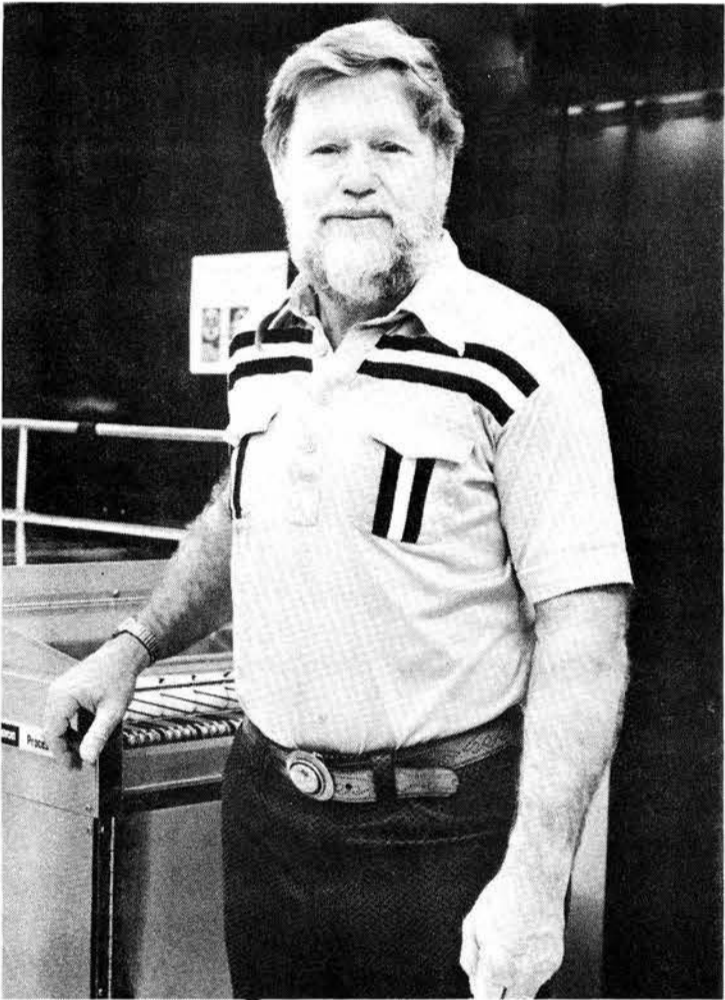
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Bill Burd - 2424 20



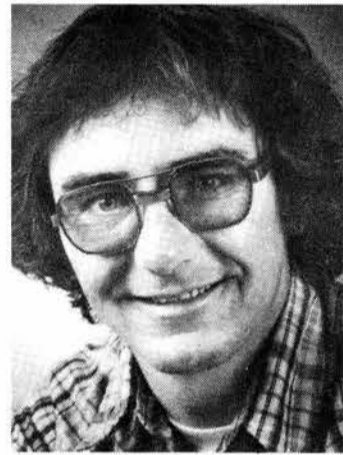
Amado Chavez - 1554 30



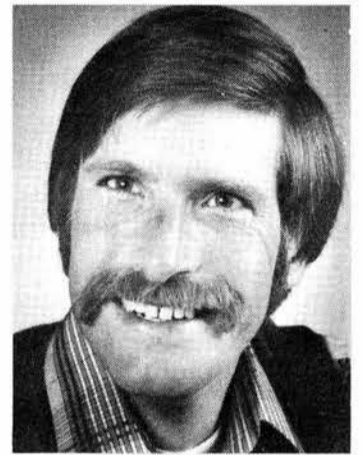
Gene Jeys - 1473 20



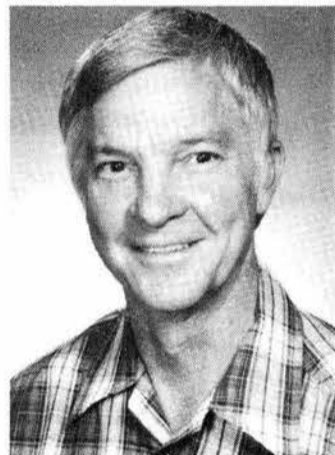
Dick Martin - 1715 30



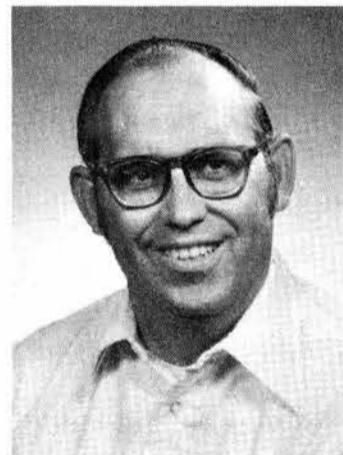
Randy Gummus - 8336 15



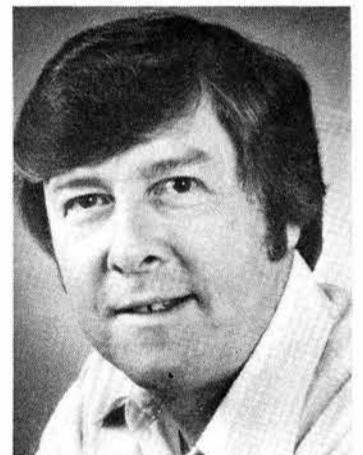
Ralph Clark - 8463 15



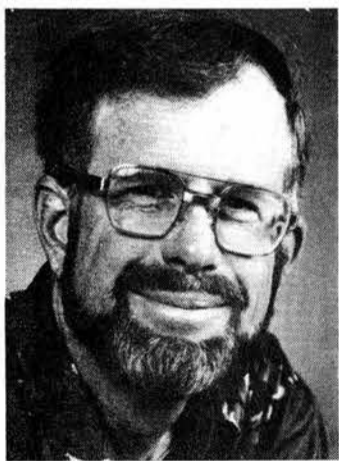
Charles Kinsey - 1733 20



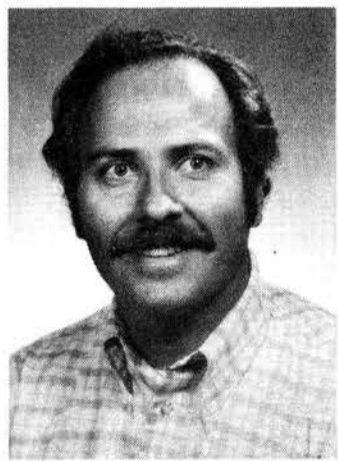
George Kolesar - 2433 20



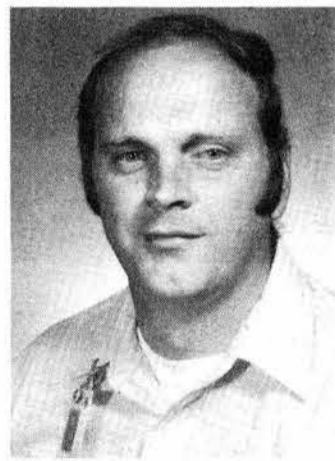
Dan Ross - 8413 15



Jim Lathrop - 8332 15



Fred Reinhardt - 2523 15



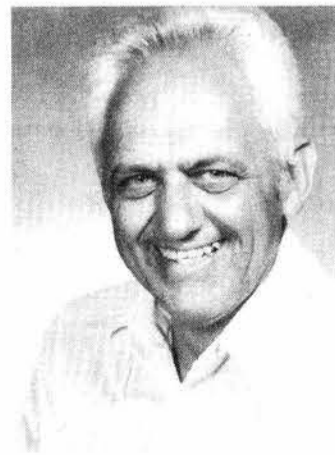
Ronald Soutar - 2353 20



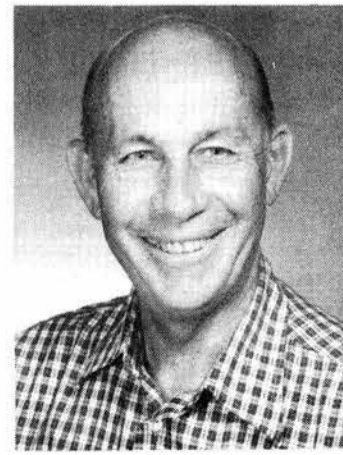
G. C. Hollowwa - 2655 35



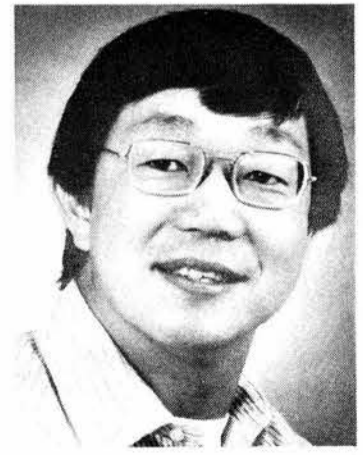
Ken Bauhs - 1521 20



Richard Case - 1721 25



Hermann Wente - 5635 25



Cliff Yokomizo - 8326 15

Super Sandians Coming Up

by Susan Harris, Sandia Medical

Next in Medical's Superwoman series is "Super Sandians," set for Tuesday, July 28, in Bldg. 815 (outside), from 12 noon to 12:30 p.m. "Superwoman" suggests the pressures involved in juggling home, family, and work. The title is not meant to exclude men; in fact, men and children are concerned with these problems and their solutions.

In this Super Sandians program, three employees will share some of their experiences, thoughts, problems, and solu-

tions in dealing with home, family and work responsibilities. A question and answer period will follow.

The first speaker, Dolores Chaves (3531), deals with problems of babysitters for her two-year-old son, child care when her son or his sitter are ill, and finding leisure time for herself and for her husband.

John Cantwell (3163) has a "blended family" (children from two marriages) of six children and a wife who works full time.

His children range from 11 to college age. John was single parent for a while and will comment on this period of his life. He believes in the importance of taking time to enjoy your children.

Jennie Tischhauser (3532) also has a blended family, with nine children ranging in age from 11 to 31. She has lots of energy and likes to organize, manage, and juggle things. Jennie says her most valuable asset in carrying out her superwoman role is the support of her husband (Jack, 2640).

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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 & organization.
9. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

MISCELLANEOUS

POOL TABLE, slate top, unassembled, no legs, \$30. Wray, 299-0530.
 TURBINE mag wheels for Chevy truck or van, 2 7x15" (5 lug) and 2 8 1/2 x15" (5 lug) w/chrome lugs, \$60/pr. Shannon, 821-6017.
 HEWLETT PACKARD 34-C calculator w/charger & applications manuals, \$100. Bailey, 299-0184.
 FREEZER, \$225; green colonial-style cabinet, \$45; antique butcher block, \$100; baby carriage, \$35; sandbox, \$15. Hughes, 265-1698.
 GERMAN SHEPHERD puppy, male, 13 weeks, both parents registered, will be large, \$75. Weems, 281-5837.
 GERRY carrier, Ford tot-guard car seat, 3 Cosco bar stools, misc. light fixtures. Bonzon, 296-3022.
 72" COUCH, loveseat & chair set, brown plaid, zippered cushions, \$250. Chavez, 294-7933.
 PUPPIES, Golden Retrievers, male or female, \$50 ea. Miller, 265-8651.
 MICROWAVE oven, Toshiba model ER-798BT, digital clock, solid state, touch control, 720 W, \$500. Sandoval, 822-0788.
 BARBEQUE grill, Sears, cast iron w/hood & cutting board, on wheels, \$30. Lloyd, 299-4372.
 AQHA mare, 4 yr. old, \$900; Appaloosa, registered, 3 yr. old, \$800. Moya, 877-9765.
 RECAPPABLE beer bottles, ideal for home brewing enthusiasts, have 158 bottles, most are returnables, \$3 takes all. Simmons, 298-8510.
 SOFA, new, brown-yellow plaid on one side, leather-like on other, 3 removable bolster cushions. Griffin, 299-2745.
 GARDEN TRACTOR, 8 hp, elec. start, cultivator, dozer disk harrow, 3 plows, tiller, trailer, \$900. Elskes, 255-5361.
 POLAROID "Big Shot" portrait land camera, 10" long. Swain, 265-0098.
 WEDDING GOWN, new, never worn, size 12, veil, satin shoes, size 9b, \$225. Jacobs, 265-4385.
 KING SIZE headboard, frame, nightstands, lamps, mirrors, chest, triple dresser, solid wood pecan veneers, Lane, contemp. style. Barber, 296-0462.
 GOLF CLUBS, Wilson 1200 women's, 3-9 +PW irons, 1-3-5 woods, talk price. Branstetter, 292-6369.
 MARLIN model 1894 .44 magnum rifle w/case, \$150. Lesperance, 255-1237, call after July 26.
 '67-77 BRONCO parts, rear seat w/belts, hub tool, 8 new plugs, roll-bar

pad, U-joint lube tool, \$60. Brammer, 266-5158.
 KAWASAKI, saddlebags w/lights & chrome rails, travel trunk & luggage rack, windjammer lowers for KZ650. Barnard, 831-4114, evenings.
 DISK DRIVE for TRS-80, 5 1/4" TEAC 80/70 track w/case & power supply, new, \$425. Simons, 296-0974.
 SPEEDOMETER for 1974 Datsun B210 auto trans, new, \$25; men's bike, Columbia Tourister, 3-sp, \$45. Henry, 266-6467.
 USED DOORS, screen, interior & sliding closet; used paneling & light fixtures. Greene, 293-6419.
 FREE to good home, medium-size, blonde, well-behaved adult female Irish Setter/Golden Retriever cross, spayed, has shots, loves children. Gaetz, 266-4806.
 COLLIES! COLLIES! (almost) 3/4 Collie, 1/4 Golden Retriever puppies ready for good home with fenced yard, \$25. Elaine, 292-5356.
 HAMS, QST magazines, nems Clark telemetry rcvr laminating machine, \$15. Mayer, 294-3368.
 TWO tires on wheels, 20.5x8-10, 6-ply, fits Apache, Jayco tent trailers, \$30 each. Kavet, 299-1793.
 SOLID OAK, drop-leaf table, 24x36", opens to 44x36", \$90. Dalphin, 265-4029.
 SCREEN & storm doors, wood & aluminum, used; 4 sets 5-ft. metal bifold closet doors. Grant, 255-6105.
 TESCO mini torch, Milwaukee hand grinder, Foredom hand grinder, Senco air stapler & finish nailer, Dayton explosion-proof fan. Gonzales, 836-3039.
 FARM implements, 3-pt. hitch, tandem disc, scoop, flatbed hay trailer. Patterson, 299-1062.
 YASHICA Electra 35mm, Vivitar flash, \$175. Maloney, 293-7400.
 TORO 19" rotary Whirlwind lawnmower, recently tuned, owner's manual, \$50; four Corvair oil filters, \$3; large ottoman, \$10. Strascina, 299-2285, after 5:30.
 MAPLE double bedframe & 6-dwr. dresser w/mirror, \$175; single bedframe, boxspring & mattress, \$40. Gray, 265-1883.
 HIKING boots, Fabiano model 366, men's size 9 1/2, \$106 new, will sell for \$35. Cameron, 292-4635.
 INFANT'S car seat, GM loveseat, \$29. Stephenson, 296-9330.
 MINITRUCK cabover camper, '76 Pilgrim w/3-burner stove, ice box & sink, includes camper jacks, \$1350. Salmen, 842-8567.
 TWO high-back living room chairs, burnt orange, \$35 each. Sims, 294-3683.
 GARAGE SALE: lawnmower, upright freezer, suitcases, fiesta & maternity dresses size 16, children's clothes, much more, Sat., July 25, 9-5, Sun., July 26, 12-4. Borgman, 299-6010.
 MOBILE home awning, 8x30', heavy gauge aluminum, \$300 you dismantle & move, \$400 I do. Danclovic, 869-6086.
 LIVING ROOM chair, \$15; 2-step end tables, nutmeg, 23x27", heirloom, one drwr, rolls, \$25. Hitchcock, 294-5153.
 TELESCOPE, 8-in. Newtonian, hi-quality optics & components; Vivitar telephoto 80-200mm lens, new. Harris, 344-2815.
 TWO white spoke wheels, 14x10, and L60-14 tires, \$65; camper shell for LWB pickup, \$250. Nelson, 881-0148.
 TAPE RECORDER, reel-reel, \$75; plywood platform bed for van or

pickup, \$25. Mueller, 296-2973.
 SWIMMING POOL, 18" diameter, heavy duty filter, gas heater, solar heater, will sell separately; shop lights, original carton. Liguori, 255-7551.
 LOVE SEAT, sculptured velvet, green, gold & white, \$75; projector, Revere, 500-watt, manual operation w/50 trays, \$45. Lenander, 256-0777.
 SLIDING closet doors w/hardware, 2 sets up to 47" wide, 2 sets up to 59" wide; red loop carpet, 40 yds. Thompson, 294-4377.
 LAWN furniture, redwood table, seats & lawn chairs. Maish, 345-6841.
 AIR conditioner, J. C. Penney, 8000 BTU, window mount, refrig. Jacobs, 881-9261.
 SPEAKERS, Altec Lansing A-500, 15" woofer & exponential horn, \$700/pr. Stevens, 883-0480.
 BATHROOM vanity, white, 2-drs., 30" wide w/beige formica top, faucet & drain hardware incl., \$50. Yarrington, 266-2431.
 SCM portable electric typewriter, \$65. Burgess, 345-2369, eves.
 CHILD car seats, \$20 ea; high chairs, \$8 ea; bicycle child carriers, \$5 ea; umbrella stroller, \$8; kitchen table & chairs, \$25; maple coffee table, \$10. Lockner, 292-6374.
 COLOR TV, \$25", \$95. McConnell, 268-3109.
 TEKTRONIX scope, model 555 w/CA and D preamps, \$400. Myre, 884-5235.
 POOL TABLE, Brunswick Rancho, 4x7, 1" slate bed, gold cloth, balls, cues, \$300. Ewing, 268-6920.
 300 MM F/5 Komura Preset T-mount for Nikon, \$65. Passman, 821-4999.
 FLYING CLUB—1/10 share: 150 mph '65 Cessna-182, other assets (7/81 appraisal \$20,800), price negotiable, current rate \$32/hr wet. Milloy, 268-3467.
 FURNITURE: old sleeper sofa, dbl. bed size, \$100; 2 upholstered swivel rockers, \$60 for both. Hartwig, 298-5048.
 REFRIGERATOR, Westinghouse, 9 cu. ft., \$60. Brown, 281-3608.
 HAMMOND organ, spinet model "XTP", rhythm unit, Leslie and other speaker drawbars, \$1500; folding ping pong table, \$35. Kaiser, 296-5215.
 HEATHKIT color TV chassis, \$65; SB201 linear amplifier, \$395; Soliger spot meter, \$125. Bernard, 881-0640.
 GM infant's car seat, \$15; GM toddler car seat, \$20. Reif, 299-2665.
 FENDER, Super Reverb, amplifier, \$400. Todd, 255-3463.
 BLOODHOUND puppies, AKC registered. Sallach, 344-4712.

TRANSPORTATION

TWO 20" BIKES, boys', \$20 ea., set of camper hold-downs for pickup stake holes, \$20; basketball hoop, \$5. Wright, 296-3850.
 '67 CORVAIR MONZA, restored, rebuilt engine, reg. gas, VW gas heater, steel belted radials, \$1850 or offer. Patrick, 265-4569.
 DATSUN 1200, recent body paint & upholstery, best offer over \$1095. Vinson, 255-6962.
 '74 EL CAMINO Classic 350, PS, PB, radio, air shocks, hitch, \$1500 firm. Predika, 836-6108.
 '80 HONDA CM200T Twin Star, bars, rack, box, Fiamm horns, \$1225. Love, 884-8475.
 '72 OLDS, Delta 88, 4-dr., 2-tone white top & light green, 454 cu. in. engine, \$1495. Myers, 299-8431.

750-K, 3200 miles, \$2400. Gallegos, 255-5264.
 HONDA 650-CB, 4500 miles, \$2200 or best offer. Garcia, 873-0380.
 '78 LAND CRUISER, 4-speed, radio, custom striping, Jackmans all-terrain tires, grill guard, trailer hitch, 36,000 miles, \$4950. Hesch, 881-9874.
 '75 CHEVY IMP., loaded, \$2250. Hamilton, 869-2718.
 SAILBOAT, 23' Coronado w/all accessories, new 7 1/2 hp Mercury aux. w/elec. start, battery charger, tandem trailer. Letz, 293-4325 or 299-0998.
 '77 KAWASAKI KZ650, custom paint, factory manual and illustrated parts book, many spares, touring accessories. Barnard, 831-4114 after 5.
 BICYCLE, 20-in., girls', Sears, blue w/chrome fenders, training wheels, reflectors, \$20. Beard, 821-0309.
 HONDA SL-100 w/windshield, 3600 miles, about 65 mpg, \$350. Caffey, 296-3320.
 '79 DODGE OMNI, AT, PS, PB, AC, 20,000 miles, extra interior/exterior pkgs., AM/FM stereo/tape deck, NADA book price. Busby, 299-6450.
 ONE ROUND TRIP TICKET to anywhere TI files (valid 9/15-12/15/81). Make offer. Barnard, 256-7772.
 '72 JAVELIN, trade for late '50s or '60s pickup, PS, mudguards, tape deck, \$700. Klarer, 268-9772.
 '75 KAWASAKI RD200, elec. start, street bike, \$500. Hanche, 281-5623.
 '80 HONDA Twin Star, 200cc, only 100 miles, under warranty, \$1150. McDaniel, 299-6189.
 '74 PORSCHE 911 Targa. Baca, 293-8218.
 '75 TRAVEL TRAILER, Free Spirit, 24', \$5500. Gray, 836-6366.
 '77 MUSTANG II, AC, PS, sunroof, 4-spd., \$2700. Bryant, 266-6166.
 HONDA XL-350 motorcycle, for street/trail riding, 70 mpg, ideal commuting, 13,500 miles, \$625. Shunney, 265-1620.
 BICYCLE, 20-in., girls', banana seat. Cook, 296-3064.
 '75 HONDA CVCC hatchback, 2-dr., \$2250. Brown, 281-3608.
 '70 PONTIAC LeMans station wagon, PS, PB, AC, AT, 350 V8, new paint, \$1095. Evans, 299-7105.
 '74 COMET, 302-V8, PB, PS, AT on floor, bucket seats, AM-FM stereo, 63,000 miles, reg. gas, \$1400. Sharp, 842-0218.
 '73 AUDI 100LS, 4-dr., 4-sp., full maintenance record. Cox, 296-1337.
 '78 Harley Davidson, low mileage, \$3500 firm. Strance, 298-0258.
 '62 PLYMOUTH VALIANT, 4-dr., 170 cu. in. slant six, AT, AC, 67,300 miles, best offer over \$750. Sublett, 884-4426.
 '79 YAMAHA IT250, off-road motorcycle, book \$1290, sell for \$1100. Lassiter, 298-2461.

REAL ESTATE

4-BDRM, LR, den w/FP, dining, utility room, 2 1/2 bath, metal storage shed, dbl garage, 2157 sq. ft., consider REC, low down, \$90,000, 10312 Karen NE. Northcutt, 293-1318.
 10 ACRES Moriarty, close in, terms, electricity & phone to lot. Fisher, 299-6697.
 '63 MOBILE home, 10x50, \$3000. Raymond, 869-9196.
 3-BDRM, all brick, 3 yrs. old, large corner lot, 1500 sq. ft. heated, 2-car garage, \$65,000, owner financing. Aragon, 294-4275.
 NE HTS near Central & Eubank, 3

br, 1 1/2 bath, 1100 sq. ft., 4 yrs. old, large corner fenced lot, mid 40s, 8.5% assumable. Lipkin, 881-6038.
 NE HTS 3-bdrm & study, LR, dining, large family room, oversize yard, assumable 8 1/4% mortgage. Slater, 294-5858.

FOR RENT

2-BDRM w/garage, near San Pedro & Kathryn, \$300 + gas & elec, \$150 DD. Brown, 268-5025.

WANTED

CEMENT mixer. Sciacca, 293-0633.
 CONCRETE mixer, large, heavy duty, 4-9 cu. ft. Gonzales, 294-6823, after 5.
 UTILITY or motorcycle trailer, 800-lb. capacity, or wheels & axle to make one. Dunn, 298-4185.
 SMALL gas irrigation pump. Chavez, 877-4312.
 SOFA BED, firm mattress. Weiss, 266-2278.
 SANDIANS (retirees & dependents incl) who perform a service or have a business outside of normal workday, purpose: to compile directory. Wilson, 298-6427, 5-7 p.m.
 TRS-80 model I microcomputer, 16K, level II. Roginski, 296-6494.
 BOOKCASE, small, condition not important. O'Neill, 892-6754.
 FLY tying equipment. Ross, 296-9794.
 SPARE for small trailer, four-hole rim and 4.8x8 tire. Patterson, 299-1062.
 TO TRADE: 11-ft. Hallmark pickup camper loaded w/extras for a boat of equal value. Lovato, 299-1375.
 BOY'S 24" bike, 5-spd or 10-spd. Barnard, 256-7772.
 TWIN BED w/mattress. Stephenson, 296-9330.
 CAMERA, Zeiss super Ikonta C or Voightlander Bessa II; Realist macro stereo camera 1060. Mattox, 821-3945.
 BICYCLING: anyone interested in cycling on dirt roads in the mountains. Mayer, 294-3368.
 FIREWOOD cutters to share modest investment in auger-type log splitter that fits on 5-hole tire rim. Shunney, 265-1620.
 JAMES BOND memorabilia, anything & everything, books, records, posters, comic books, etc. Cyrus, 898-4038.
 ROOM/HOUSE/APT for Sandian & husband July 26-Aug. 31, rent or house-sitting while waiting for escrow to close. Butler, 447-9315.
 '72-'75 economy car in good condition. Stoeber, 296-3717.
 TELEPHONE answering machine for donation to Parentcraft, Inc., a non-profit agency. Hartwig, 298-5048.
 MICROPHONE stands, floor type, adjustable; P.A. system components such as mixer, amp, speakers, etc. Klarer, 268-9772.

WORK WANTED

HOUSE SITTING, responsible, competent, prefer NE or SE. Mrs. Brown or Mrs. Servis, 298-0387 or 884-4748.

SHARE-A-RIDE

RIDE to Rochester or Minneapolis, Aug. 3 or 4, return after Aug. 9. Payne, 299-5966.

How About a Shaggy Dog Story?

TONIGHT at Happy Hour Yolanda and La Ultima return to the bandstand. The band, featuring Sandians Yolanda Armijo (3543), Pete Gallegos (2327) and Paul Metoyer (3432), is a Club favorite because of their unusual approach—they play tunes with recognizable melodies in a danceable way and, when they sing, you can understand the words. The buffet spread features New England brisket of beef with assorted goodies.

Next Friday, July 31 (you can live it up, it's payday), Happy Hour brings grilled pork chops to the buffet spread and a group called The Fugitives to the bandstand.

Happy Hours start right after work on Fridays and run until midnight or so with very special prices in effect all evening. To make buffet reservations, call the Club office, 265-6791, by mid-week.

VARIETY NIGHT on Saturday, Aug. 1, brings a classic Walt Disney movie—*Shaggy Dog*—to the Club screen. This is the one that turns the hero, otherwise a standard klutz, into a sheepdog. Kids love this kind of stuff. Bring the family out around five for a super supper. The movie starts at 6. Admission is free.

THE REDONDO round dance club will meet every Thursday night during August with intermediate waltz lessons from 7 to 8:30 followed by club dancing from 8:30 to 10. Any round dancer, experienced at the basic level, is invited to join the group. Call Charlie Clendenin, 299-2071, for details.

TRAVEL DIRECTOR Frank Biggs

(4231) says time is running out to sign up for the Aug. 8 bus tour to the Gallup Indian Ceremonial. For \$28 you get transportation, parade, ceremonial dances, exhibit hall, museum, rodeo, and treats on the bus. He needs at least 36 signups by July 29.

The \$110 bus trip to Las Vegas (Sept. 13-16) is full but if the waiting list grows to 20, a second bus will be arranged.

Sign up now for the Labor Day bus tour to Carlsbad Caverns, Juarez and White Sands—Sept. 5-7, \$109. The package includes the New Cave, a chuckwagon dinner, desert botanical gardens, lodging, transportation and goodies on the bus.

Frank says Sept. 26 is perfect for maximum color on the Cumbres & Toltec scenic train ride. Take a charter bus to one end of the railroad, ride the train across Cumbres pass to the other end, and return to Albuquerque by bus. The tour includes treats on the bus. Cost is \$42 for adults, \$30 for kids 11 or under.

Another bus trip to historic Canyon de Chelly is set Oct. 24-25 for \$78.

The Mazatlan package—a week on the beach at the luxurious Playa Mazatlan—is available Nov. 2-9 or 9-16 for \$369, and the Caribbean cruise is open Dec. 13-20 for a week on the Mardi Gras luxury liner for \$1031 (or \$996 if 30 sign up).

Frank has in the works a holiday potpourri (Dec. 17-24) charter bus trip to the Holiday Bowl (Los Angeles vs. Washington), San Diego Zoo, Disneyland, Catalina Island and the Riverside Casino in Loughton, Nev., for about \$340. If interested, see Frank in the Club lobby tonight between 5 and 7.

Fun & Games

Powerlifting—Sandians are making their mark in New Mexico in this sport. At the second annual Cannon AFB Powerlifting Competition in Clovis earlier this month, five Sandians placed. Firsts were taken by Richard Cernosek (1314) and Robert Smyth (3613) in their weight classes (220 and 242 pounds, respectively), while Jaime Castaneda and Hamp Richardson (both 4218) took seconds (148- and 165-pound classes), and Joseph Schofield (2627) a third in the 181-pound class. Smyth set a state record in the squat with a lift of 585 pounds. In powerlifting meets, competitors vie to get the highest total poundage in three lifts—the squat, bench press and dead lift.

* * *

Skiing—For those of us who have been skiing for 30 or so years, today's downhill scene is wacko on several counts. So here we are in mid-July, signing up for a ski trip that won't take place until . . . well, here's the details. Sun Valley, Jan. 23 to 30, Coronado Ski Club, by bus, \$415/person for lodging, lifts and transportation. Sharon Mackel needs 40 sign-ups and your \$100 deposit soonest. If you haven't been to

Sun Valley, go . . . the place is a snow-covered legend. (And the skiing's good.)

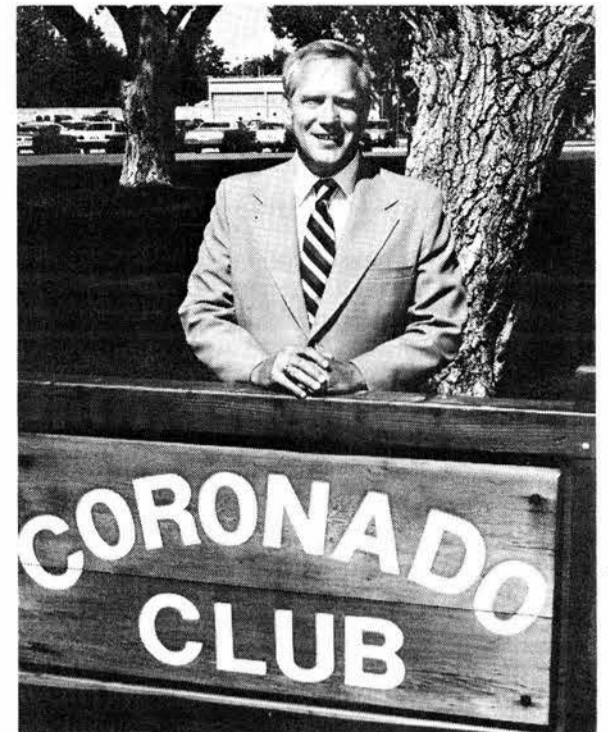
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Cruising—DOE's Bill Horton reports that his 44-foot charter sailboat cruise in the Virgin Islands, from mid-October to mid-November, is just about filled. The boat takes six, and would-be cruisers are signing up for one or more weeks. Bill is on 6-2115 if you're interested.



"Well Howard, I'd have to guess it's a carrot."

—Copyright Century Magazine



TOM ROSS, new Coronado Club manager.

Tom Ross New C-Club Manager

Tom Ross, a 20-year Army veteran with club management experience, is the new manager of the Coronado Club.

Retired from the service since September 1979, Tom has been active in auto sales, real estate and oil and gas leasing in the Albuquerque area. He holds a degree in business earned while still in the Army from the University of Albuquerque.

He was manager of the officers club at Ft. Sill, Okla., for two years and also responsible, in an earlier assignment, for the operation and administration of 15 area service clubs at Ft. Sill and Ft. Chaffee. He is a graduate of the Army's club management course.

Tom's family has resided in Albuquerque since 1974 when Tom left for a year's duty in Korea. He has a daughter attending UNM, a son in high school and another daughter in junior high.

Interviewed after just two days on the job, Tom was enthusiastic about Coronado Club facilities and programs.

"I'm eager to meet the membership," Tom says, "and to work with the Club's board of directors. I'm still getting the feel of the operation and it's too soon to talk about future plans. However, I do have strong feelings about quality and excellence—goals for any service club."