

Award Program for Technical Staff Announced

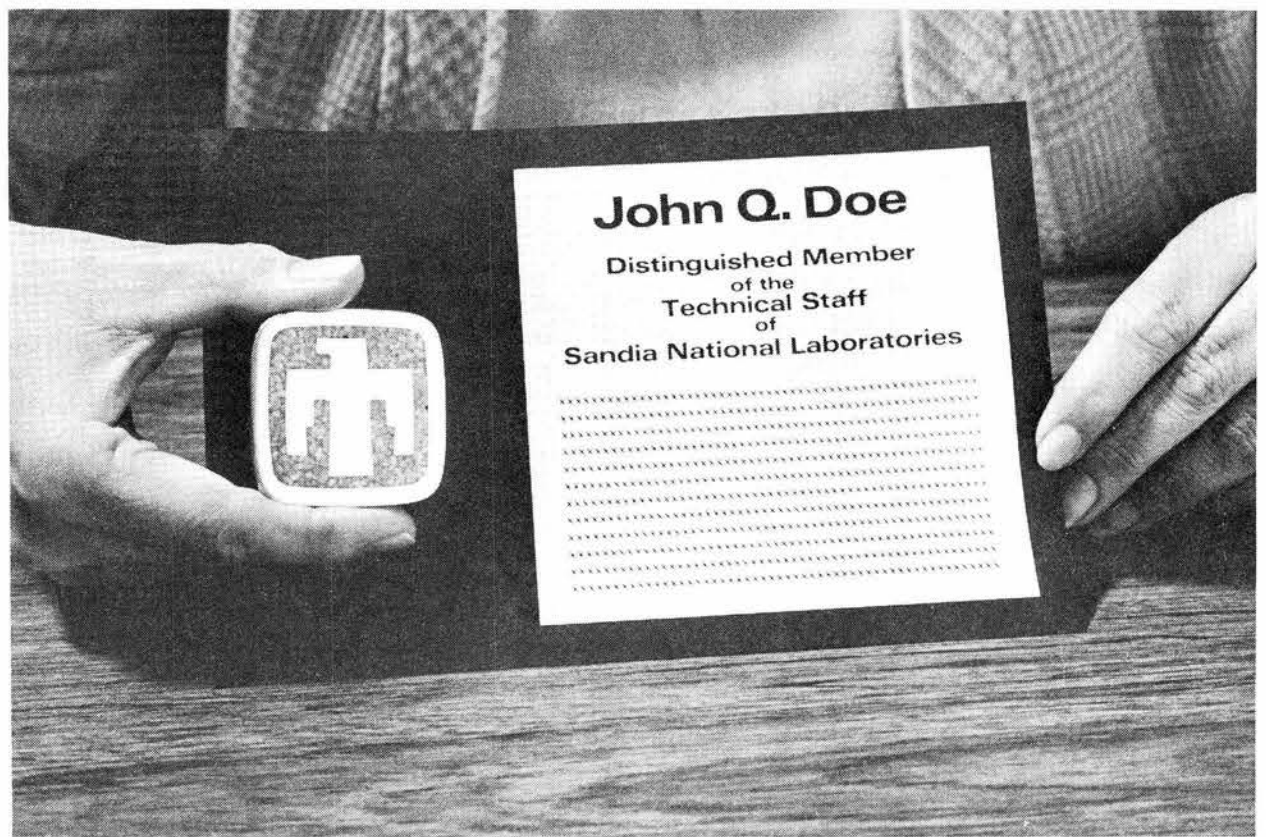
Sandia, like any other major R&D institution, employs a number of scientists and engineers whose abilities and contributions deserve special recognition. In the past, the only obvious way to recognize such employees was to promote them into the ranks of supervision.

But some of those outstanding people want neither the status nor the duties that attend such promotions. Others, let's be candid here, are fantastic researchers, say, but would not be equally fantastic supervisors.

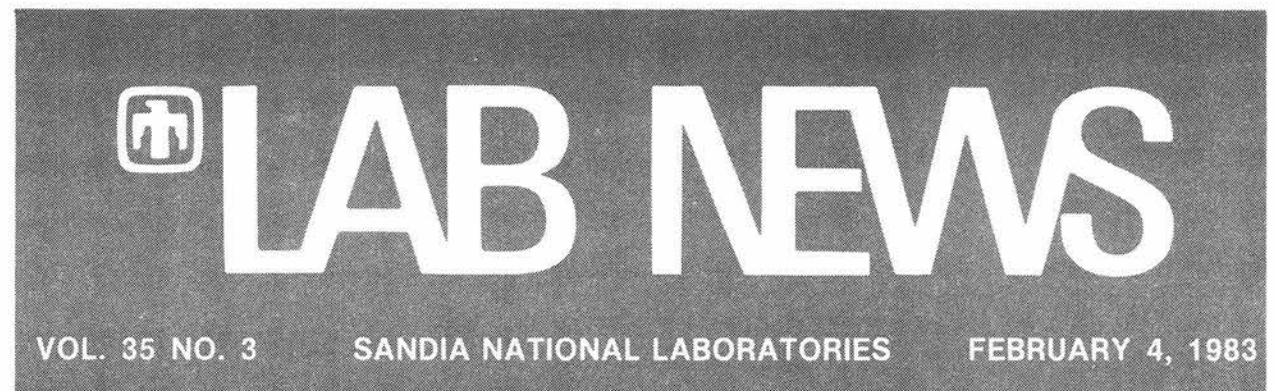
As a major step in resolving the problem, Small Staff and Sandia's Board of Directors have established a Distinguished Member of Technical Staff Award Program. As announced recently, the award recognizes "sustained performance or unique contribution related to the technical missions of the Laboratories." All non-supervisory members of the technical staff with 10 or more years of professional experience are eligible. The eventual total number of awards is limited to 10 percent of the non-supervisory MTS population.

Each recipient will receive a plaque, a pin, and a payment (\$1000, subject to taxes) during a presentation by the concerned vice-president.

Nominations for the first 50 awards are currently being accepted for action by Small Staff. LAB NEWS will announce all recipients.



PROTOTYPE of the new Distinguished Member of the Technical Staff Award plaque is held by designer Janet Jenkins (3155). The finished version will be one-inch-thick walnut measuring about six by nine inches. A bas-relief version of the thunderbird logo was produced by T.A. Allen (7473). From it will come white metal castings with a hard nickel plate and turquoise inlay to be mounted on the plaque. The etched plate will contain the name of the recipient and a brief description of the achievement for which the award was granted.



W78/Mk12A Program

'We Salute You For a Job Well Done'

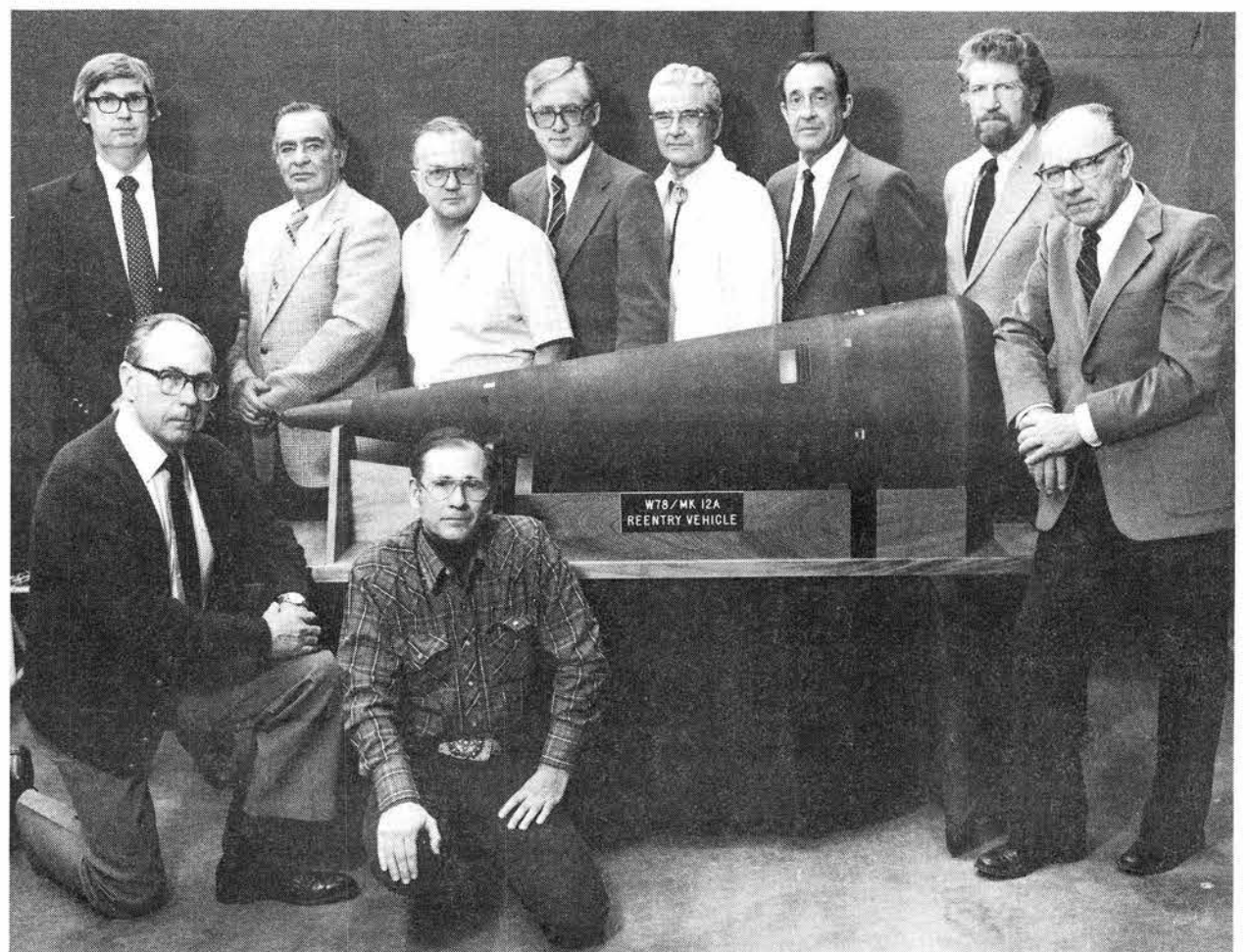
That encomium and several others equally impressive were recently received by Sandia management on behalf of many employees in the technical and support organizations. The senders of the congratulatory letters included the Air Force, the DOD, and DOE.

The occasion of the letters was the successful completion of a major program in which the W78 warhead and the Mk12A reentry vehicle were developed as a replacement for the W62/Mk12 in a portion of the Minuteman III force.

It was a joint DOE-Air Force program in which Sandia and Los Alamos were responsible for the warhead design. General Electric Reentry Systems Division in Philadelphia, under contract to the Air Force, developed the reentry vehicle and its fuzing system.

DOE Phase 3 development authorization was issued in July 1974, and the first production unit was accepted by DOE in September 1979. System Initial Operational Capability (IOC) was achieved in February 1980.

The warhead design objective was to increase the nuclear yield over that of the W62. The new design incorporates modern nuclear safety features for both normal



SOME OF THE KEY PEOPLE involved in the W78/Mk12A effort: (left to right, front) Bill Ulrich (9325), Ken Morgan (2361); (rear) Art Littleford (7423), Dick Davis (9325), Roger Abbott (9352), Don Benoist (7213), John Tenbrink (9314), Gordon Hawley (9316), Gene Ives (9330), and Carl Scheiber (9315). All Sandians who worked on the program were recently commended by the Air Force, the DOD, and the DOE.

(Continued on Page Two)

A Job Well Done

(operational) and abnormal (accident) environments.

The development program included eight flight tests on Minuteman III missiles launched from Vandenburg AFB (California) and impacting at Kwajalein Atoll. The flight program was complemented by environmental tests in Tech Area III and by underground tests in Nevada.

While the development program was not uneventful, necessary design changes were proven and incorporated before the start of production.

All DOE and Air Force milestones have now been met, and production was recently completed on schedule.

Since stockpile entry, there have been many system flight tests and system laboratory tests, using both new production and stockpiled material, without a system failure. "These results are eloquent testimony to the significant achievements of the DOE design labs and production agencies on this program," says Bill Ulrich, supervisor of Stockpile Division 9325, which played a key role in the program.

A program of this magnitude typically involves a great number of Sandians, some fulltime, some part, over the years. To all those who played a role in the replacement program, President Dacey says, "Your efforts are indeed appreciated," and EVP Tom Cook adds, "Well done!"

Congratulations

Kazuo (9334) and Ann Oishi, a son, Kevin Takashi, Jan. 11.

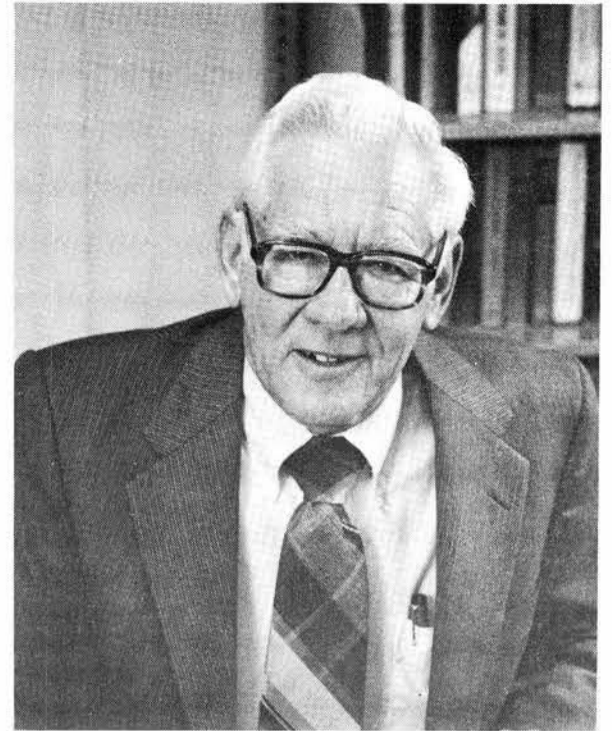
Anthony (7584) and Lorraine Montoya, a daughter, Lisa Marie, Jan. 3.

Sympathy

To Peggy Burrell (3552) on the death of her mother in Newport Center, Vt., Jan. 20.



JACK WIRTH — 2300



JACK WIESEN — 7200

New Directors Appointed

Jack Wirth has been named Director of Electrical Engineering Subsystems 2300, effective Feb. 1. Jim King (formerly 2300) is now Director of Process Fabrication Labs 7400. The 7400 vacancy was created by the retirement of Luke Heilman.

Jack joined Sandia in 1962, first working on the effects of nuclear radiation on electronic systems and semiconductor devices. He became supervisor of the Components and Systems Division in 1965, then was promoted to manager of the Exploratory Systems Department at Livermore in 1968. He next transferred to manager of the Simulation Services Department in 1969, dealing in simulation, instrumentation development, and radiation transport. The department evolved into the many general areas of theoretical physics, combustion research, and exploratory physics. Then in 1978 Jack became manager of the Systems Development Department, which is responsible for the development of the B83 Modern Strategic Bomb.

His education includes a bachelor's, master's and PhD, all in electrical engineering from Michigan State University.

He and his wife LaVerne have a 19-year-old daughter and a 13-year-old son.

Jack's spare time activities include photography, woodworking, and radio-controlled model planes.

Jack Wiesen was named Director of Systems Evaluation 7200, effective Feb. 1. Leon Smith (formerly 7200) now heads a new directorate, Instrumentation Systems 7300.

Jack joined the Labs in January 1951 in the electronic components development group. After promotions to section and division supervisor, he was named manager of the Reliability Department in 1962. Jack was chairman of the 100 Management Staff from 1969 until 1972. He then headed the Systems Research Department for three years. Since July 1975 until his present promotion, he has been manager of Reliability Department 7220. Responsibilities in his new position include reliability, nuclear safety, military liaison, and quality assurance.

Jack received a BS in mathematics and an MS in statistics from Iowa State University. He has been a member of the Annual Reliability and Maintainability Symposium Management Committee since 1967, and has served as vice general chairman, general chairman, and chairman of the Board of Directors for that group. He is a member of the American Society for Quality Control, a former Director of Region 14, and currently is vice chairman of the Reliability Division, ASQC. Jack is also a long-time member of the American Statistical Association. Two leisure-time activities that he enjoys are golf and tennis.

Jack and his wife Helen have six children — two still at home — and four grandchildren. They live in the NE heights.

Supervisory Appointment

AL LUNA to section supervisor (lieutenant) in Security Operations Division II 3435, effective Nov. 1.

Since coming to the Labs in 1970, Al has worked in custodial services, electronic fabrication and, for the past four years, with security. He attended the U of A and received his electronics technician certificate from T-VI.

Al enjoys biking, gardening and fishing. He serves as a special deputy with the Valencia County Sheriff's Department. He and his wife Becky have two children. They live in Los Lunas.



AL LUNA (3435)

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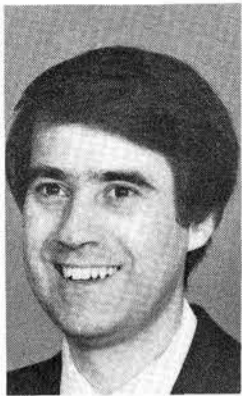
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Supervisory Appointment



ART HULL to supervisor of Electronics Technology Division 8466, effective Jan. 16.

He came to Sandia in 1968, first working in instrumentation development, then in simulation sciences, developing instrumentation techniques for use in high noise environ-

ments. He has also worked on control systems for experimental programs and, most recently, has been involved in developing electronic circuits and systems for Joint Test Assemblies.

Art's education includes bachelor's and master's degrees in electrical engineering from UC Berkeley.

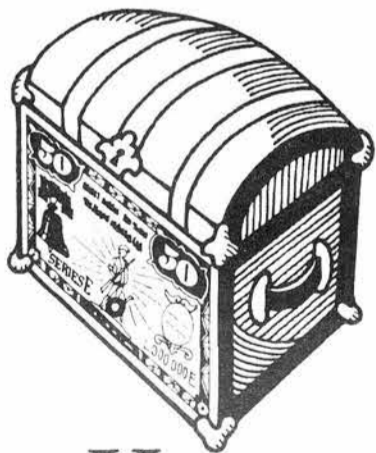
He and his wife Nancy have a four-year-old daughter and a two-year-old son. They reside in Livermore. Art's recreational interests are skiing, camping, and hiking.

Take Note

The Jan. 17 blood drive at Sandia Livermore attracted 148 donors. The donated blood will be divided between Kaiser Foundation and the Sandia Blood Bank based on the percentage of people using each service. The next Sandia blood drive will be in June.

* * *

Steve Margolis of Applied Mathematics Division 8331 has been cited by the DOE Office of Basic Energy Sciences for his work in studying the stability of flames. His work was done in collaboration with Professor Bernard Matkowsky of Northwestern University.



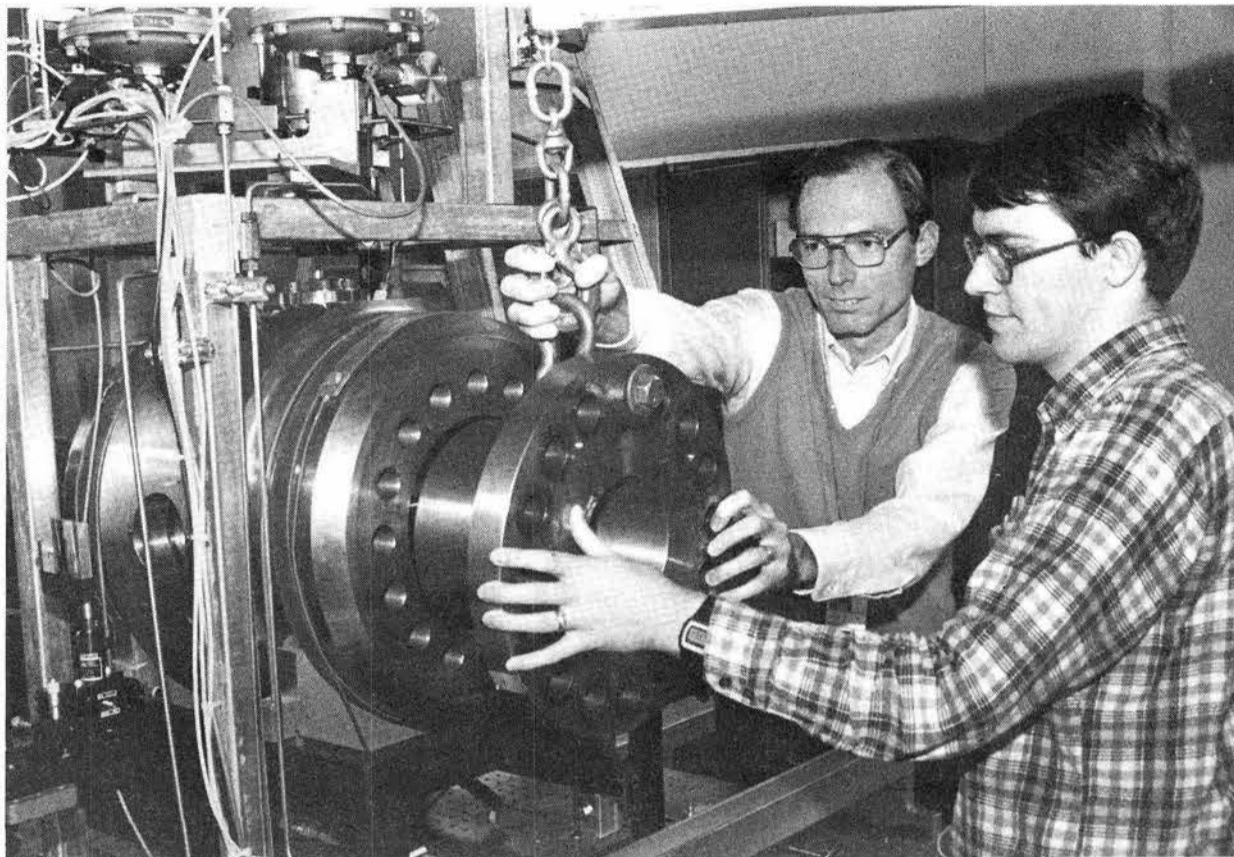
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Take stock in America.
Buy U.S. Savings Bonds.



SANDIA LIVERMORE NEWS

VOL. 35 NO. 3 SANDIA NATIONAL LABORATORIES FEBRUARY 4, 1983



HALF A TON of stainless steel — John Keilman (8121; at left) and Brent Haroldsen (8112) guide the end plug into the high-pressure test vessel before installing the 16 cap screws.

High-Pressure Vessel Permits Use of Lasers, Photographs

Brent Haroldsen of Strategic Systems Division 8112 and John Keilman of Analytical Mechanics Division 8121 have designed, built, and successfully tested a large high-pressure vessel with four windows to do flow visualization measurements.

To make the needed tests the researchers found that a four-porthole spherical container with an 800-cubic-inch volume was needed. Large windows were required to accommodate laser diagnostics as well as the standard forms of photography utilized in previous experiments. The vessel had to be safety-rated to 5000 pounds per square inch working pressure. A quarter-scale working model was constructed to prove that the design met the requirements before initiating fullscale development. This model was tested to 20,000 pounds per square inch which established the necessary safety factor of four.

Brent and John then proceeded with the 1000-pound, stainless steel vessel. For its acrylic plastic windows, they borrowed a design used by the U.S. Navy in its deepsea submersibles. But the Sandians had to reverse the cone shape window design because the pressure for this experiment was

from the insideout, while the Navy had to be concerned about external pressure from the depths of the ocean. The fullscale model was tested to 10,000 pounds per square inch of pressure, double the required condition.

The flow visualization measurements involve the use of gases at high pressures, exerting about 100 tons of force against each window. The container is situated within the Combustion Research Facility for convenient access to the lasers. When operating the experiment the researchers stay in an adjoining room where the controls and monitors are located. The gas transfer system is controlled from valves outside the test room, and a computer controls the firing of the laser and determines when the data are to be taken. The information gained from the experiments is fed directly into the computer from a digital vidicon that records the light patterns emitted.

Improved diagnostic capability required an ultraviolet laser, which is currently being installed. The acrylic windows are not transparent enough for the new laser's wavelength, so now one window is being replaced with a large single crystal sapphire window. Although the sapphire should have adequate strength, it is a brittle material so safety modifications and additional testing will be needed.

Working with Brent and John in laser diagnostics are Dave Stephenson and Clyde Layne (both 8512) at the Combustion Research Facility, and Cook Story (8112).

Congratulations

Lillian Funk (8273) and Ken Bennett (8261), married in Reno, Jan. 10.

Dan Poole (8212) and Debra Vosburg (9372), married in Albuquerque, Dec. 28.



ARMY CHIEF of Staff, General Edward Meyer, visited with President Dacey and other Sandians recently. Bldg. 892 was one of the stops on his brief tour.

GSA Schedules Vehicle Sale

Ten vehicles from Sandia Labs are among the 116 used government vehicles offered for spot bid sale by the Government Services Administration on Wednesday, Feb. 16. Included are pickups, sedans, carryalls, school buses, station wagons, vans, and travelalls.

The vehicles may be inspected Feb. 14-15 from 8:30 to 3:30 at the GSA Motor Pool, 1800 12th St. NW. The sale begins at 10 on Feb. 16. Under a spot bid, offers are submitted in writing to the sale officials, who select the highest offer. For more information, call Joe Salas (3418) on 4-2746.

Fred Martinez Heads Credit Union Board

Record assets of \$78,315,217 were reported to members attending the 35th annual meeting of the Sandia Laboratory Federal Credit Union last week. Elected to the board of directors were Fred Martinez (3253), Paul Rosenkoetter (0133), and Bill Alzheimer (8150). Martinez was subsequently elected president by the board of directors.

Winners of the three door prizes offered at the annual meeting were Dave Caskey (9268), \$500; Chandra Carson (ret.), \$300; and Frances Dragoo (family member), \$200.

Other officers of the board are Joe Ruggles (3661), vice president; Bob Luna (9781), secretary; and Red Turner (Credit Union General Manager), treasurer.

Appointed to the supervisory committee were Helen Davison (1600), Eddie Gallegos (0122), Bob Higgins (2400), Carlos Griego (7500), and Dan Held (8262).



BECAUSE 'E'S GONE TO THE DOGS, THAT'S WHY!

"Why was Sir Ninian Stephen sworn in by a figure dressed up as a cocker spaniel?"

Letter to *The Australian*, Sydney, quoted in

World Press Review

Antojitos

On FMPS--Household finances are not my forte. In fact, as Don Stone (3511) once remarked, they're not even my piano. (Music lovers, please explain to colleagues.) Nevertheless, having once worked for the U.S. government and having therefore received a paycheck every two weeks, let me address some financial advice to FMPS--Formerly Monthly Paid Sandians.

For perhaps the first time ever, you will now have to take control of your finances. All of your obligations--the rent or mortgage payment, the utility bills, the bank and charge cards, all the far-too many others--arrive monthly. These creditors, sad to say, don't care how often (or how little) you get paid. They care only that they get paid.

And that's going to be more difficult now, especially if you're used to writing out all the checks at the beginning of the month, then subsisting the rest of the month on whatever happens to be left over.

Making the new system even more difficult is that, most months, you're going to receive only a minuscule 1/13th of your annual salary, not a grand 1/12th as under the monthly paid system.

So, tighten those financial belts and squeeze those financial sinkholes. But remember--twice a year you'll get three paychecks in one month. As I remember government service, that's what makes it all worthwhile.

* * *

Words of Wisdom, Inadvertent Division--After an apparently inspiring division safety meeting emphasizing the importance of vehicle safety belts and conducted by Bob Colgan (3153), cinematographer Wayne Hancock was seen to buckle himself resignedly into the division's van and heard to mutter with equal resignation, "Guess I'll have to learn to live with them!" Wayne, the expert at the National Safety Council or the flack on Madison Avenue couldn't have expressed the concept more cogently. To you, congratulations. To those with allergies to seat belts, learn to live with them too--they're your cheapest form of life insurance.

* * *

Psycho-Cyclist Returns--(Old timers, please explain to young-timers.) While some of Cecil Page's (9321) people were approaching a flatbed truck with a forklift--forks heading right into a skid under the load--along comes this airhead on his 10-speed and pedals blithely between the truck and the forklift! (I publish this only in the interest of bicycle safety, that is, professionally. Personally, I'd prefer to continue to believe that there is some positive correlation between a respectable IQ and a Q clearance. ●BH

El que no agarra consejo, no llega a viejo. (He who won't take advice won't reach old age.)

Friendship Force Plans Two Trips

The New Mexico Friendship Force is planning two exchanges, or travel experiences, for 1983, reports Wally Cramond (9412) who is coordinating one of the trips. The first Friendship Force group departs April 17 to an English-speaking island country in the southern hemisphere. The second leaves May 12 to a non-English-speaking country in Europe.

"These two-week trips are open to anyone and provide very rewarding experiences," Wally says. "The trip destinations will be announced later."

The Friendship Force is a non-profit, private organization chartered to promote

international understanding through "the force of friendship." It does this by arranging visits in the homes of foreign people by Americans who then host foreign visitors in their homes.

More than 100 exchanges between U.S. cities and cities in all parts of the world have been conducted. Sandians have participated in exchanges from Albuquerque to Korea, Italy, Costa Rica, England, and the Philippines. Worldwide, more than 100,000 people have participated in the program.

To learn more about the Friendship Force, contact the group's office afternoons on 243-6916 or call Wally on 298-2660.

feed *back*

Q. Why do business cards cost several times the price of comparable quality cards from local profitmaking printing shops, and take 10 times as long to deliver?

Sandia's business card format (including logo and print size specifications) was developed in-house and approved by Management. The contract for procurement of cards meeting these specifications was competitively quoted by local as well as other suppliers. Based on these quotes, the contract was awarded to the low bidder.

Delivery time is related to more than one factor. First is the ordering. Employees place (and pay for) their business card orders throughout the week. Since 3 to 5 orders are normally received during that time, these are accumulated and a supplier order placed weekly to keep administrative costs low. Then there is the time from the mailing of the order to receipt of cards. Although this now takes about 3 weeks, Sandia is trying to reduce this time.

P. M. Stanford — 0100

Q. Why doesn't Sandia request that AT&T designate a member of our management as a trust officer? With so many Sandia employees participating in the Bell System Savings Plan & receiving AT&T stock, it would help appreciably if we had a designated trust officer to verify employees signatures for the sale of that stock. I was recently told that since AT&T did not have a designated trust officer, I would have to have my signature verified by an officer of a commercial or trust bank. Since I do all my banking with the Sandia Federal Credit Union, this may prove difficult to do since I do not do business with a bank.

A. Most AT&T companies do provide a signature guarantee service for the sale of AT&T stock by their employees. However, since Sandia operates with government funds, it is in a somewhat different position and has elected not to provide this service. The decision is further supported by the fact that this function is commonly provided by brokerage firms and commercial or trust banks (but not credit unions nor savings and loan associations). Although some banks may provide a signature guarantee only for their regular customers, at least one Albuquerque bank also provides this service for others: the First Interstate Bank's trust department will provide a signature guarantee for persons with sufficient identification (e.g., driver's license and national credit card).

P. M. Stanford - 0100

Death



Bill Colborne, manager of the Auditing Department 0120, died Jan. 27 after a short illness. He was 59.

He had worked at the Labs since June 1953.

Survivors include his widow, four daughters, and two sons.



DISPLAYING the new AMPFION-Hybrid diode is Cliff Mendel (1264). The most recent in a series of experimental diodes he has designed, the device is one of the promising new developments in fusion research at the PBFA facility. Other diodes will be covered in future LAB NEWS stories.

Another Step Toward Fusion

AMPFION Able to Bunch Ions

No, AMPFION is not the legendary Greek musician who built the walls of Thebes by charming the stones into place with his lyre. That was Amphion. AMPFION (Auto-Magnetic Plasma-Filled Ion) is one of the new and promising experimental diodes in the fusion project at the PBFA (Particle Beam Fusion Accelerator) facility in Area IV. First, some background.

"The purpose of the project is to make a very small hydrogen bomb," says Cliff Mendel of Beam Experiments Division 1264. "More precisely, we're trying to create a thermonuclear reaction in a BB-size pellet containing the fuels deuterium and tritium. Once this reaction — fusion — is achieved, the pellet gives off neutrons. The resulting heat could then be used to run turbines that generate electricity.

"The thermonuclear reaction is obtained by compressing the pellet, which is a hollow metal shell filled with fusion fuel, by a factor of 10 in radius very rapidly — in 10 nanoseconds. We do this by getting the outer surface of the pellet's thin metal shell very hot. As the outer surface expands, it blows away. Simultaneously, the inner surface is pushed rapidly toward the center of the pellet. The resulting compression heats the gas contained inside. In such an environment, nuclei are likely to collide with each other. These collisions create fusion."

Cliff explains that the inertial confinement fusion community has explored three principal ways of heating the pellet: laser beams, electron beams, and ion beams. But there are problems with each of these methods. Laser beams can be easily focused but lead to difficulties with energy deposition. Electron beams heat the entire shell and the gas inside. Ion (or particle) beams, the preferred method at PBFA, have very good energy deposition; however, they're difficult to focus well.

"Our job is to design an efficient diode that will focus ion beams very tightly," says Cliff. "There are two approaches to the problem. One is to go ahead and make

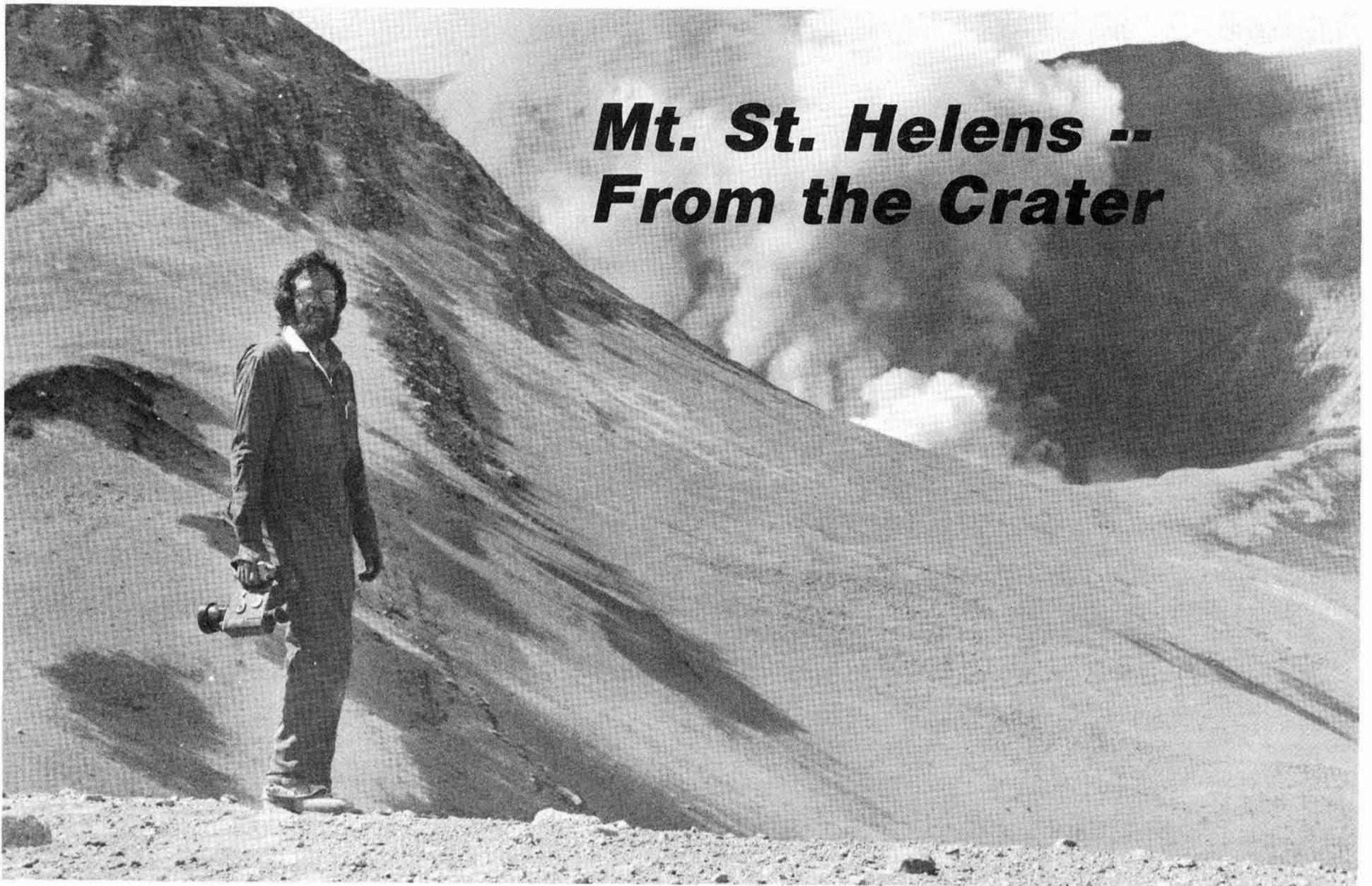
something that may work, measure it, and correct it. The other is to come up with a conceptually simple diode design.

"AMPFION is the second type. Above all, we tried to make a diode in which the electrons could be precisely controlled. Electrons cause problems because they follow more complicated orbits than ions, which travel in almost straight lines within the diode. Our solution is to distribute ions and electrons more uniformly than in earlier diodes. By doing this, each point in the diode looks much like every other point. The diode can then be modeled by one-dimensional, time-dependent analytic theories.

"In addition, we fill the entire diode between the positive and negative electrodes with a dense, highly ionized gas that allows us to choose the ion species — carbon, proton, or lithium. This plasma fill also permits us to 'bunch' the beam. This is because the voltage in a plasma-filled diode rises gradually in time, resulting in late time ions that travel faster than early time ions. This velocity spread can be adjusted, or bunched, so that late (fast) and early (slow) ions all arrive on target at the same time. Like its Greek near-namesake then, AMPFION technologically charms ions into place.

"We've achieved most of our objectives in plasma-filled diodes," Cliff continues. "But focusing still poses problems. To focus the ion beam as tightly as necessary, we need a very uniform, dense, and highly ionized fill plasma. Right now, we believe we know how to make a uniform plasma. However, it's not sufficiently dense and has too high a neutral content for the voltage level. We may be able to generate a satisfactory plasma for higher voltages.

"We've also tested the AMPFION-Hybrid diode, which uses the same electron control techniques as AMPFION but does not have a plasma fill. This diode focuses quite well, and we're happy with its operation and our understanding of it. But it also has problems with ion sources, so we're looking at ways to improve them."



Mt. St. Helens -- From the Crater

WITH THE CRATER of Mt. Saint Helens yawning behind him, Terry Leighley Terry spent two years on loan to the U.S.G.S. team at the site, operating photo-looks over the desolation caused by the volcano's eruption of May 18, 1980. graphic equipment and documenting changes in the area's geology and flora.

The eruption of Mt. Saint Helens on Sunday, May 18, 1980, touched the lives of many people. Scores died and the stark memory of the destruction brought by the eruption will be carried by others for the rest of their lives.

Terry Leighley (7556) lived for two years with Mt. Saint Helens' menace, yet also remembers the experience as one of the most meaningful he's had.

"I was probably the only person on the U.S. Geologic Survey team who was there for every eruption starting Aug. 7, 1980," says Terry. "As luck would have it, I was in Albuquerque during the famous May 18 eruption.

"USGS had asked Sandia to set up and operate a couple of time-lapse cameras, and I was picked for the job. I installed one to the north and another to the south about 20 miles apart. On May 2, USGS decided both cameras should be on the same side of the mountain. During the May 18 eruption, one camera was lost and the other was covered by three to six feet of ash. Dave Johnston of USGS was killed at one of those sites, five miles from the mountain — the only casualty among our group.

"Some people who died, however, had to have gone out of their way to be there. The Forest Service and State of Washington had set up roadblocks, but some people were actually selling maps that showed how to avoid the roadblocks by using logging roads. It's true that a lateral explosion of this magnitude hadn't been predicted, but the authorized observation points were well outside the restricted area and quite safe. It was fortunate that the explosion was to the north — the most lightly inhabited area. If it had been to the south, the destruction would

have been catastrophic — dams destroyed, towns flooded."

Terry says it was a shock to go back after May 18. Spirit Lake and the dense forests surrounding Mt. Saint Helens had been "beautiful"; when he returned, everything was "one shade of brown."

"It was the better part of a year before the colors started coming back, to the rocks as well as from new vegetation," he says. "Millions of trees were knocked over like matchsticks by the explosion — many were reclaimed by the logging companies, although they had problems washing the logs to get the ash off. By no means was it a bonanza to the loggers. A fantastic amount of timber was just destroyed, thousands of acres completely lost.

"After the eruption, I was asked to put in two more cameras. Then USGS asked me to provide photographic support for one year — after which I extended for another year. I moved my family to Vancouver where the USGS office is. We usually commuted by helicopter to Mt. Saint Helens, 30 miles away.

"The early eruptions were of the explosive type — after October they were all dome building eruptions. Material that collects inside the crater is blown away every once in a while. I've been in the crater during eruptions. We felt perfectly safe because most of us had confidence in our data. We all accepted the risks because we felt it was for a worthwhile purpose."

Terry relates that the most exciting experience he had was during the September 1981 eruption. He and USGS geologist Don Swanson were doing deformation studies inside the crater. They felt 86 earthquakes and had to dodge rocks the size of houses.

"The ground temperature was 897

degrees Celsius," says Terry, "although the dome material provided such good insulation that the surface was just warm — but six inches down it'd burn off gloves and boots.

"Going into the crater was strictly on a volunteer basis. I was documenting changes around the crater — plant life, erosion. I didn't have to go in, but I really fell in love with the work. Don, whom I worked with principally, had the most time in the crater — I probably was second.

"The USGS people are the greatest in the world," he continues. "From the day I arrived, they accepted me as one of them. For years, they prided themselves for working on practically no budget at all. But now they need computer support and that takes money. I never worked with people who were willing to put in so much of their own time — 16-hour days, 7 days a week were not unusual."

Terry explains that volcanologists are a select group. The USGS has about 25 in addition to a couple of dozen water resource specialists. On some occasions, probably all American volcanologists were at Mt. Saint Helens at the same time. He also met many visiting foreign scientists from Japan, Britain, France, and Indonesia, which has the largest number of active volcanoes in the world.

"The USGS doesn't expect more big eruptions," says Terry. "Based on its past history, Mt. Saint Helens will have dome eruptions sporadically for the next 20 years. The USGS will maintain monitoring stations and maybe an observatory if they get the funds.

"It was a fantastic two years," he concludes. "I'd go back again, if they called me."

Sandia Assisting With City Pollution Study

SANDIA BALLOONS carrying air sampling instrumentation were tethered over the Northeast Heights last week as Applied Atmospheric Research Division 9784 under Bernie Zak gathered air samples to analyze for pollutants. More than 500 samples will be taken at various locations and altitudes around the city. Sandia is participating in the city's study of winter visibility degradation (the brown cloud). At right are Lee Jensen, Hugh Church, and Bernie Zak (all 9784) with three seven-meter helium balloons. Below, Mark Ivey (Technadyne) operates vacuum pumps in the back of a van which pull air through filters and sampling instrumentation hanging on Kevlar lines from the tethered balloons. Meteorological data are also recorded with the air samples. Division 9784 has performed similar studies for DOE and EPA at NTS, St. Louis, the Cumberland Power Plant in Tennessee, and the Geysers area in Northern California. Industrial Hygiene Division 3311 is also participating in the air pollution study.



A Controlled Tirade

You Can't Get Blood From a Turnip

Major Premise: You can't get blood from a turnip.

Minor Premise: Sandians (generally speaking) are not turnips.

Conclusion: You can get blood from a Sandian.

What's going on here? Just this. Collectively, Sandians contributed an impressive 1394 units (pints) of blood to the community via United Blood Services last year.

Individually, Sandians didn't do so hot — a mere 214 employees giving blood every eight weeks could have accounted for the 1394 units. In reality, more like 500 or 600 Sandians give blood on a more or less (often less) regular basis. In terms of percentage of a population of 7000, that approaches the abysmal.

Yes, it's true that there are those who, for sound medical or psychological reasons, can't give blood. But there are many more who fall into one of two other groups: 1. People who give only once in a while because they ignore the United Blood Service's reminders for one week, then forget about it for the next couple of months. To them the obvious advice is: *put your next*

donation date on your calendar just as you do any other important date.

2. People who have never gotten around to giving blood because they're totally indispensable on the job on Tuesdays, they're not convinced of the need, or they're chicken.

Let's look at those reasons in reverse order. There's no need to be chicken — the physiological penalties are minimal and momentary; the psychological rewards are major and long-lasting.

For the need is great. Albuquerque is *the* source of blood for the entire state plus part of southern Colorado. It gets used, and wisely. In fact, one donation can save three lives! And often does.

Most blood gets used in the form of red blood cells — they are usable for up to 35 days after the blood is donated. Almost as much blood gets used in the form of platelets, a clotting agent. Platelets are usable for only five days. Given the advances in medical science that involve some pretty miraculous saves on an operating table, the need is high and rising.

The United Blood Services operates on a very small inventory — more than 99.5 percent of the blood donated gets used.

Finally, *no* one is indispensable on Tuesdays. So, "turnip at the bloodmobile." It's at the southwest corner of Medical from 8 to 3. Filling out the form and mailing it in will help schedule donors.

Barbara Champion - 3543

I wish to participate in the Sandia Blood Donor Program as a Volunteer Blood Donor.

NAME (please print)

ORG. PHONE DATE

I am already in the program but wish to increase my participation to ____ times per year. (Maximum participation is every 8 weeks.)

NAME (please print)

ORG. PHONE. DATE

Personnel Director Sees New Opportunities

Bob Garcia, 3500 director, recently told the LAB NEWS about two new corporate-wide review programs soon to be implemented for both non-graded and graded employees:

Managing Professional Growth, or MPG, workshops were initiated at Bell Labs and are now available at Sandia. We became aware of MPG through President Dacey and contacted Bell Labs since the people there have had considerable success with the program. We've had two pilot sessions consisting of two-day workshops for selected employees. Blessing-White of Princeton, N.J., developed the program. Their representative conducted the first workshop at Sandia and trained our staff to run subsequent seminars. We've already run 10 sessions, and comments from employees who have participated in the workshops have been extremely favorable. Now we're making it available to all non-graded employees.

In the past, supervisors have approached counseling their employees with a certain amount of apprehension. MPG eliminates this concern by establishing a non-threatening environment. The employee discusses his or her interests and career goals with the supervisor. Both exchange ideas on what each considers to be the most important and least important aspects of the job. There is feedback in both directions resulting in a greater understanding on the supervisor's part of the employee's ambitions and goals.

Many supervisors don't really know the career goals of their subordinates. They need a face-to-face discussion relating to their employees' expectations at the Labs. Supervisors thus learn by developing their own confidence in coaching subordinates. And the subordinates gain an opportunity to talk frankly with their supervisors about job aspirations.

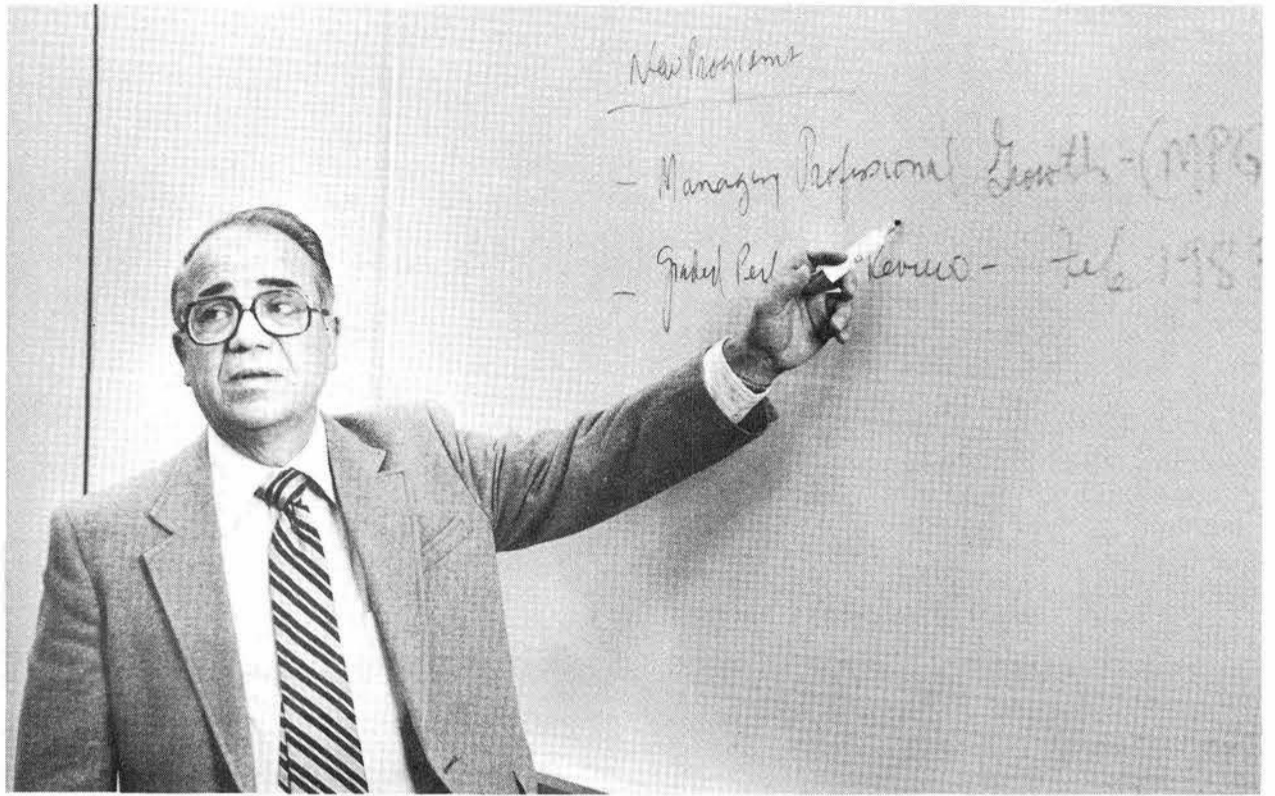
This is what the MPG workshop is designed to accomplish — to open a line of communication between supervisor and employee, to help the employee pinpoint job goals, and to correlate these ambitions and objectives with the supervisor's feedback. The supervisor is the key person in providing guidance because the supervisor sees and works with the employee every day. MPG provides the tools to enable the supervisor to actively participate in the professional growth of the people who work for him or her.

Each MPG workshop is limited to 25 people, and there's always a backlog of employees wishing to take the two-day session. There's been little publicity, but news of the workshop has spread by word of mouth.

I might add that taking the course is no guarantee that one's horizons will broaden. Ultimately, that's up to the individual. However, the workshop can provide insight as to how your supervisor views you and what you have to do to achieve your goals.

* * *

A new performance review procedure for graded employees has been approved by Small Staff. In the past, many organizations had developed their own rating forms and,



BOB GARCIA (3500) discusses the two new evaluation programs recently implemented for non-graded and graded employees.



INTENSELY pondering his career goals, a participant in a recent Managing Professional Growth workshop concentrates on an exercise.

as may be imagined, there's been quite a variety in use. Standardized forms were greatly needed because graded employees bid more frequently than non-graded employees — therefore potential supervisors request more information about the bidders' performance on their current job.

We met with many organizations and came up with a standard review system in which all graded employees' performance will be evaluated by their supervisors at least once a year. In addition, we've conducted orientation sessions with all concerned supervisors in the use of the new form. We expect to implement this program early in February.

* * *

Sandia is a community of highly select people. The Labs encourages employees to maintain their technical vitality by participating in the various educational programs that we offer. This means that our employees have to be alert to new challenges and be willing to keep current in their field. In the next five to ten years, we will exper-

ience an increase in retirements, which are currently at a rate of over 200 a year. There'll be no lack of opportunities for those who are prepared to assume new and broader responsibilities.



ASTEROIDS BELTED

From France's National Aerospace Laboratories comes a suggestion for making Venus habitable. The discovery of Venus's high temperature (460°C) and high pressure, carbon-dioxide atmosphere was a severe disappointment for those who believed the planet almost a twin sister of Earth. To make the planet habitable, the first requirement would be a lower temperature. This in turn should allow the rocks on the planet's surface to absorb CO₂, thus eliminating the so-called greenhouse effect.

The trick, according to Christian Marchal, is to trap an asteroid orbiting near Venus and pulverize it to create a billion-tonne dustcloud. This would screen the planet by one to three degrees each week. Marchal lists some 40 asteroids that come pretty close to Venus, but as he observes it is unlikely that one will be found in exactly the right place. The solution would be a small (2 kilotonne) nuclear bomb for an asteroid of 1 kilometre diameter. The hijackers would have to bore a hole to the centre, and put a bomb at the bottom.

The bomb, small enough not to destroy the asteroid, would blast a small cavity in the centre and gas would escape at 2000 to 3000 metres a second, pushing the asteroid in the required direction. Repeating the process would be one way of using up the world's stockpile of atomic weapons, says the researcher. When in the right place, another bomb would pulverize the asteroid, or better still, asteroid rustlers could play a game of galactic marbles, making two asteroids collide to create the required dust cloud.

— New Scientist

A Message for Sandia Inventors

"About 60 patent applications from Sandia inventors are in the mill right now," Tom Marker, Sandia's Patent Manager 6020, told the LAB NEWS recently. "That's more than we've had going at any one time in the past."

"Does this mean we have more inventors, more creative engineers and scientists?" we asked.

"Yes and no," Tom answered. "Certainly we have inventive people and we have new technical people on roll — more, perhaps, than we had five years ago. We are involved in more demanding programs, technical jobs that require new solutions. New tasks require new answers."

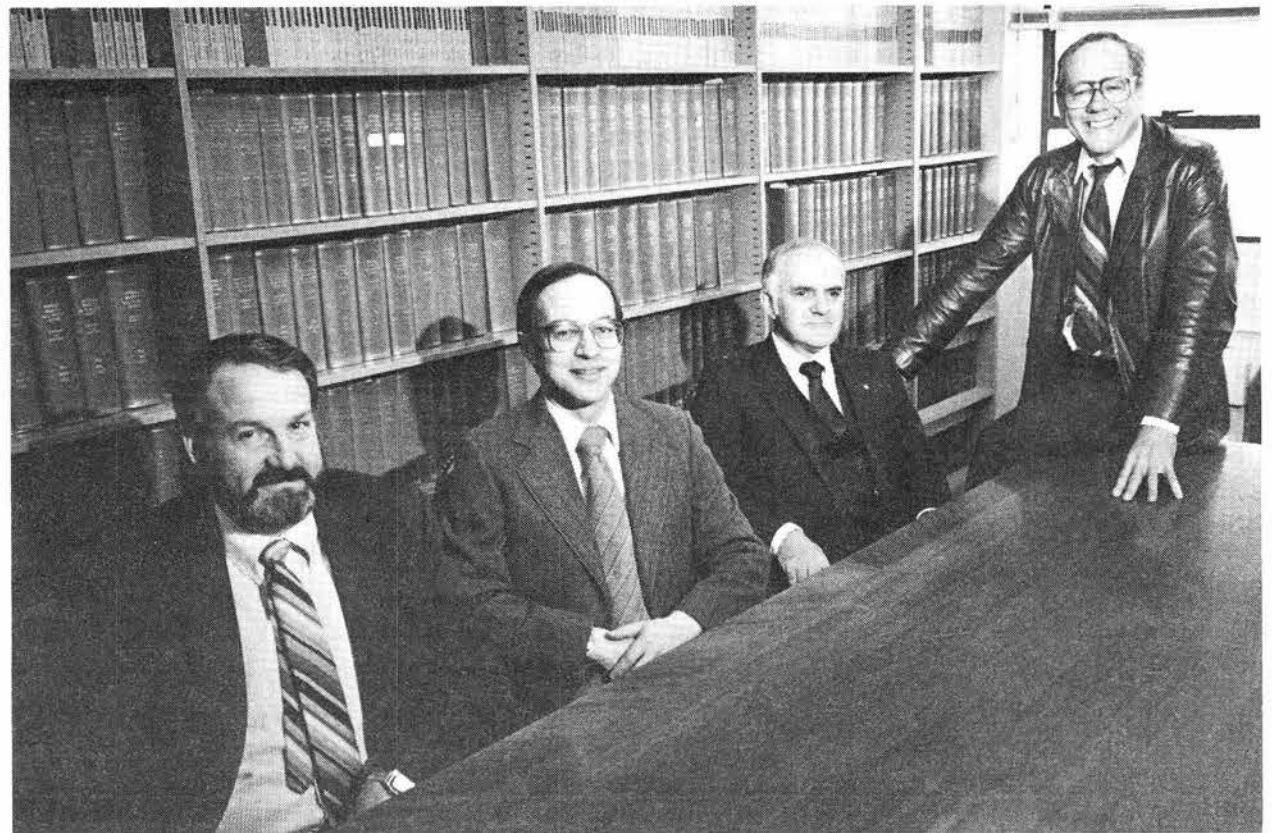
"But there's another important element," Tom continues. "We've always had inventive people, but not all disclosures were followed up. There's new support from DOE. Meet Al Sopp."

Al Sopp comes on with a friendly handshake and a smile. He's the DOE Patent Counsel who heads a team of three attorneys who handle patent applications for the Albuquerque Operations Office.

"The LAB NEWS can be helpful," Al says. "We have a message for Sandia people."

"Lay it out," we tell him.

"OK," Al says. "We at AL are approaching a par with the rest of DOE and thus we're filing more patent applications than ever before. That's because DOE feels it is important to recognize meritorious inventions as well as protect government rights. This is not new, but the emphasis is new. We want all Sandia and other inventors in the DOE/AL complex to know that all patent disclosures are given a fair shake, a prompt



PATENT ATTORNEYS for the DOE/AL complex are Jim Chafin, George Libman, and Armand McMillan with Patent Counsel Al Sopp, right. The team currently has 100 patent applications in the mill, more than half from Sandia inventors. There's a total of 68 years of patent attorney experience among the group.

and careful evaluation, and a substantial percentage of them result in a patent applications." Tom agrees. He calls for more patent disclosures from Sandians. Tom and the Invention Reports Division 6021 under Joe Szymanski work closely with the inventor to prepare the disclosure.

"We're always looking," Tom says. "Patents bring recognition to both Sandia, and to its inventors. There are many rewards."

The message is clear: If a Sandian has something new, contact Division 6121 right away.

"Right away," Tom Marker says.

"Right," Al Sopp says. "It usually takes about two years from the date of application to award of patent. Let's get started."

Events Calendar

Feb. 5 — "Broadway Dreams," Sweet Adelines' Annual Musical, 2 & 8 p.m., KiMo.

Feb. 6 — "Duke City Jamboree," hosted by Watermelon Mountain Jug Band, country/western music variety show, 2 p.m., KiMo.

Feb. 6-May 15 — "A Feast of Color," Corpus Christi dance costumes of Ecuador, a Smithsonian Institution traveling exhibit, Albuquerque Museum.

Feb. 6-Dec. '83 — "The Chaco Phenomenon," conclusions of research about this prehistoric community. Maxwell Museum of Anthropology.

Feb. 8 — One Way, rhythm & blues band, tickets \$8 & \$9 in advance. Popular Entertainment Committee at UNM, 8 p.m., Popejoy.

Feb. 9 — "Divisions and Delights," Vincent Price as Oscar Wilde, 8:15 p.m., Popejoy.

Feb. 10-13 — "The Adventures of Don Quixote," La Compania de Teatro de Albuquerque, 8 p.m.; student performance, 10 a.m., 11th; matinees, 1 p.m., 12th, and 3 p.m., 13th. KiMo.

Feb. 11 — NM Jazz Composers Orchestra, 8 p.m., KiMo.

Feb. 11-12 — NM Symphony Orchestra concert featuring NMSO soloists, 8:15 p.m., Popejoy.

Feb. 11-12, 18-19 — "Antigone," the Greek legend updated for modern audiences, 8 p.m., Stage One, U of A.

Feb. 12 — Folk music, "An Evening of Song," Dave Von Ronk, 8 p.m., KiMo.

Feb. 13 — Audubon Wildlife Film Series, "Eagles," 7:30 p.m., Popejoy.

Feb. 16 — Scottish Folk Music, "The Tannehill Weavers," 8 p.m., KiMo.

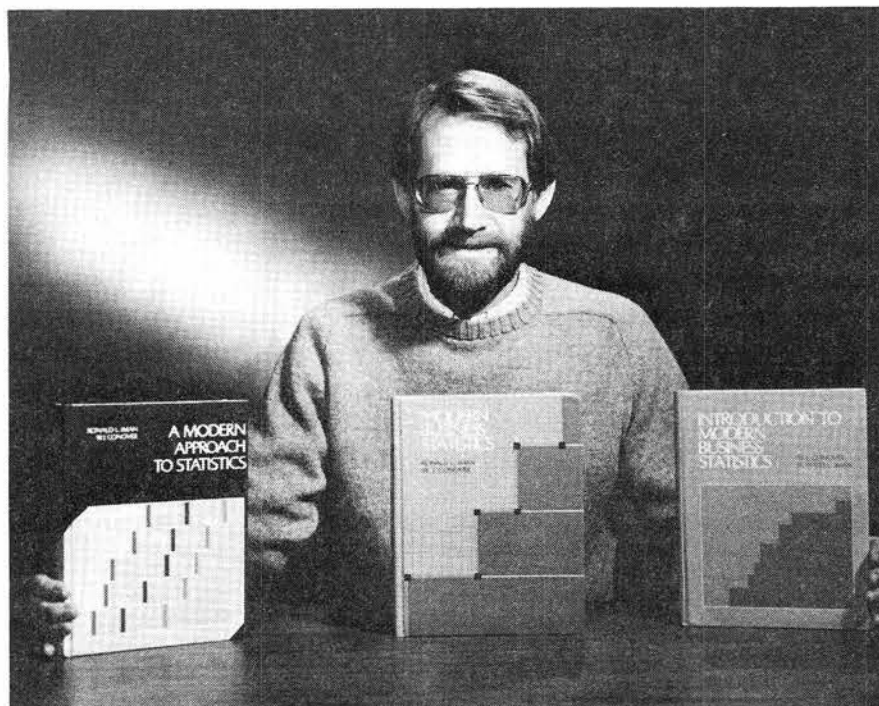
Feb. 18-20* — Classics Theater, "King Lear"; Gene Ives (9330) in title role, 8:15 p.m., *2:15 p.m., Popejoy.

Textbooks

Statistically

Significant

TWO YEARS of working every weekend and several hours each evening after work resulted in three statistics textbooks by Ron Iman (7223) and his co-author, W.J. Conover of Texas Tech.



Ron Iman (7223) and W.J. Conover (Texas Tech) are the authors of three books published last month by John Wiley and Sons. Based on research the authors have done for the past 10 years in the area of rank transformations, the books are undergraduate texts in statistics. One volume covers a semester of business, a second covers two semesters in business statistics, and the third is for one semester of general statistics. Ron says that these are the first

books published on statistics that contain side-by-side presentation of parametric and nonparametric statistics. In previous books on the subject, nonparametric statistics were usually added as a final, single chapter.

In addition to the three books, the authors also prepared a set of student study guides and instructors' manuals for each book. International editions are also being distributed.

Take Note

Tonight's the night for the joint American Society of Mechanical Engineers/American Institute of Aeronautics and Astronautics dinner meeting with a speaker on "Dirigibles: Past, Present, and Future." It's at the Bella Vista in Cedar Crest with social hour at 6, dinner at 7, and program at 8. Cost is \$5.50. Reserve *right now* with Kathleen McCaughey at 4-1573 or Gil Benevides at 4-6308.

* * *

The American Vacuum Society will hold its 19th annual symposium at the Convention Center April 26-28. Sessions on surface science, thin films, and other topics in vacuum science and technology are planned. Get info on abstracts (due March 1) or on the technical sessions from William Rogers (2515). For info on the short course program held in conjunction with the symposium, contact Raymond Berg (2564).

* * *

The 12th International Conference on High-Energy Accelerators, to be held Aug. 11-16 at the Fermi National Accelerator Lab, will address recent work on the physics of high-energy accelerators and the interface with detectors. Abstracts for talks, posters, and papers are due May 1. More info from conference secretary Rene Donaldson, FNAL, Mail Station 107, P. O. Box 500, Batavia, Ill. 60510.

* * *

Quality control is, logically enough, the subject of a talk by Pat Callahan, manager of the Albuquerque Testing Lab, to the local chapter of the American Society for Quality Control on Feb. 8 at the Coronado Club. Social hour at 6, dinner at 7. Guests are welcome; reserve with Jerry Rudolfo on 4-1102.

* * *

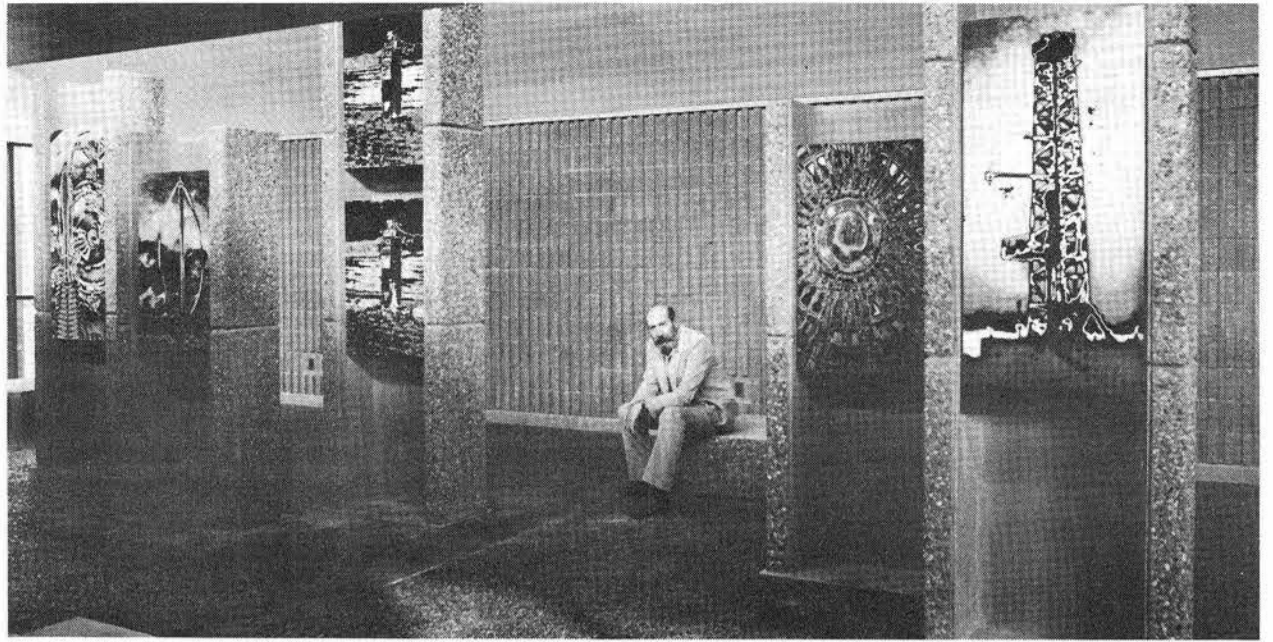
The New Mexico Network for Women in Science and Engineering is sponsoring an "Expanding Your Horizons in Science and Mathematics" conference for young women (grades 8-12) at UNM on Feb. 26. The conference will include technical career workshops for the young women as well as a special program for teachers, parents, and counselors. Speaker topics are: Changing Psychology and the Role of Women, Mathematics in the Job Market, and Matching Career Goals to Choice of College. Register by Feb. 14; fee is \$5. More info from Imogene Russell at 247-3658.

* * *

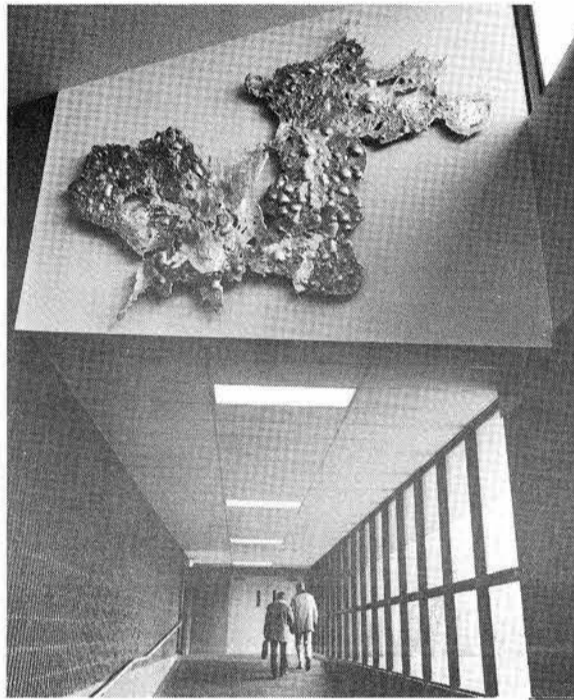
"In Case of Nuclear War . . . A Forum on Civil Defense" will include speakers from the Federal Emergency Management Agency, the city's Office of Emergency Planning, UNM, and other organizations. Providing commentary for one of the UNM speakers will be Roger Hagenruber, manager of System Research Department 0310. Sponsors of the forum include Action for Nuclear Disarmament and New Mexico Peace Conversion Project. Forum programs are available in the LAB NEWS office.

* * *

Another "Passive Solar Design" workshop sponsored by the NM Solar Energy Institute and NMSU is set for Feb. 18-19 at the Hilton. Registration forms are available for the NM Energy R&D Info Center, 117



SANDIA STONEHENGE it's not. It's a display area in Bldg. 822 designed to dramatize selected labs achievements. The current display features computer-enhanced photographs of Sandia-related scenes. Computer enhancement work was done by Dennis Ghiglia (2644) of the Image Processing Facility. Dennis notes that such enhancement can provide new insights into technical photographic data as well as aesthetic appeal. The display area was executed by Mac McHarney (3155) and Joe Laval (3163), relaxing after its completion.



ADJACENT to the display area in Bldg. 822 is a poured aluminum sculpture by Gary Gallegos and Charles Burrow (both 7473).



HANGING the sculpture took the talents of Millwrights Woody Edwards, Leroy Garcia, Reggie Tibbetts, and Mario Candelaria (all 3616) and engineer Bill Hendrick (3643).

Richmond NE; or from the Day Division of T-VI.

* * *

Before-and-after-school services are available in KAFB's Youth Center. The supervised program is open to all children whose parents work on the base. Cost is \$30 per month. Contact is Margaret Hammond on 4-9975.

* * *

Maxine Stephenson (3423) is retiring this month and not shown in LAB NEWS photos.

* * *

The Edelweiss German American Club is sponsoring the Second Annual Fasching Parade and *Bier und Wurst Fest*. Fasching is the Teutonic equivalent of Mardi Gras, and Mayor Kinney has declared Sunday, Feb. 13, German American Day.

The parade will begin at the club's headquarters on Quincy and Menaul NE, move west to Carlisle, north to Candelaria, east to Quincy, then south to the starting point. During this time and until 10, the *Bier und Wurst Fest* will be in full swing under a giant tent next to the clubhouse. Featured will be knackwurst und sauerkraut, German imported beer, continuous oom-pah-pah music, and German *Volkstänzer*. Also available will be soft-drinks, American draft beer, and wine.

For more information, contact Herr Larry Lopez (pronounced Lopetz, 3151) or the German American Club, 883-9877.

* * *

Anyone interested in becoming a "Week-end Docent" at the Rio Grande Zoo is invited to a get-acquainted coffee tomorrow at the Zoo Barn at 10:30. Docent training is scheduled at the Zoo on Saturdays starting at 9:30 a.m. on Feb. 12, 26, and March 12. Docents serve the Zoo as volunteer guides for tour groups. For more information call 242-8550 weekday afternoons between 2 and 4.

* * *

More zoo gnus. New hours are 9 to 5 every day except Thanksgiving, Christmas, and New Year. And if you've ever wanted to have an exotic animal think of you as its Albuquerque mommy or daddy, call 766-7823 and ask for info on the new Zooparents program. Parental obligations (mainly financial but with visiting privileges) last one year at a time. Maybe a fire-bellied toad for your love for Valentine's Day?

* * *

A catalog of upcoming classes offered by KAFB's Arts and Crafts Center is available for reference in the LAB NEWS office, MO 125.

Checking Careers Close-Up

Sandia, along with other local firms, is participating in an Albuquerque Public Schools pilot program for gifted students. The program, which is called the "Career Exploration Program," is designed to offer high school seniors of exceptional ability and potential the opportunity for in-depth exploration of possible career choices.

The students are selected from the high school Gifted Students Program by the APS staff and faculty to spend a semester in either a mentorship (for juniors) or go through an internship (for seniors) at a local business.

The mentorship is an introductory course in career exploration in which a student works on a one-to-one basis with a mentor in a possible career choice for a minimum of five hours per week for 16 weeks.

In the internship, students serve as interns within an organization or professional organization for at least 15 hours a week for 16 weeks. The student intern is under the supervision of both the professional "sponsor" and one APS instructor for the gifted. The emphasis during this period is on observing organizational and professional behavior such as management techniques, group dynamics, leadership, communication, work competency, and professional ethics. Intern students are also granted



REVIEWING Sandia's Career Exploration Program are (l to r) Soila Brewer (3533), Jan Bodnar (APS Gifted Program director), Frank Gallegos (3533), and students Joe Worden and Elizabeth Chambers.

credit from their school for their participation.

The intern program requires that students serve without pay at a local firm for 16 weeks or an academic semester. However, at Sandia, the students spend from one to three weeks at a series of Sandia organizations and similar companies. This enables the students to gain exposure to

various types of engineering and scientific fields by spending time observing the activities that have been especially planned for them.

Soila Brewer of Personnel and General Employment Division 3533 is Sandia's coordinator. "The program hasn't been hard to sell at all" says Soila. "Everyone has been very supportive. Jan Bodnar, Director of the APS Gifted Program, approached Sandia about it six months ago. Frank Gallegos [Supervisor, 3533] liked the idea and appointed me to the project."

This last semester, three students participated in the program. During eight weeks of the 16-week program, the students were assigned to different departments at Sandia to observe the various professions in science and engineering. The organizations involved were 1240, 1260, 1540, 1820, 2110, 3640, 9720, and 9740. The remaining eight weeks were spent at the other participating companies: AFWL, BDM, and PNM.

"Sandia volunteered to coordinate the APS pilot program with other participating companies and agencies in order to give the students exposure to the professional working environment" says Frank Gallegos. "Sandia strongly supports the education of our local youth to pursue careers in those professions that affect our company's future."

Comments by the "sponsors" at Sandia and the other participating firms have been quite favorable. They feel it is a very useful program to the firms and the community. All are in support of continuing the Career Exploration Program.

"Presently, only three high schools are involved but the program will be expanded to all 10 high schools in the Albuquerque Public School system" adds Soila. "Next semester, which will still be part of the pilot program, we'll probably have three more students."



CITY COUNSELORS visited the Sandia Irradiation for Dried Sewage Solids (SIDSS) facility in Area III to hear from Willis Whitfield (left) and Jim Pierce (next left; both 9453) how Albuquerque's sewage sludge could be converted from a waste to a resource. Counselors present were (from right) Nadyne Bicknell, Fran Hill, and Pat Baca. Several local media people also attended the briefing.

Retiree Hikes Grand Canyon in 81 Days

by John Shunny (Ret.)

Five years ago, LAB NEWS reported on George Steck (now retired) and his 42-day hike in the Grand Canyon of the Colorado. That hike took an awful lot of time and effort, and it seemed reasonable to expect George to leave well enough alone.

But no, and now LAB NEWS can report the saga of a 57-year-old Labs retiree who has just completed an 81-day odyssey through the entire length of the Canyon, all the way from Lee's Ferry (just below the Glen Canyon Dam) to Lake Mead, some 280 river miles downstream, some 800 aching miles by foot with a 50-pound pack. Another Sandian, Don Peterson (2424) and his wife Adair accompanied George during the first three weeks.

On the day before Thanksgiving, George and his companions emerged upon Lake Mead, having departed Lee's Ferry on Sept. 5. Between start and finish, George had traversed some of the most rugged and untracked terrain remaining in this country, climbing up the thousand-and-one side canyons, scrambling down, rarely enjoying the luxury of flat country. Canyon hiking is first and foremost an exercise in crossing the grain of the prevailing terrain.

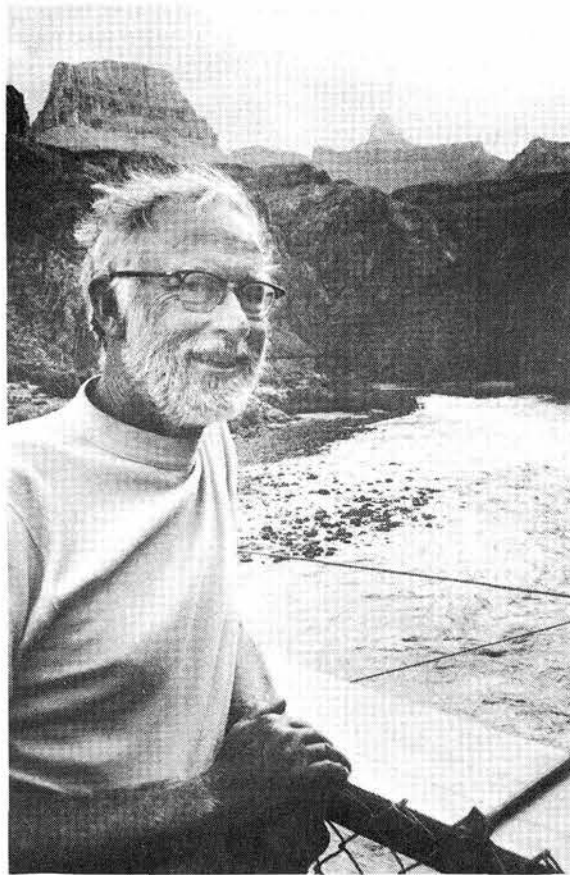
In September, canyon temperatures exceeded 100 degrees. In November, the final weeks of the trek brought rain and temperatures 20 degrees below normal. Sleeping bags were damp, clothing never dried completely. Conditions were, well, miserable and the hiker finds himself asking, "Hey, this is fun?"

Further, while their diet of dehydrated food offered variety — beef stew, clam chowder, chicken with chile — there was increasing talk as Thanksgiving approached of the "turkey at the end of the tunnel." George reports, "I longed for warm water for washing and bathing. And a breakfast of unmanipulated bacon and eggs."

Fortunately, or unfortunately, depending upon point of view, Grand Canyon hikers have few opportunities to bail out when the going provides something less than minimum enjoyment. What you are dealing with is, essentially, a 300-mile gash in the earth, ten miles wide. The Colorado River, cold and fast, snakes through the gash and, should you wish to cross it, there is but one crossing in those hundreds of miles (at Bright Angel Creek below the South Rim). It's true that boats go down the Colorado, and you might be able to hitch a ride out, but the other aspect of Canyon hiking is that most of it is done away from the river because the canyon walls frequently descend into the river itself, leaving no bank upon which to walk.

In any event, the Steck party (George, brother Allen and friend Robert Benson) gave no serious thought to bailing out, even when conditions were miserable. "By that time we all had too much of an investment in seeing the trip through to its completion — a physical, mental and emotional investment," George recalls.

Provisions for the 81 days had previously been placed in a series of caches along the route. Each cache consisted of a five-gallon metal can with food, water, gasoline (for the stove), clothing and topographic maps



RETIREE GEORGE STECK spend 81 days hiking the entire length — some 800 walking miles — of the Grand Canyon.

of the next segment of the canyon. And tequila and beer. Don Mattox (0300) and this writer took cold weather gear and some fresh food to the expedition in late September at Bright Angel Creek (Phantom Ranch).

Benson, at 26 the youngest member of

the party, suffered the only serious difficulties during the hike, first coming down with Giardia, a gut-busting parasitic disease endemic along the Colorado. This cleared up after Benson received medication at the Bright Angel ranger station. Later, while hiking, a handhold gave way and Benson fell about 30 feet. He was badly shaken and completed the final weeks limping and in pain. (After Benson's return to Albuquerque it was determined he had hiked the last few hundred miles with fractures in his pelvis and back.)

That magic day ultimately arrived when the party was able to view the Colorado River widening and emptying into Lake Mead. Their final cache was special too: it contained an inflatable boat with which the group would cross from the north to the south side and, after a few more miles, would meet Helen Steck, George's wife. But someone had tampered with the cache, and the pump didn't work, and the hikers didn't warm to the notion of blowing the boat up with lung power. They were mulling over the problem when fate intervened in the guise of a friendly boater who happened by, offered a lift and, shortly, George and company were being congratulated by Helen at Pearce Ferry on the south shore of Lake Mead. On Thanksgiving Day, they had a more extended celebration at the Bright Angel Lodge on the Grand Canyon's South Rim.

"Never again," says George ... but then a certain tentativeness. "Well, maybe ... in another five years."

Legal Notices

The following legal notices are required by court orders to be published in two consecutive issues of the Sandia LAB NEWS.

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW MEXICO

EDWARD C. NEIDEL, JR., WILLIAM B. MINSER and CORA S. CALLENDAR, individually and as class representatives,

Plaintiffs,

vs. No. CIV 81-0616 HB

SANDIA CORPORATION, a corporation, and PRUDENTIAL INSURANCE COMPANY OF AMERICA, a corporation, individually and as trustees,

Defendants.

NOTICE

To all Sandia employees, retirees and former employees:

YOU ARE HEREBY NOTIFIED that two putative class action lawsuits, *Neidel, et al. and Olheiser, et al. v. Sandia Corporation, et al.*, Nos. CIV 81-0616 HB and CIV 81-0617 JB are pending in the U.S. District Court for the District of New Mexico. The relief requested is the return of mandatory employee contributions to Sandia's retirement plan and to require Sandia to make additional contributions to the retirement plan based upon alleged breach of contract, fraud and wrongful conversion. These actions have never been certified as class actions by the Court.

The parties have agreed that these actions will be voluntarily dismissed without prejudice by an order of the Court on or after February 4, 1983.

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW MEXICO

WILLIAM W. OLHEISER, JR. and ANTHONY PARISI, individually and as class representatives,

Plaintiffs,

vs. No. CIV 81-0617 JB

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Fun & Games

Women's Golf — The Sandia Women's Golf Association is again getting into the swing of things. With a new slate of officers led by Laurene Dubuque (DOE), the group is dreaming of holes-in-one and fantastic l-o-n-g drives down the fairway. If such dreams intrigue you, join the group at the membership drive in the Eldorado Room of the Coronado Club on Feb. 9 at 4:45. And watch for more info on the upcoming Spring Swing.

* * *

Men's Softball — With spring just around the corner, it's time to think about softball. An organizational meeting for managers, coaches, the team organizers will be held Feb. 22 at 4:45 in the Eldorado Room. The meeting will cover league fees, starting dates, rules, election of officers, and the direction the league will take this year. Bring your ideas to the meeting and trade them for free refreshments.

* * *

Women's Softball — All women interested in playing on or organizing a team in the Sandia Women's Softball Program should attend the meeting on Feb. 24 at 4:45 in the Eldorado Room. It will cover starting dates, fees, league rules, etc. Last year's team managers should attend the men's meeting on the 22nd as well (see above). For more info, call league president Charles Ringler on 4-4776 or Recreation Manager Tom Lenz on 4-8486. Refreshments will be served.

* * *

Cross-Country Skiing — There are a few openings in the final beginner level X-C ski clinic of the season. The indoor portion is on Feb. 22 from 7-8:30; the outdoor session is on Feb. 27. Call Tom Lenz for signup.

* * *

Snow Camping — Some of you have spent a day with him, but could you stand a whole weekend of Klaus Weber? He'll be taking a group of 15 people on a winter-camping-on-skis outing on March 26-27. Those hardy types who get pleasure from sleeping in the snow should call Tom Lenz on 4-8486 for details.

* * *

X-C Skiing the Moonlight — For the more romantically oriented, Klaus Weber will lead a leisurely moonlight trek in the Sandias on Feb. 27 at 6 p.m. Participation limit is 15, so call Tom Lenz right away to sign up. Only those intending to have a good time need call, says Tom pregnantly.

* * *

Telemark Clinic — Klaus Weber will teach this most graceful of cross-country ski techniques. It's on Feb. 20, and it costs \$10. Call Tom Lenz for details and signups.

* * *

Our (Seldom Immaculate) Town

Sandian Has Trashy Interests

- Go ahead and dump it — everyone else does.
- Go ahead and dump it — it's not our property.
- Go ahead and dump it — someone picks up here anyway.

Those three attitudes — and the actions that accompany them — are all too abundant, even among otherwise aware adults. But both the attitudes and the trash accumulations that result are subject to change. At least that's the goal of the Clean Community Committee instituted by Mayor Kinney and including a Sandia representa-

tive among its 70 members. Similar communities, arms of the Keep American Beautiful program, already exist in 196 communities in 35 states.

The Sandian is Cleavord Giles (3422). He represents Sandia on the Kirtland subcommittee as well as on the committee as a whole.

"I'm *not* looking for piles of trash. If you can see those, call Telecon. What I *am* looking for are innovative ideas about changing the three 'It's OK to dump here' attitudes, whether here on the Base or in residential areas. If you come up with some good ideas, give me a call on 6-3466."

Therapeutic Massage — One of the most popular classes ever in SERP (Sandia Employee Recreation Program) will be offered again in March. Dates are March 1, 8, and 15; time is 7-9 p.m.; place is Room B5 of the Coronado Club. Bob Morgan, a registered massage therapist, teaches the rank beginner how to soothe those aching muscles. Couples only. Call Tom Lenz now — the waiting list from previous classes has this class nearly filled.

* * *

Little League Baseball — Registration continues in the KAFB Youth Center. Try-outs and player draft are set for late February. Cost is \$15 for the season.

* * *

Youth Soccer — KAFB Youth Soccer Club teams have filled their rosters for players born between 1973 and 1977; future registrants will go on the waiting list. But players born in 1969 and 1971-1972 are still needed. Registration fees are \$12.50; bring a copy of the birth certificate and a photograph for each player.

* * *

Masters Race/Fun Run — The first ever Fairground Run Around is set for Feb. 13 at 10 a.m. in front of the Fine Arts Gallery at the Fairground. The race covers five miles, the fun run 2½. Entry fee is \$5 with T-shirts to all finishers. Entrants, male and female, must be 40 or over. Registration forms are available at the LAB NEWS office, MO 125.

* * *

Racquetball/Fitness — One of the well-established racquetball clubs and a well-known fitness center in town are offering Sandians and DOEans a reduced price for membership. Again, call Tom on 4-8486 for further info.

* * *

Aquatics — The KAFB Aquatic Club welcomes new competitive swimmers from six to 60. Monthly dues are \$10. More info from 4-9975.

* * *

Rafting — Anyone interested in rafting The Big One — down the mighty Colorado through the Grand Canyon — this summer? Get in touch with Mark Percival (9734), who will see whether planning such a trip is worthwhile.



RIBBON CUTTING CEREMONY recently by Brig. Gen. Stanford Brown, Commander, Field Command, Defense Nuclear Agency, and President George Dacey opened a new conference room area for FCDNA at Sandia Labs. Room 178 in Bldg. 836 will be used by FCDNA liaison officers conferring with Sandia people.

MILEPOSTS

LAB NEWS

FEBRUARY 1983

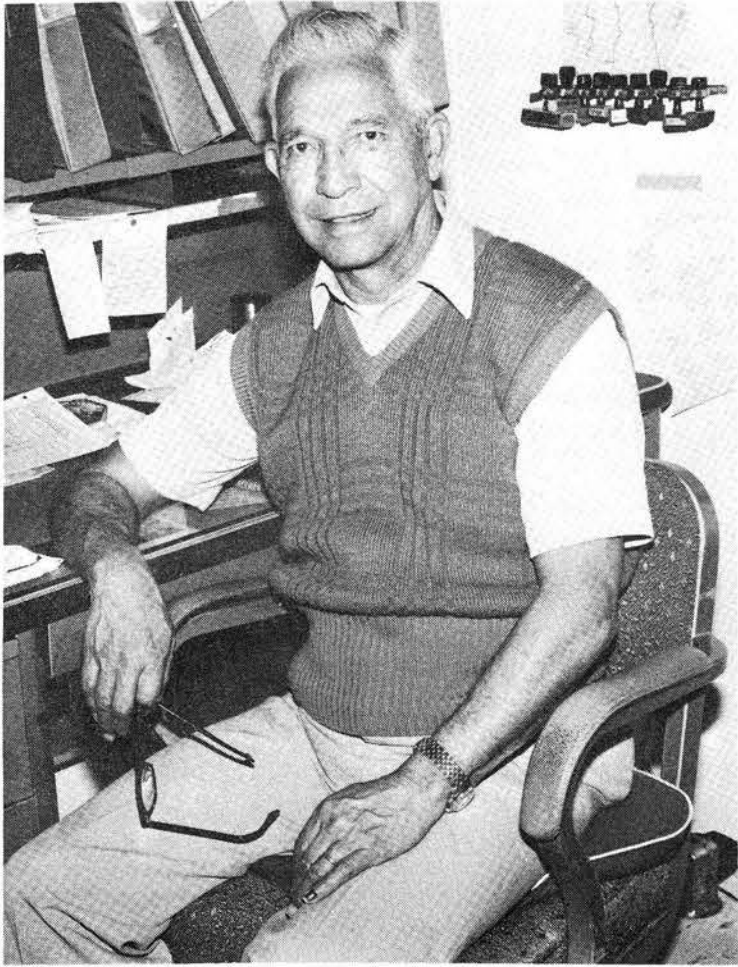


Barbara Stearns (3311) 10



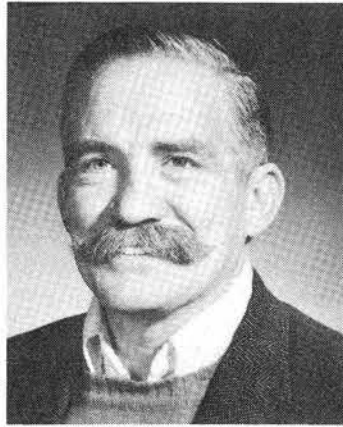
Vernon Easley (3630)

25



Bernardo Gallegos (3741)

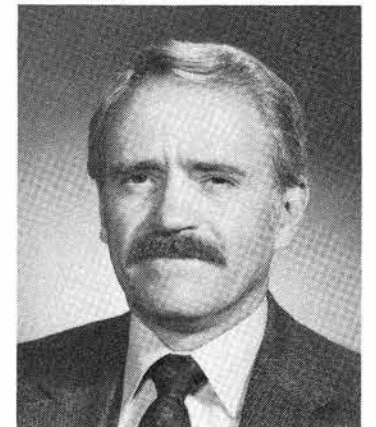
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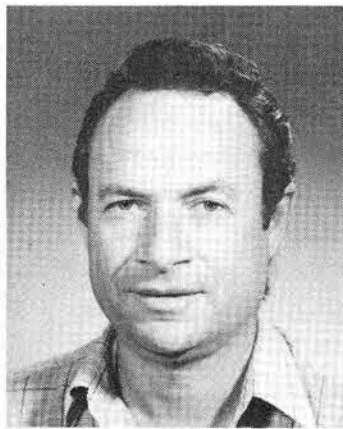
Harold Gough (7551) 15



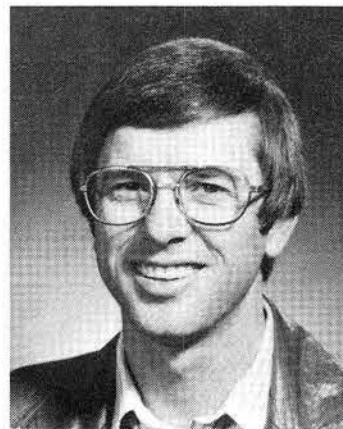
Warren Merritt (2335) 35



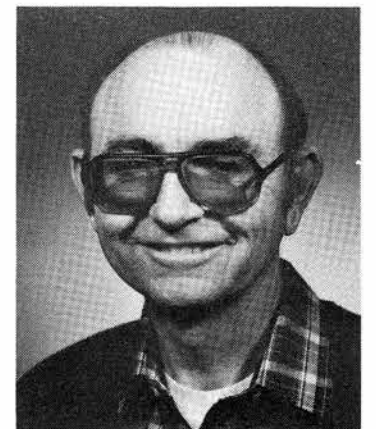
Jim Martin (3430) 20



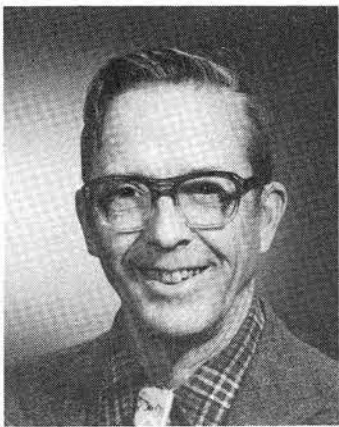
Bob Silva (9323) 15



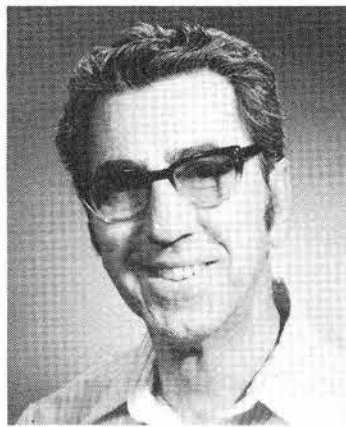
Steve Burchett (1521) 15



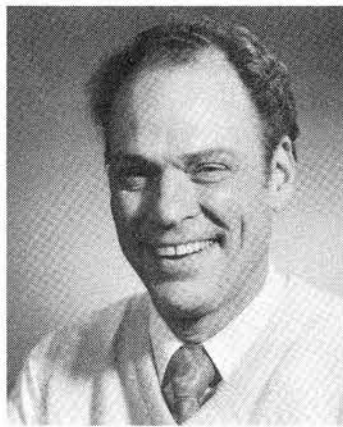
Harkey Boling (3155) 25



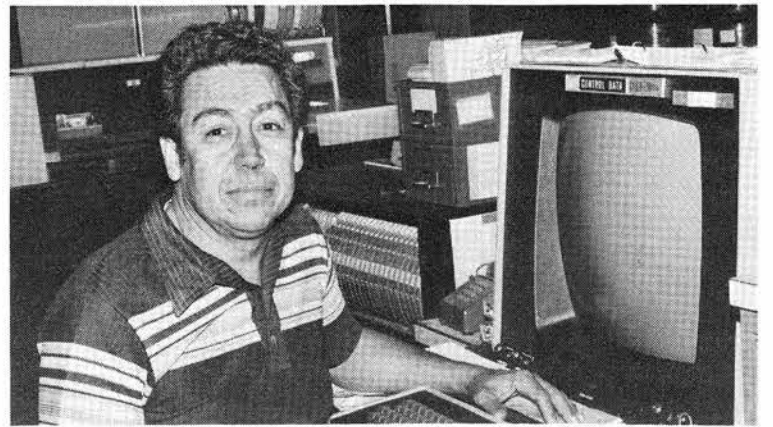
Paul Adams (7531) 35



John Stathis (2625) 25



Harry Fisher (7385) 25



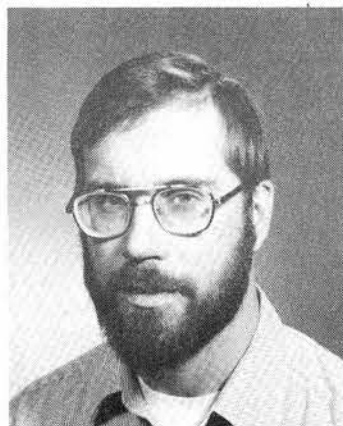
Audie Tenorio (7522)

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Bill Goldrick (0323)

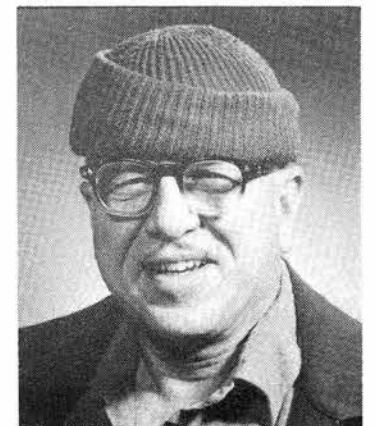
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Mike Bukaty (0311) 10



Wayne Young (1621) 20



Key Hykes (3611) 25



Favorite Old Photo

Prairie farming in eastern South Dakota in the 1920s wasn't an easy life, but there were occasional simple pleasures. This photo shows my Dad, Ray Keiner (second from left) with two uncles and a friend after a successful duck hunt. Except for service in WWI, he spent his entire life on the farm and hunting was his favorite pastime. Dad died about 25 years ago. (Joe Keiner — 1423)

JUNK•GOODIES•TRASH•ANTIQUES•KLUNKERS•CREAM PUFFS•HOUSES•HOVELS•LOST•FOUND•WANTED•& THINGS

CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday. Mail to: Div. 3162 (M0125).

RULES

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

MISCELLANEOUS

DOBERMAN, 1½ yrs old, friendly but good watchdog, shots, neutered male. Moss, 268-7604.
PIGEONS, flying & show rollers, reds, blues & Torts, 10 at \$5 ea. Edrington, 881-2395.
BALLOON, Piccard AX6S, ready to fly, includes all equipment & instruction for non-pilots, \$3200. Hankins, 293-6031.
WASHING MACHINE, Frigidaire, \$75. McGuckin, 299-1342.
UKC American Eskimo puppies, male or female, \$150 each, playful, gentle. Rimkus, 292-1258.
HOFFMAN spinet piano, \$650. James, 294-6837.
KING waterbed: mirror headboard, frame, mattress, liner, heater, mattress pad, bedspread, will install, \$300. Baczek, 299-8793 or evenings call 266-1003.
HANSEN ski boots (jr.), size 12, \$30; 19" Yamaha motorcycle front wheel assembly, \$30. Gonzales, 836-3039.
RECLINER CHAIR, black naugahyde, wood arms, \$75; fireplace tube grate, Sears, \$12. Molecke, 296-5850.
DINETTE SET: white table top (36x60) w/leaf, 4 chairs w/gold cushions, \$50. Thome, 296-8173 after 5.
GERRY cuddlepack baby carrier; Graco baby swing; 1 set cafe doors for 30" doorway. Follstaedt, 299-5941.
SKI RACK, \$10. Baxter, 344-7601.
POOL TABLE, full size, \$100. Maddox, 281-5683.
APPLE II Plus personal computer, 6 mos. old, used very little, \$2200 in-

vested, price negotiable. Eley, 296-3185.
BED, twin size, w/mattress. Moss, 296-4109.
MEMPHIS electric guitar, 6-string, Les Paul copy, w/hard locking case, \$200. Reger, 268-9358.
SPINET Cable piano & bench, \$600. O'Bryan, 822-0924.
CRIB, Simmons dbl. drop sides; Singer Genie port. sewing machine; braided rug, 105"x68", brown & white, \$50 each item. Sprankle, 822-0326.
SOFA, 80", 6 mos. old, rust corduroy fabric w/white pindots, \$300; full sleeper sofa, black & white plaid Hercules, \$175. Spears, 266-9782.
TWO dbl. bed frames w/headboards & footboards, 1 cherrywood spindle, \$125; 1 maple \$100. Stackpole, 822-8448 after 6.
GULBRANSEN organ, console model transistor E, \$950. Chavez, 881-2711.
19" B&W TV, 1 yr. old tube, \$15 or best offer. Prior, 296-2930 after 5.
45-GAL. aquarium w/all accessories including fish, delivered & set up on its own stand, \$150. Mowry, 292-6226.
CAR RADIO, mini-chassis, AM-FM Fujitsu, w/buttons to pre-set five stations, \$40. Harris, 256-1642.
AUTOMOTIVE ITEMS: chains, tires, exhausts, engine parts, trim for '66-67 Mustang & Cougar, 124 Spyder, BMW 320, 15c-\$15. Phipps, 299-8490.
10-SPEED bikes; elec. guitar w/amplifier; 2 acoustic guitars; 2 motor-cross racing type bikes, make offer. Arana, 299-1214.
SPEAKERS, Ultraliner 3-way, \$125; child's Hanson ski boots, size 5, \$40. Campbell, 294-6000.
FISCHER Europa 99 cross country skis w/bindings, 215 cm, \$125; soldering iron, \$4. Klett, 884-8354.
AM-FM stereo, turntable, 8 track player, recorder & 2 speakers, \$70 or best offer. Morrison, 299-4757.
HAMMOND ORGAN, church model C2, JR-20 speaker, \$950. Biffle, 293-7043.
ROCKWELL model 8 motorized table saw, complete w/stand, rip-fence, mitre gauge, guard & combination blade, \$85. Allen, 296-6453.
GOLD couch & love seat, reversible cushions, matching corner piece & corner table; 2 chairs, (1 swivel rocker), \$650. Montoya, 881-6898.
HAM STATION, complete: slow scan

monitor & camera, books, keys, filters, antenna, everything goes, \$1000. Cochrell, 298-2068.
SEARS washer, HD, white, 2 yrs. old, \$250; vinyl padded chairs, \$40 ea.; console stereo, \$30. Price, 821-0342.
GE refrigerator-freezer, white, 15 cu. \$100. Moulton, 298-2511.
FUR COAT, Lou Nierenberg original, man-made, full length, size 10, value \$225, for \$75. Treadwell, 884-4221.
TWO pair oxfords: one black, one brown, size 10½, \$10 ea. Smith, 299-6873.
GRAVEL, free, 10 yds. landscape gravel, you haul. Beckmann, 296-1829.
ORIENTAL lamp table, \$30; Duncan Phyfe lamp table, \$20; Oriental coffee tables, cinnamon colored, \$50; chair-ottoman, \$35. Chirigos, 888-3474.
SAN MARCO ski boots 10s, Salomon bindings w/brakes, boot tree, Moon boots, wine carrier, (after the weekend). Bailey, 294-4218.
POOL TABLE, 8' Sears w/accessories, \$100. Tollison, 821-3980.
BATES windshield, clear, handlebar fairing type, came off Yamaha 650, but adjusts to fit most bikes, \$45. Mooney, 299-1774.
.22 PISTOL in leather case; .22L rifle, Winchester, in leather case. Perea, 255-7831.
UTILITY TRAILER, 5'x8' bed w/36" stake sides, 5000 lb. axle, ¾ ton springs, 3" structural channel frame, fenders, lights, \$425. Snelling, 292-7460.
PAIR 8.55-14 steel studded snow tires, \$30; 1 F78.14 Polyglass; 2 bowling balls w/cases; bookcase headboard, \$25. Mills, 299-2130.

TRANSPORTATION

'82 SUBARU 4-wd stn. wgn., GL, \$6900. Schmitt, 821-8268.
'68 NOVA, 6-cyl., 4-DR, AT, PS, recent overhaul, new seat covers & battery, \$900. Montoya, 881-6898.
'76 HONDA Accord, front wheel drive, 5-spd., new tires, 72K miles. Sandoval, 293-6261.
'73 CHEVROLET Impala stn. wgn., V8, AT, AC, power, 114K miles, \$775. McGee, 299-0661.
'81 CITATION, AT, PS, PB, low mileage, fog lights, cassette stereo, rear window def., cloth int., \$5500. Eley, 296-3185.
'71 CHEVY Impala, R&H, AT, AC,

\$695. Chaves, 892-9765.
'75 BUICK Skylark S/R, one owner, AT, PS, PB, AC, bucket seats, low mileage. Houghton, 299-3386.
'65 CHEVY Biscayne 283, AT, new radials & battery, 50K miles, \$1500. Jeffery, 255-3523.
'69 FORD Falcon, 2-dr., std. trans., \$800 or make offer. Binder, 299-2937.
'74 DODGE Coronet, PS, PB, AC, low mileage, 58K miles, \$1300 or best offer. Perea, 898-0433 after 5.
'81 CHEV. pickup, Scottsdale, short bed. O'Hare, 1-864-3474.
'69 COUGAR convert., 3-spd., 350 Windsor V8, 4bbl Holley, Edmunds intake, dual exhaust, \$2000 firm. Longfellow, 299-7062 after 5:30.
'81 MAZDA GLC 4-dr. sedan, 4-spd., front wheel drive, AM-FM, 11.5K miles, \$4995. Sprankle, 822-0326.
'74 DODGE Dart Swinger, AT, PB, PS, stereo, \$2000. Harrell, 281-3251.
'77 CADILLAC Seville, leather seats, moon roof, metallic bronze, below book. Anderson, 293-2490.
'76 PEUGEOT 504D sedan, sun roof, power windows. Eiffert, 299-3847.
'78 BUICK Regal, white w/red leather interior, fully loaded, needs minor touch-up, book \$4800, asking \$3950. Bronowski, 821-3760.
'78 BULTACO Sherry T, 1200 miles, \$800. Cunningham, 344-9841.
'76 CHEVY VAN, one owner, customized, ¾ ton, AT, AC, AM-FM cassette, CB, cruise, radials, captains chairs, etc., \$3900. Tollison, 821-3980.
'80 TOYOTA Supra, AT, AC, PB, PW, sunroof, AM-FM cassette w/equalizer & power amp; '79 Harley-Davidson Sportster, 1000 cc, stock, 6000 miles. Tinker, 293-4242.
MODEL A Ford, 1929 Tudor sedan, \$3800. Trompak, 298-6671.
'60 CHEVY pickup, 6-cyl., 3-spd., new paint, white spoke mag., w/new tires, new seat covers, \$1850. Padilla, 836-2279.
'80 DASHER wgn., FWD, AT, 20K miles, extended warranty through Nov. '85, pay off existing loan. Baca, 293-8710.
PENTON 400 six spd., 2 tanks, Metzler tires, \$650. Boruff, 298-4365.
'70 PONTIAC Catalina 2-dr. HT, \$450. Olson, 293-6078.

REAL ESTATE

ELEPHANT BUTTE mobile home lot,

\$6000 cash only, all utilities available, city sewerage, approx. 55'x140'. Stephenson, 836-4260 after 6.

WANTED

FACTORY manuals for '65 Mustang. Baxter, 344-7601.
SHARE luxurious NE home w/2 young men. Schmidt, 821-3190.
A TICKET or tickets for NCAA basketball tournament final four. First 2 games or final 2 games or both. Johnson, 268-0389.
AWNING for travel trailer. MacInnis, 848-1628.
6 to 7 HP working outboard engine. Horton, 883-7504.
HOBIE CAT 16' catamaran w/trailer. Snelling, 294-5751.
GLOVES, evening, elbow length black, size 7 ring finger. Still, 299-8825.
POLAROID CAMERA, model 110A or 110B. Mattox, 821-3945.
WISH to rent 2-3 bdr. house in NE or SE. Tomek, 292-3041.
SET OF TICKETS to NCAA basketball tournament. Nam, 293-6558.
NOV. 1982 issue of "National Geographic" and Oct. 1982 issue of "People" magazine. Rogers, 256-0066.
USED public address system for lg. meeting rm. w/audience of 50 people, must be portable. Leeman, 299-9149.
TWO or FOUR tickets for NCAA basketball final four games. Brown, 873-0401.

WORK WANTED

LEAF raking, deep raking, roto-tilling, mowing, lt. hauling, odd jobs, estimates. Tom Edrington 881-2395, Paul Holt, 294-6928.
HOUSE & apt. painting, UNM student paintshop, estimates, references. Peter Shunny, 266-0266.
STUDENT w/pickup wants hauling jobs. Paul Prew, 296-3815.

SHARE-A-RIDE

CAR POOL, Taylor Ranch to Area I, 8-4:30, 3 persons looking for a fourth. van Berkel, 897-2541.

FOUND

SET of keys in NE heights, describe. Martin, 299-3004.
IN BLDG. 822-conf. rm. on Jan. 3: a men's large ski jacket, describe to Anderson (4-2098) to claim.

T-Bone Steak Tonight

TONIGHT at Happy Hour, a group called the Apple Mountain Band plays fine country and western. Several of the musicians in this group also work with the Watermelon Mountain Jug Band. Dinner is a spectacular 16-oz. T-bone steak, grilled to your specifications and served at your table with all the trimmings. Price is \$8 for adults, \$4 for a smaller version for kids. Call the Club office *right now*, 265-6791, about reservations.

* * *

TOMORROW is Variety Night, and the evening features a live production of the "Dracula Magic Show" by the Bunraku Puppet Theatre. The Bunraku is an adaptation of a Japanese art form developed in the 17th century where puppeteers dress in black and work against a black background so they're virtually invisible as they manipulate life-size puppets. The "Dracula Magic Show" was performed last Halloween at the KiMo Theatre and received favorable local reviews plus raves and screams from the kids.

A selection of sandwiches and pizza is available at 5 p.m., the puppet show starts at 6:15, and a showing of Walt Disney's cartoon classic, *Robin Hood*, follows. Admission is \$1 for adults, 50 cents for children under 12.

* * *

NEXT FRIDAY, Feb. 11, a super-band called Together holds the bandstand playing a variety of styles. Hank the Chef goes Italian on the buffet, serving spaghetti with white clam sauce, lasagna, meatballs, anti-



VISITING SANDIA LABS last month for technical briefings was U.S. Representative Bill Richardson, center. His hosts were EVP Al Narath and President George Dacey.

pasto, salad, and garlic bread. Cost is \$4.75 for adults, \$2.50 for kids.

* * *

THE BIG ONE this month is the Sweetheart Ball on Saturday, Feb. 12. The Billy Morris band, which has worked the larger local hotels recently, brings a big-band sound and a melodic style to the Club for this candle-lit evening. It's a dress-up affair with a served dinner featuring your choice of braised prime rib of beef or lobster thermidor. Tickets are \$10.25 and should be picked up early.

* * *

CORONADO SKI CLUB meets Tuesday, Feb. 15, at 7 p.m. in the ballroom. E.R. Sweetser, Lovelace Medical Center orthopedic surgeon (who also skis), will discuss ski injuries. The agenda includes a movie and door prizes.

* * *

TRAVEL DIRECTOR Shirley McKenzie (2432) announces some money-saving improvements on two previously announced tour packages and a new Caribbean cruise.

The first improvement is a new price for the Hawaii trip scheduled April 16-24. You can save \$45 off the cost if you pay for the airline ticket portion of the tour package by Feb. 7. The new prices are \$535 if you stay at the Beachcomber, \$607 if you stay at the

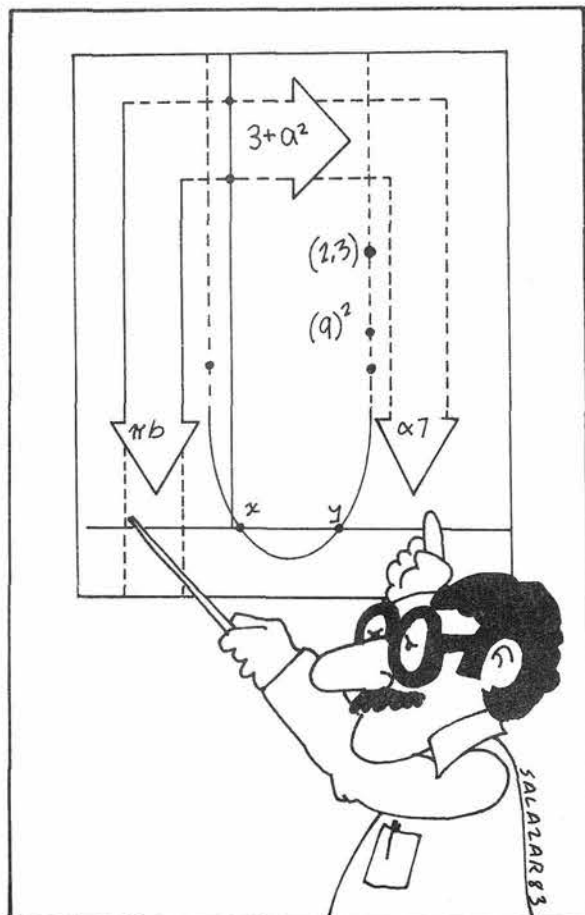
Outrigger. Shirley also has some other options for the trip scheduled April 16-24. You could spend a couple of nights in Honolulu, for instance, then move on to Kauai or Maui.

Space remains on the San Diego/Disneyland tour scheduled March 26 - April 2 or April 4 - 9. This is the addition of three extra days on the second trip at the same price — \$328.

The new Caribbean cruise is scheduled Oct. 28 - Nov. 5 on the Norwegian cruise ship *Starward*. Ports of call include Jamaica, Grand Cayman, and Cozumel on the Mexican Gulf coast. Price is \$1095 (double occupancy). The *Starward* is a luxury cruise ship operating out of Miami. The package price includes air fare, hotel in Miami, transfers, baggage handling, and the cruise.

* * *

LUNCH at the Coronado Club continues as the best buy on Base and continually improves. In addition to daily specials, the Club announces a new Monday special — the Rio Grande Burrito, either green chili and beef or bean, for \$1.75. A wide selection of soups, salad, and sandwiches is available Monday through Friday from 11:30 to 1. The Club is open to anyone on Base.



So that's how the new bi-weekly payroll system works. Any questions?

Retiring



Luke Heilman (7400)



Cecil Jordan (0132)



Lewis Larsen (9721)