



SILVER ANNIVERSARY FOR TTR—Twenty-five years ago, on Feb. 4, 1957, the first test operations were conducted at Tonopah Test Range. Since that time, thousands of prototype bombs, rockets and artillery shells have been tested at TTR. In addition, it has accommodated many special projects including high-explosive experiments for Project Plowshare, gas balloon flights, and tests of conventional weapons for DoD. Many of the original crew of 32 who migrated from the Salton Sea Test Base are no longer active employees, but a few still are: Howard Austin (1126), B. G. Edwards (1131), Tom Earp (1137), Bill Moore (1171), Lloyd Young (1173), Curly Saxton (1556), Al Bolles (1587), Tom Stevenson (4311), and Gordon Hawley (4338). In this photo, we see the present TTR crew debarking from their favorite DC-9 after a dawn flight from Las

Vegas. Leaving the ship last, at the top of the stairs, is Range Manager Sam Moore (1170), then Ron Bentley, Dave Denton, Wayne Lathrop and Ben Sewell. In the last row, l to r, John Willems, Jim Enlow, Dan Tebbs, Mike Bakos, Russell Brown, Al Brazda, Dick Williams, Palmer Nelson, Dwight Barker, Hoot Gipson, Rick Orzel, Jim Van Meter, Andy Jones, Al Faychak and Leo Convisor. 2nd row, Steve Reynolds, Paul Roper, Bob Beasley, P. K. Goen, Don Anderson, Jim Clemons, Bill Moore, Ross Sinkey, Joe Bradshaw, Bill Kluesner, and Lance Wilson. 1st row, Norris Rose, Cecil Lang, Lloyd Young, Dave Greene, Mark Montavon, Ron Haines, Art Rodriguez, Ken Johnson, Gary Martinez, Henry Stuckert, Dave Schafer, Gene Arndt and Mick Cockrill. (Photo by George Bull and Diana Root, EG&G)

LAB NEWS

VOL. 34, NO. 3

FEBRUARY 5, 1982

SANDIA NATIONAL LABORATORIES • ALBUQUERQUE NEW MEXICO • LIVERMORE CALIFORNIA • TONOPAH NEVADA

Pu Container Licensed For Air Transport

A shipping container for plutonium that can survive a severe aircraft crash and resulting fire has been developed by Sandia and licensed for international use.

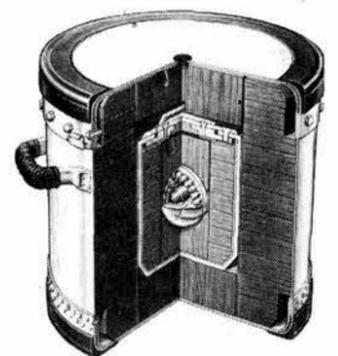
The cylindrical container—Plutonium Air Transportable Model 2, or PAT-2—weighs 70 pounds, is 14 inches high and 15 inches in diameter. Licenses permit transport of up to 15 grams of fissile plutonium or plutonium/uranium mixtures in solid form, including oxide powders, sintered oxide pellets, and metal.

PAT-2, developed with sponsorship from DOE's Office of Safeguards and Security, consists of a double-thick shell of

[Continued on Page Four]



PAT-2 PACKAGE
Plutonium Air Transportable Model 2



DESIGNER John Andersen and his partner, Zack Ortiz (both 1725), display components of PAT-2, aka the plutonium air transportable model 2. Tests have shown that PAT-2 can survive worst-case air crash and fire and will release no nuclear materials. It has been licensed for international use.

Afterthoughts

A question of perception--I received one of those survey forms from our state senator soliciting my views on what our problems are at about the same time as APD released its 1981 crime statistics for the city. Down on page two of the latter, one finds this: "There were 37 fatal traffic accidents in 1981, 58% of which were alcohol related."

That makes 21 people killed in alcohol related accidents. Surely, this has to be our paramount problem, yet most will read this and shrug, an it-happens-all-the-time reaction. But consider, if those 21 were killed in, say, a nuclear reactor incident what the resultant clamor would be, with protest marches, investigations, blue-ribbon committees and the like. What's the difference? If you're one of the dead ones, there is none. To the state senator who inquired, I would affirm that our first and absolute priority is to protect society from the drunk driver by whatever means is necessary. Education and rehabilitation is fine... but only after rigorous steps are taken to take and keep the drunk driver off the road.

* * *

Albert Einstein discusses the goal of education:

It is not enough to teach a man a specialty. Through it he may become a kind of useful machine, but not a harmoniously developed personality. It is essential that the student acquire an understanding of and a lively feeling for values. He must acquire a vivid sense of the beautiful and of the morally good. Otherwise he — with his specialized knowledge — more closely resembles a trained dog than a harmoniously developed person. He must learn to understand the motives of human beings, their illusions, and their sufferings in order to acquire a proper relationship to individual fellow men and to the

community.

These precious things are conveyed to the younger generation through personal contact with those who teach, not — or at least in the main — through textbooks. It is this that primarily constitutes and preserves culture. This is what I have in mind when I recommend the "humanities" as important, not just dry specialized knowledge in the fields of history and philosophy.

Overemphasis on the competitive system and premature specialization on the ground of immediate usefulness kill the spirit on which all cultural life depends, specialized knowledge included. ■

*js

Events Calendar

- Feb. 5—Sonny Rollins Jazz Concert, 8 p.m., Student Union Building, UNM.
- Feb. 5-7—Classics Theatre Company, "Taming of the Shrew," 5-6th, 8:15 p.m.; 7th, 2:15 p.m.; Popejoy.
- Feb. 8—Albuquerque Youth Symphony,

- 8:15 p.m., Popejoy.
- Feb. 9—Aman, international folk dance group from Los Angeles; 8:15 p.m., Popejoy.
- Feb. 13—Ella Fitzgerald and the NM Symphony Orchestra, 8 p.m., UNM Arena.
- Feb. 13—"Bailes Folkloricos con Miguel Caro," 7 p.m., Popejoy.
- Feb. 13—Albuquerque Jaycee's Track Meet, 7:30 p.m., Tingley Coliseum.
- Feb. 13—"Get Acquainted" Weekend Docent Program, refreshments, free admission, 2 p.m., Rio Grande Zoo Barn.
- Feb. 14 through March 6—Exhibit of artworks by students of Albuquerque high schools, Tues.-Sat., 11-4; Downtown Center for the Arts, 216 Central Ave. SW.
- Feb. 15—André Previn conducts the Pittsburgh Symphony Orchestra (Haydn and Rachmaninoff), 8:15 p.m., Popejoy.
- Through Feb.—"Nuevo México, Sí," musical drama (in English) of the history of New Mexico, La Compañía de Teatro de Alburquerque, Fri. & Sat., 8 p.m.; Sun., 3 p.m.; Nuestro Teatro (formerly Tiffany's), 3211 Central NE, 256-7164.

LAB NEWS

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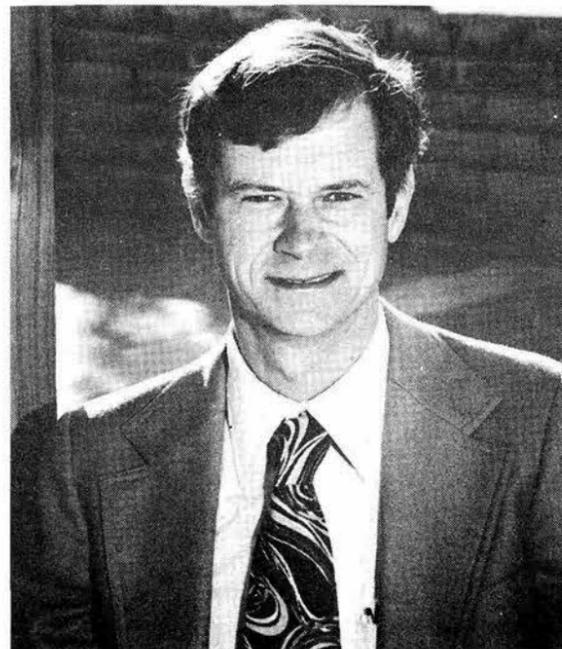
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Supervisory Appointments

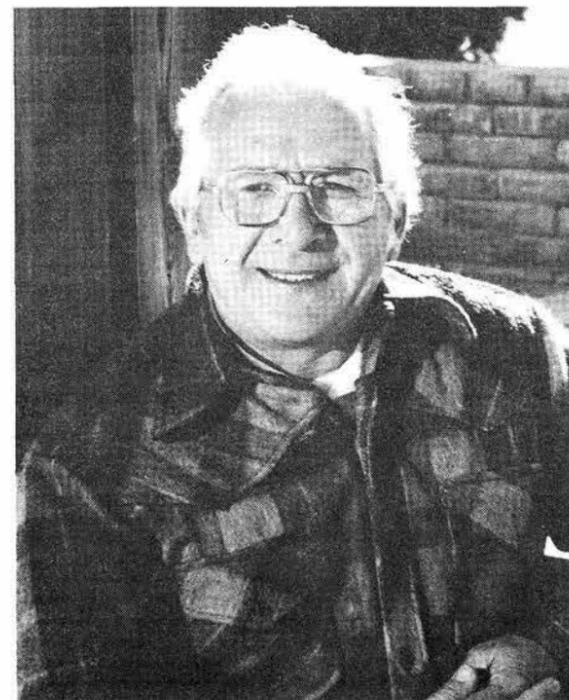


HOWARD McCOLLISTER to supervisor of Glass Formulation and Fabrication Section 1472-3, effective Jan. 1.

Howard came to Sandia in June 1979 as a process engineer in the development labs. He had previously been a senior research scientist with the Owens-Illinois Technical Center.

He earned his BS degree in ceramic engineering from Ohio State. His MS and PhD in materials engineering were both earned at the University of Michigan. Howard is a member of the American Ceramic Society.

He enjoys tennis, fishing, backpacking and working with Cub Scouts and Boy Scouts. Howard and his wife, Joanne, have four children and live in the NE heights.



JOE DALPORTO to supervisor of Hybrid Microcircuits Section 1471-1, effective Jan. 16.

Since joining Sandia in 1961, Joe has been primarily concerned with development of the microwelding process for joining components. He worked for Union Carbide's materials research department before coming to the Labs.

Joe is a graduate of the Erie County Technical Institute in Buffalo. He enjoys bowling and coaching in youth baseball and football leagues. He and his wife Ruth have four children and live in NE Albuquerque.

A Helping Hand For the Deaf-Blind

When a person is both deaf and blind, how do you communicate with him or her? The answer is called "fingerspelling," which makes use of the deaf-blind person's tactile sense, spelling out the letters of words with the hand and fingers while touching the person with whom you are communicating. (In actual practice, the deaf-blind person rests his hand upon your palm-down hand while you form the letters, e.g., "s" is a clenched fist.) It's not a speedy process, but the technique opens new vistas for those with this cruel affliction, estimated to number 15,000 in this country.

Winalee Beeson (8441), a recently arrived Sandian, has designed and built an artificial hand for use in fingerspelling that is now receiving national attention. Winalee, who arrived here Jan. 4, has just completed her master's thesis at the University of Oklahoma. It is titled "Design and Development of a Microcomputer-controlled Mechanical Hand for Deaf-Blind Communication."

Working on an earlier NSF project to design a new type of prosthesis, she became interested in creating a lifelike hand that could aid the deaf-blind in communicating. Winalee developed the project as a part of her master's thesis program and undertook its construction. She not only designed it but went to the university's machine shop and did the machining of the parts herself, including the construction of the pneumatic muscles.

Basically, the mechanical hand operates with a series of small electronic/pneumatic valves that regulate the artificial muscles and tendons. Using a microcomputer, the operator programs the hand to form the 26 letters of the alphabet, making the desired words one letter at a time upon command for the deaf-blind to touch. The hand worked so well that a former worker with the deaf and blind was able to understand the hand signals within just a few minutes, Winalee reports.

The primary application she sees for the hand is a learning tool for deaf-blind students. A teacher with a minicomputer terminal can operate several hands at once for a class. At present, teachers of the deaf-blind must work one-on-one. A similar system could be used to com-



DR. JOHN RHODENBAUGH came to Sandia Livermore in January to head the medical staff, replacing Dr. H. McLeod Patterson who retired at the end of 1981. Dr. Rhodenbaugh was in general practice in Ohio for three years in the 1950s. Following residency training in radiology, he practiced in the Oakland and Hayward areas for the past 25 years. His wife Rosemary and he are 20-year residents of Pleasanton and have two grown sons.



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WINALEE BEESON (8441) demonstrates her mechanical sign language hand. In use, the deaf-blind person's hand rests upon the outstretched hand.

municate with deaf-blind individuals via telephone lines. Looking into the future with further refinements and more research, Winalee believes it could also be adapted for use as a prosthesis for a forearm amputee, using the electrical signals from the person's muscles to control movement of the artificial parts. This would be done with the aid of a microcomputer worn by the amputee. Work in this area is already being done by Swedish researchers.

As a teaching aid, the hand and microprocessor could be mass produced for about \$3000 a set, according to Winalee.

She exhibited her project at NASA in Houston in a Johns Hopkins' competition, the National Search for Personal Computing to Aid the Handicapped, and received a 13th place rating in her five-state region. Since then, TV's "Good Morning America" has learned of the device and may air a segment about it on the network program.

Winalee has already turned the project over to the University of Oklahoma. She hopes further work will be done on it and that, eventually, a company will put it into production.

Take Note

Lutz Dahlke (8444) was honored with the Fellow Award of the American Society for Nondestructive Testing at the national fall conference held in Atlanta in October. The Fellow Award is given to those of "unusual professional distinction, who have made continued significant contributions to the advancement of non-destructive testing and evaluation." Lutz, a 12-year Sandia Livermore technical staff member, has authored more than 40 technical presentations and publications pertaining to NDT. In Society matters he has been an active member of the Penetrating Radiation and Personnel Qualifications Committees and has also served as a technical program chairman

for several ASNT conferences.

* * *

Seven Livermore Sandians took part in the Oakland Marathon on Dec. 6, four of them setting new personal record speeds for the 26.2-mile course. Qualifying for the Boston Marathon were Len Hiles (8151) and Bill Wilson (8341), each with a 2:56 time; John Martin (8151), 3:09; and Morey Reynolds (8161), 3:12. Also running were Tom Jefferson (8332), 3:14, and Dan Dawson (8453), 3:18. Participating in the half marathon the same day was Dave Bray (8466) who ran the 13.1-mile course in 1:38. More than 3000 entrants took part in the Oakland event this year.

Retiring



Lee Davies (8250)



Al Ford (8414)



Red Hollenbach (8521)

Take Note

Albuquerque's new Volunteer Aide Program is seeking volunteers to work with abusive and potentially abusive parents. Volunteers attend a 12-hour training session that prepares them to go into the homes of parents and work with them on a one-on-one basis, acting as friend, counselor, role model, confidant and teacher. Volunteers are asked to give from two to eight hours per week. Contact: Viki Pedroncelli, 256-9819.

* * *

The Polish-American Club of Albuquerque is sponsoring a Valentine Polka Dance on Saturday, Feb. 13, from 8 p.m. to midnight. Music will be provided by Nino & His Trio, and the dance will be held at the Albuquerque Garden Center, 10120 Lomas NE. A Polish cuisine is offered as well. Tickets are \$3/person and are available from the Polish-American Kitchen, 294-1574, Don Dube at 4-4485, Barbara Ruminski at 4-8038, or Ted Stetz at 4-4447.

* * *

Retirees take note: UNM's Dept. of Communicative Disorders is conducting a study of auditory perception in older people. Needed are females ages 67 to 80 and males ages 60 to 80. Participants take part in one hour of testing, which includes a hearing test and listening to tapes of distorted speech. All testing is done at UNM (BCMC) Hospital. Transportation can be arranged, and each participant is paid \$5. Call 277-5101 or 881-3885 and leave your name and phone number if you can help.

* * *

A release from the Highway Dept. states that work on the Juan Tabo interchange, already started, includes widening the overpass to six lanes and adding two new lanes to Juan Tabo between Central and Lomas. The work is scheduled for completion in October.

* * *

A book, "Cracks in Composite Materials," co-authored by E. P. Chen (4747) and G. C. Sih (Lehigh University), was published by Martinus Nijhoff Publishers, the Netherlands, in December 1981. Volume six of a series on mechanics of fractures, the book deals with the stress analysis of composite structures which develop crack-like flaws.



Although Henry Luce III (pointed) with pride at *Time's* attempts to make journalistic prose more readable, some of those attempts miscarry. Certain words have become trite by long overuse in the magazine: among them are *hone*, *fault* (verb), *draconian*, *tough*, *pragmatic*, *hike* (raise), *extremism*, *agony* (whether of Nixon, Cambodia, or the pound sterling), *strongman*, *muscle* and *clout* (in the political, fiscal, or military sense), *scenario*, *crunch*, *all-out*, and *charisma* . . . More justifiable, perhaps, is Luce's argument that "as the horizon of human experience expands, so does the need for fresh words and expressions." *Time* continues to supply the words through analogy, puns, blends, and unusual use of affixes: *apocalypticians*, *bewilderness*, *systemaniac*, *petropolitics*, *polycopulative*, *televangelist*, *growthmania*, *Koreagate*, *McLuhanoid*, *Tetonesque*, *culturecrat*, *phallocrat*, *thanatophilia*, *geronopolis*, *skyjam*, *Beatledämmerung*, *Disneyfication*, *Hammer and Pesikle*, *Queegsotic*, *outcumbent*, *grandpaterfamilias*, *urbanscape*, *barocco*, and *domemate*.

—Norris Yates in *American Speech*

Continued from Page One

PAT-2 Licensed

stainless steel with rounded end caps, riveted on the bottom and bolted on the top.

The shell is filled with an outer layer of redwood and an inner one of maple. Sandwiched between the wood layers is a quarter-inch-thick titanium container which spreads impact loads throughout the wood and helps dissipate heat generated by the payload.

Within the innermost wood section is a high-strength, iron-based super alloy sphere about the size of a baseball, closed by 20 bolts and hermetically sealed with a copper gasket. Nested within the sphere is an egg-shaped stainless steel capsule which holds small brass or aluminum canisters that contain the nuclear materials.

PAT-2 is an outgrowth of Sandia's PAT-1, a 500-pound package of similar design, which was licensed in 1978 for domestic air transport of 3½ kilograms (7½ pounds) of special nuclear material between fuel reprocessing plants, research and development sites, and fabrication plants.

"The development of PAT-2, however, presented an increased design challenge because this smaller package had to survive the same damaging environments during proof testing as its much larger predecessor," says John Andersen (1725), principal designer of PAT-1 and PAT-2.

"Titanium had to be substituted for aluminum as the loadspreader, for instance, and the new package required a super alloy containment sphere instead of one made of steel as in PAT-1."

Nuclear Regulatory Commission and Department of Transportation licenses were issued to PAT-2 after a group of packages survived proof tests, including impact, crush, puncture, slash, fire and immersion. The tests were severe. For example, the impact test called for impact

against an armor-plated, unyielding concrete target at speeds of more than 288 mph.

"Test results show that if a PAT-2 is involved in a worst-case air crash and subsequent fire, it will release no nuclear materials," John reports.

A key to the package's performance is use of wood as a major component. When wood burns, char—a carbon having insulation properties similar to the heat shield of a space vehicle—protects the PAT-2 inner vessels from the fire's heat.

The woods also have extremely good energy absorption characteristics. Redwood has the highest specific energy absorption rate (energy absorption ability based on weight or volume) of any shock-mitigating material; maple also has a high energy absorption capability.

"Nature has built these woods as extremely fine, well-constructed microscopic honeycombs," John says. "Man has not yet been able to duplicate their energy-absorption characteristics, even with the most advanced space-age products."

The NRC license permits use of the container in the U.S. to ship small amounts of radioactive materials used in nuclear safeguards technology research and development projects.

The DOT Certificate of Competent Authority permits use of the container by the International Atomic Energy Agency (IAEA) for shipment of radioactive samples from nuclear processing plants in Nuclear Non-Proliferating Treaty countries to the agency's assay laboratories near Vienna, Austria.

Assaying is designed to confirm that the nuclear materials are being used for electrical power generation and not for weapons fabrication.

* * *

John Gardner (3142) is directing the current Classics Theatre Company's production of Shakespeare's *The Taming of the Shrew* which opened last night at Popejoy Hall. The show runs tonight and tomorrow, with performances both evenings at 8:15 plus a matinee Sunday at 2:15. Sandians performing in the play include Phil Mead (400), Martin Peterson (3618), Pauline Bennett (4414) and Lou Baker (4247). For reservations, call 277-3121.

* * *

Sandians who are parents of girls who are in grades 8 to 12 will be interested in a Technical Career Workshop for young women being offered at UNM on Saturday, Feb. 27, from 8:15 a.m. until 3:30 p.m. The NM Network for Women in Science & Engineering is the sponsor, and the program includes a number of workshops and panels on technical fields. Object is to give the young woman a look at a number of potential careers. Register

your daughter by Feb. 15, and the local contact is Gerda Kreffft (3510) on 6-0668.

* * *

Eldon Boes (4724) was awarded an Inaugural Forecast Certificate on Jan. 4 by the National Weather Service. Eldon helped initiate daily solar energy forecasts which predict the amount of solar radiation to be received nationwide. The first forecast was made on Oct. 29, 1981.

Congratulations

Edward Matthews (OYOC from 2112) and Jane Hull, married in Greenwood, Miss., Dec. 19.

Eric Gurrola (OYOC from 1553) and Virginia Aceituno, married in El Paso, Dec. 26.

Joe C. (3154) and Debbie Costales, on the birth of twins—a son, Joseph Charles, and a daughter, Melanie Lynn, Jan. 18.

Steve (1246) and Pat Booth, a son, Michael Anthony, Jan. 26.

Paul Attermeier (1248) and Toni Lyons, a daughter, Lauren, Jan. 4.



Sandia Laboratories Policy Statement

As President of Sandia National Laboratories, I reaffirm our commitment to the principles of equal opportunity. In fiscal year 1982 we will continue our policy of providing equal employment opportunity in all personnel actions for all persons. This policy extends to all of our activities including recruiting, employment, compensation, training, advancement, promotion, transfer, and termination without regard to race, color, religion, national origin, or sex, and in accordance with the laws and regulations concerning age, physical or mental handicap, and disabled or Vietnam Era Veterans. Not only will we comply with all applicable laws, directives and regulations of federal and state governments and their agencies pertaining to equal employment opportunities, but also we will strive to develop the true spirit of these acts throughout the Laboratories.

The program of affirmative action to which we have pledged our efforts has had gratifying results. These efforts have advanced the cause of equal opportunity both in the Laboratories and throughout the communities with which we interact. Internally our progress is reflected not merely in the number of minorities and women on roll but in their greater representation in the professional and technical classifications. The ultimate objective toward which we continue to strive is the optimum use of our personnel resources. Externally, our efforts are focused on community involvement, support of educational institutions, and support of minority owned businesses.

Our Affirmative Action Program has been developed with the view of assuring good faith implementation of our equal opportunity policy by all Laboratories people. Information is regularly disseminated through policy statements, employee news media, and special meetings. Every supervisor is expected to be familiar with our Affirmative Action Program and to take an active positive role in maintaining and promoting our equal opportunity commitment.

J. R. Garcia, Director of Personnel, and staff will continue to monitor all equal opportunity activities and report to me on the effectiveness of our Affirmative Action Program, including recommendations for necessary action to ensure attainment of our objectives.

J. R. Garcia



FY 82 AA Program Is Set

Equal Opportunity and Affirmative Action Department 3510 is now distributing the FY 82 Affirmative Action Program to all supervisors and personnel representatives. In addition, President George Dacey's policy statement on Equal Opportunity and Affirmative Action will be posted throughout the Laboratories.

In FY 81, Sandia met almost all of its goals in hiring and promoting well-qualified minorities and women. George Banos, Manager of Equal Opportunity and Affirmative Action, credits line management for these accomplishments. Regarding the hiring suspension, Banos says, "The goals published in the FY 82 Program were established before the suspension, and although it will slow our momentum, Sandia's top management is firmly committed to Affirmative Action. There are still many positive external and internal actions that management can take that will help offset our inability to hire."

The SNLA Affirmative Action Program is available for review by all employees and applicants for employment. If you wish to see a copy of the SNLA Affirmative Action Program, contact your supervisor or personnel representative. Detailed plans for each Vice Presidency may be seen by contacting your Personnel Representative. Both SNLA and Vice Presidential Affirmative Action Programs and detailed background information are available in Division 3511.

All supervisors will be discussing the program with their employees. In Albuquerque, questions concerning it should be directed to Don Stone (4-9342) or H. R. Shelton (4-6281) of Division 3511.

Sandia Livermore recently distributed its FY 82 Affirmative Action Program. Paul Brewer, manager of Personnel and Accounting Department 8210, and Carol Verity (8216) are available for questions concerning the SNLL Affirmative Action Program.

Credit Union Reporter

Loan Policy Changes Announced

At the 34th annual meeting, Jan. 21, these board members were reelected: Red Turner (Credit Union Manager), Marvin Daniel (2113), and Robert Luna (4551). Paul Brewer (8210) was elected to replace Leo Gutierrez as Livermore representative, and John Anaya (3741) was reelected to serve on the Credit Committee.

Cash prize winners were: Donald Galager (8262), \$500; LeAnn Wells (family member account), \$300; and John Gieske (1552), \$200.

The new board elected the following officers: Elsie Wilkins (1000), President; Marvin Daniel (2113), VP; Red Turner, Treasurer; and Joe Maldonado (retired), Secretary. The Credit Committee reelected John Anaya as its Chairman.

* * *

The Board of Directors is pleased to announce these changes in the Credit Union's loan policy (effective Jan. 22):

1. Term loans are now available for 90 or 180 days on stock or life insurance (in addition to those already now offered on shares, certificates and student loans).

2. The maximum amount a member can borrow on a new automobile is 90% of the purchase price (instead of the previous 80%).

3. The maximum amount a member can borrow on a first mortgage is 80% of appraised value and, on a second mortgage, it is 80% of the appraised value minus the existing first mortgage balance; however, the maximum term remains at 60 months. The interest rate is 17% if the loan is paid off in 36 months or less, 18% if the term of the loan is between 37 and 60 months. (Previously, first mortgages were limited to \$15,000 and second mortgages to \$25,000.)

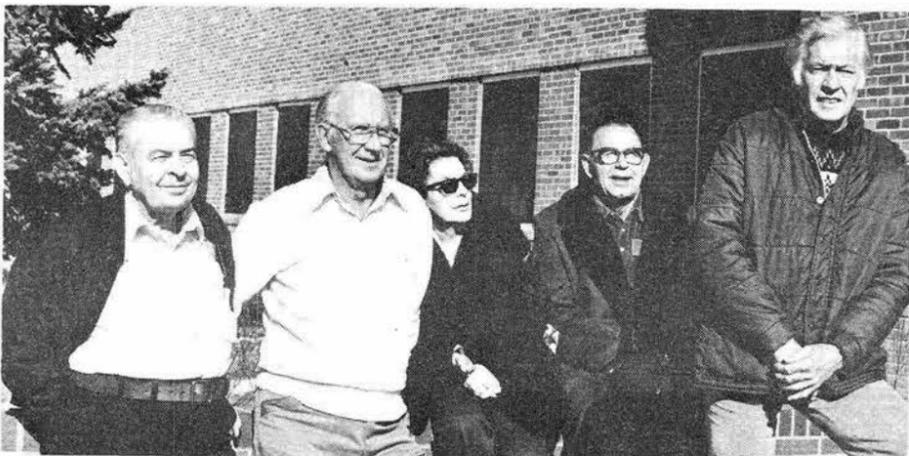
4. The maximum amount that the Credit Union can lend on signature is two month's gross salary. (Previously, the maximum was one month's gross salary.)

Speaker

J. M. Hueter (3521), "Time Management—Effective Clockwatching," Fusion Energy Education Development Seminar, Oct. 29; and "Teacher Burnout," Technologies faculty and staff conference, TVI, Dec. 18, both in Albuquerque.



RETIRING—Bob Sylvester (1473) and Cork Corwin (3541)



RETIRING—Lee Toliver (2424), Earl Sherwood (2543), Virginia Miller (1471), Stan Horn (3412) and Jim Courtin (2426).



Mac McCampbell (2150), Alma Van DeVelde (2426), Hermenes Chavez (3417) and Clarence Coats (2362).

Mexican Folk Dances Coming to Popejoy

Julia Vargas should have a scheduling problem but doesn't: she is secretary for Solar Energy Department 4720 and a wife and mother of two children. Then in her spare time, she performs as a dancer with the Miguel Caro Dance Company.

Julia joined the dance group a little more than two years ago when she enrolled her daughter in the school. "I had taken dance lessons as a youngster and, more recently, had taken some jazz and modern dance classes. I found my daughter's classes so interesting that I, too, became a student," she explains.

The dance company and school was formed in 1976 by Miguel Caro, a native of Mexico and a former member of the National Ballet Folklórico of Mexico. The company performs dances from every region in Mexico, wearing authentic costumes which are different for each state. The dance classes—beginning to advanced—include instruction in regional history, dance, dress, legends and costumes.

"Miguel conducts the classes in Spanish, so you could say that language is also part of the course," Julia says.

The school has about 40 students with 14 dancers in the performing group. Their repertoire includes Aztec and folk dances. Many of the costumes are handmade by Miguel and members of his family who live in Mexico.

The company has performed throughout the state. They are a popular addition to the Spanish Village entertainment at the State Fair and the Santa Fe Fiestas.

The group will give a performance on Saturday, Feb. 13 at 7 p.m. at Popejoy Hall.

"We have an interesting program," Julia says. "We'll perform dances representing 10 of the best-known regions in Mexico,



THE MIGUEL CARO DANCERS wearing authentic costumes from three states in Mexico. (L to R) Julia Vargas (4720), Oaxaca; Miguel Caro and Christina Barela, Jalisco; and Anna Barela, Michoacán. (Christina's and Anna's father is Mike Barela, 3741.)

as well as an Aztec number—these costumes are spectacular, feather head-dresses and bright colors. We'll also perform a series of dances depicting the Mexican Revolution—lots of marching and very colorful. A narrator will explain each dance in Spanish and English."

The show, "Bailes Folklóricos con

Miguel Caro," lasts about two hours; tickets (\$4) are available at all Ticketmaster locations.

Julia adds that the company would like to recruit more male dancers. "It's wonderful exercise because the dances are so vigorous, and no previous dance training is required."

feed back

Q. The distribution of vehicles seems unfair. Quite often my people need a vehicle to go to Area III, V, to Sparton S. W., or Menezzy to move equipment. Our department has one vehicle for 51 people and the demand exceeds its availability. But I observe numerous vehicles not in use in the Tech Area. [I compare 10 a.m., 2 p.m. with the 4:35 p.m. status.] Why not establish a telephone number at each vehicle area [where two or more are assigned] and specify that these vehicles are for use by anyone who calls; first call, first served?

A. The current vehicle distribution is based on annual justification of need, approved by the requesting director. Of course, some organizations return vehicles just as soon as the project for which they were justified is completed. Others, unfortunately, hoard this resource. Continued assessment of vehicles with low usage is challenged and requires additional justification. Last year, DOE decreased the SNL fleet by two percent (13 vehicles). At

the same time, the General Pool for short-term loan was increased. The resultant reduction (29 vehicles) was distributed over all organizations.

At one time, we operated a system similar to your suggestion. Three sub-pools were operated in Tech Area I. This system suffered many of the same problems you allude to and allowed even less control. Further, it required local dispatchers for each pool. That plan was discarded in order to reduce personnel.

Taxi service is now provided between technical areas with scheduled pick-up points; the schedule of pick-ups is in your phone book; Area III provides an on-call taxi service in that area; and the Transportation Division not only provides dispatch service for material movement, but makes daily deliveries of equipment and material between Area I buildings and also between Area I and other Sandia areas. Short-term loan vehicles are generally available from the Motor Pool.

We have urged organizations with assigned vehicles to make them available for

loan. Many organizations have done this and find it works well. I would suggest you contact the "owners" and attempt to arrange for a similar system in your building or area.

D. S. Tarbox—3400

Q. Is it not "penny wise and pound foolish" to just have one teller at the finance window in 802? I encountered 14 employees ahead of me this afternoon in my efforts to pay my Sandia business trip refund. Since my work station is nearby, I could afford to leave and return later [?] to make the payment.

A. It is sometimes necessary to limit teller service to just one teller in order to accommodate lunch periods and breaks. We are attempting to resolve the shortage of tellers, and we expect to provide more teller assistance in the future.

R. B. Yoder—6020

Donohoe Presents Paper En Español

When Greg Donohoe (1738) was invited to present a paper in Chihuahua at the Instituto Tecnológico Regional de Chihuahua ("el ITCH," for short), he figured he'd breeze through it in English—after all, English is the international scientific language.

"Well, yes and no," explains Greg. "Most teaching, especially in the graduate courses, is in English—as are most of the textbooks. But the first paper was by a visiting professor from Poland who'd been teaching at ITCH for a year, and he read it in a combined Polish-British accented English. I noticed his paper wasn't too well received—much coughing, shifting in seats, that sort of thing.

"So that night, I got together with four Chihuahuan graduate student friends, along with plenty of coffee and two six-packs of Tecate, and translated my paper into Spanish. They drilled me on vocabulary—terms like feedback signal which turns out to be *señal de retroalimentación*. By midnight we'd gone through my paper three times. The next morning I winged it in Spanish referring only to my notes and vocabulary, and even made it through an extensive question and answer session.

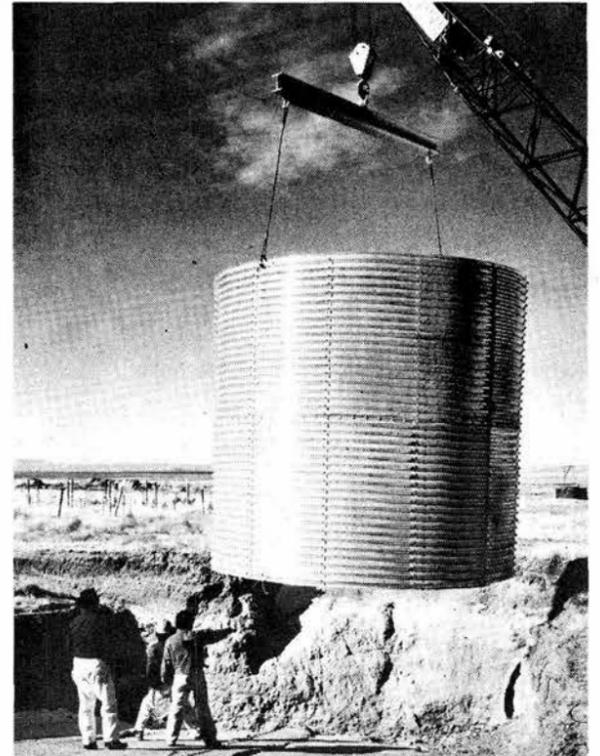
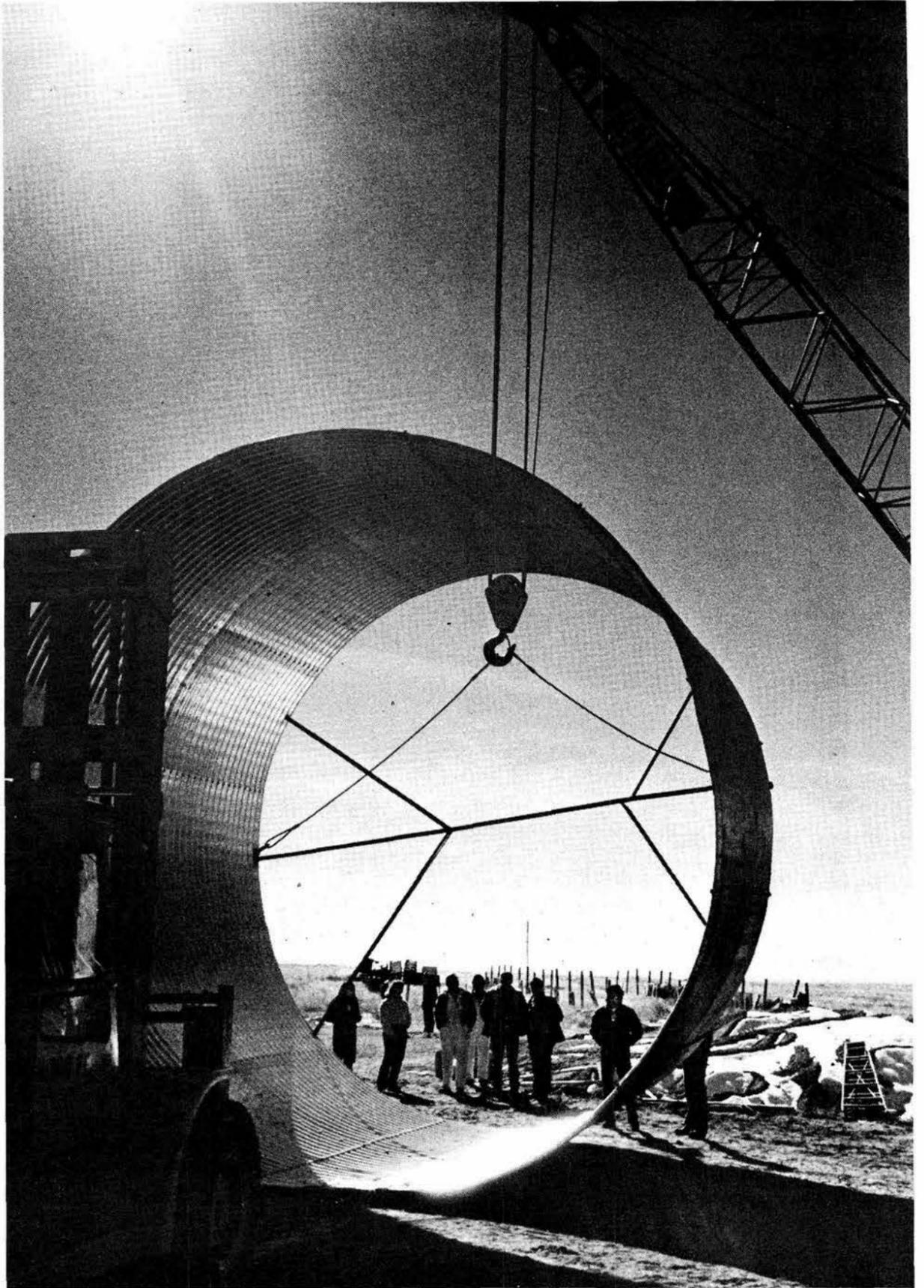
"Frankly, I was terrified, but the paper was very well received. In part because the subject—adaptive filters—was new to the audience and they were interested in its practical applications. But also because of my Chihuahua-accented Spanish which I'd picked up on previous trips to northern Mexico with the St. Jude Express." (LAB NEWS, Dec. 18, 1981)

ITCH has sponsored an annual conference since 1979 and this year's was called Electro 81. A total of 19 papers was read during the five-day conference in November. Speakers represented institutions from throughout Mexico and the United States.

"Every state in Mexico has at least one government-run technical institute offering undergraduate engineering programs as well as one graduate program—ITCH's is electronic engineering," says Greg. "I was impressed with the quality of the papers. Mexican engineers—teachers, students, and working engineers—are very well prepared in theory. The biggest impediment they face is a lack of lab facilities and text and reference books. I was interested to learn that almost all R&D in Mexico is federally sponsored—there's very little private funding because bureaucratic red tape makes it difficult to obtain patents."

Greg found Chihuahua "remarkably like Albuquerque." The city, capital of the state of Chihuahua, has a population of about 500,000 and is situated in a river valley on a high plateau.

"It's an energetic, very alive place with lots of business activity," he says. "Among the major industries in the state of Chihuahua are cattle-breeding, lumbering, and mining. In fact, if it weren't for the fact that everyone was speaking Spanish, I would have felt as if I'd never left Albuquerque."



WHEN you want to emplace an eight-ton section of a 21-foot culvert pipe in a deep trench, then you'd better call upon the millwrights of Florencia Baca's Test Support Section 3618-4. Their special skill resides in the handling and moving of large and awkward contraptions. This job attracts the attention of the Labs' apprentice millwrights (below, left) as Paul Lowe of the Operating Engineers' Union explains methodology to them. In other photo, crane slowly lowers pipe into trench. Work was being done for Floyd Mathews' Explosives Testing Division 1533.

Fun & Games

Swimming—The Kirtland Aquatic Club is looking for more swimmers, ages 6 to 21 to compete in this age group, and ages 22-60 to compete in the masters category. Training sessions are held on week nights from 7:15 to 8:45 at the Olympic Pool, and the monthly membership fee is \$5. Competitions with other swim clubs are regularly scheduled, here and out of town. Gary Beavers is the coach; his number is 844-9446.

* * *

Skiing—The Coronado Ski Club meets Tuesday, Feb. 16, at 7 p.m. George Brooks, coach of the UNM ski team, is the featured speaker.

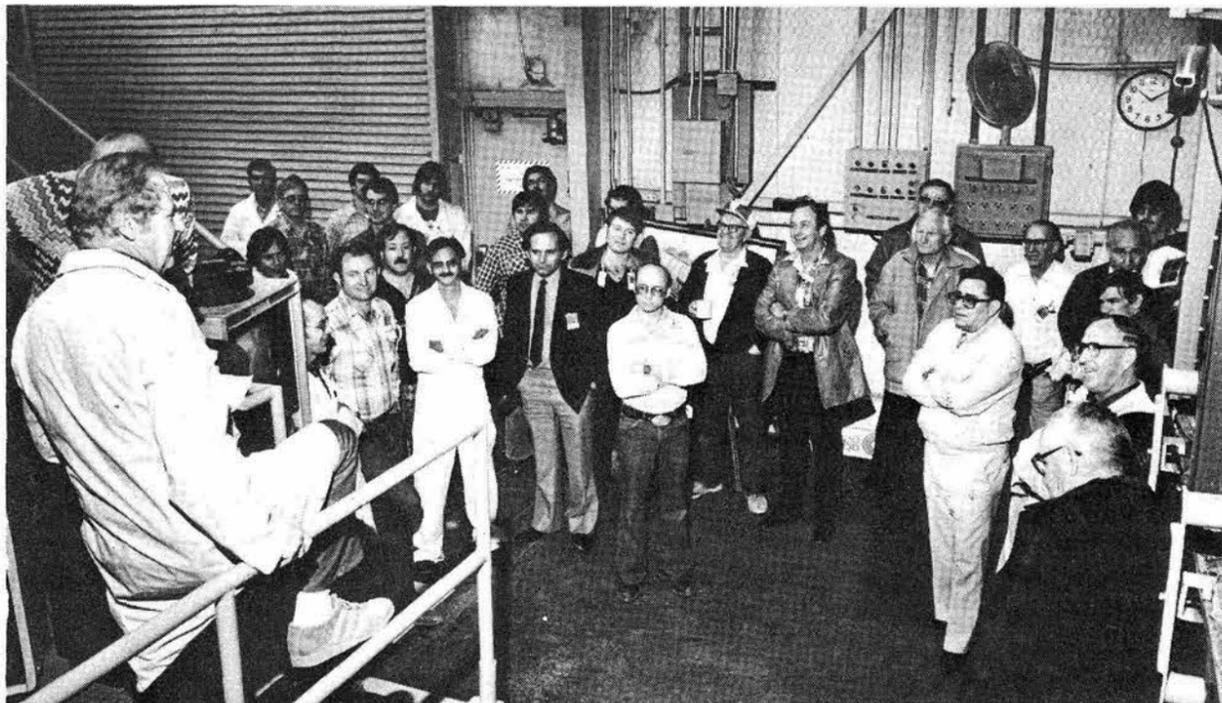
On the touring scene, San Pedro Parks in the Jemez is the destination tomorrow, Feb. 6, for the Ski Touring Club. They meet at ANB, San Mateo and Academy NE, at 7:30 a.m. On Sunday, Feb. 7, the STC heads for Fenton Ridge in the Jemez. Meet at ANB, 7:30 a.m.

* * *

Women's Softball—C-Club Rec Manager Tom Lenz reports that a slowpitch softball league for women will be organized if enough interest is shown. At least four teams will be needed, meaning 60 or more women. An organizational meeting will be held at the Club on Feb. 24, 4:45 p.m., in the El Dorado Room. Employees, spouses and dependents are eligible. Free food and drink will be offered while the meeting focuses on skills clinics, length of season, coaching, costs, and all the rest. Be there if you have any interest at all, Tom urges.

* * *

Arts & Crafts—Beginning calligraphy, auto mechanics, pottery, B&W photography, woodcarving, sumi painting, portrait painting, monochromatic drawing, tole painting, frameshop, jewelry casting and fabrication, Bavarian stain for ceramics, and macrame. Surely you want to learn one of these, offered on Base by your friendly A&C Center. Give C-Club Rec Manager Tom Lenz a call, 4-8486, for information on signup.



THE OCCASION marked the 20,000th firing of Sandia's Hermes II pulsed electron beam accelerator. Bob Schuch (4233), left, explains that the machine was first fired in 1969, but a pulse is only 150 nanoseconds (a nanosecond is the amount of time required for light to travel one foot) in duration so that the total time of all 20,000 bursts is only three milliseconds. The machine was updated last year with installation of a new Marx generator based on the design of those in the Labs' Particle Beam Fusion Accelerator. The powerful gamma ray beam produced by Hermes II is used in research and weapon effects simulation studies. In inset photo are facility operations Jess Harness, Joe Romero, Bob Jefferson (original Hermes supervisor, now 4550), Walker Simmons and Richard Westfall (all 4233).

Sympathy

To Jerry Wallace (3151) on the death of his father in Tucson, Jan. 26.

To Bill Bedwell (3435) on the death of his mother in Missouri, Jan. 19.

To George McLellan (3652) on the death of his father in Wisconsin, Jan. 9 and on the accidental death of his daughter in Albuquerque, Jan. 23.

To Celdon Gabaldon (3154) on the death of his father in Belen, Jan. 16.

To Joe Gabaldon (3154) on the death of his father-in-law in Albuquerque, Jan. 17.

To Steve Zdunek (3618) on the death of his mother in Toledo, Ohio, Jan. 17.



ECP AT WORK—Chairman of the ECP allocation committee, Waylon Ferguson (3730), right, was invited by the Association for Retarded Citizens to see the piano which Sandians helped purchase with a donation from the Reserve Fund. The piano was placed in one apartment of a complex of group homes operated by the association. Twenty-two residents have access to the piano which house-mother Marcia Latham (left) says is used for therapy as well as recreation.

Secretarial Awareness Seminars Scheduled

A series of one-day Secretarial Awareness seminars is scheduled Feb. 9-11 and 16-18 by Education and Training Division 3523. Sessions will be held at the Coronado Club and include a luncheon.

The program features presentations by Tom Heaphy (3150), "Dissemination of Information and Records Management"; Alice Morgan (3252), "Assets Protection, Timecards—A Management Briefing"; Dr. Judy Ewing (3330), "Doctor, If You Were a Woman, What Would You Do?"; Maggie Gregory (consultant), "Clothes That Work"; and Rape Crisis Center/Albuquerque Police Department, "Personal Security."

Sandia secretaries may enroll by calling their secretarial coordinators—Elsie Wilkins (1000), Alice Brinkley (2000), Anne Michele (3000), Thelma Foster (4000) and Shirley Dean (5000).

ALO to Observe Black History Month

An art exhibit, pottery demonstration, poetry readings, lectures and discussions are part of a three-day observance of National Black History Month scheduled by DOE's Albuquerque Operations Office. The program is centered in ALO's Bldg. 381 conference room Feb. 22-26. Also a special food menu will be offered in the ALO cafeteria Feb. 25. LAB NEWS (MO 125) has copies of the agenda.

MILEPOSTS

LAB NEWS

FEBRUARY 1982



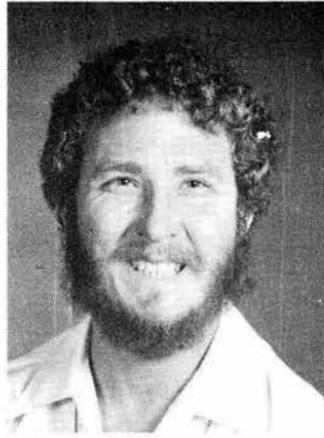
Ruth Brooks - 3521 30



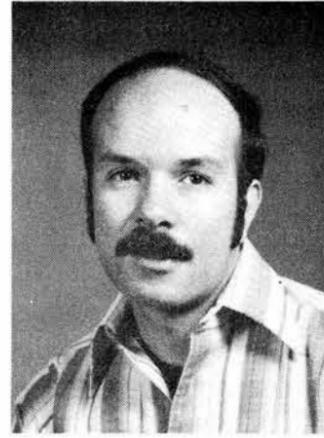
Jack Reynolds - 3713 30



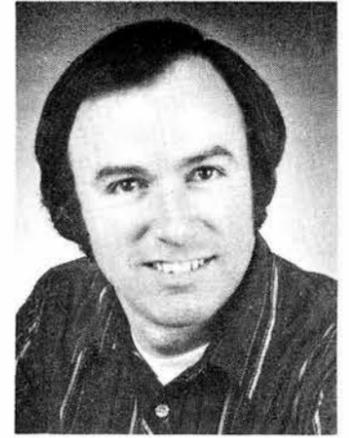
John Chifalo - 3155 25



Randy King - 2314 15



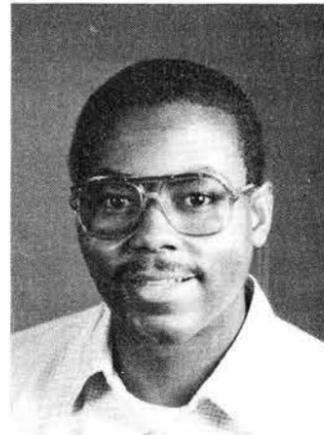
Dennis Kramer - 2147 10



Tim Marino - 8414 15



Louis Roper - 3610 15



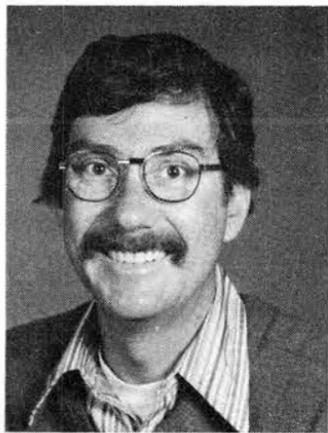
Eddie White - 1769 10



Don Scranton - 1543 25



Cliff Skoog - 8153 20



Joseph Harris - 1111 15



Ted Baggett - 3155 25



Diwiatt Barker - 1171 15



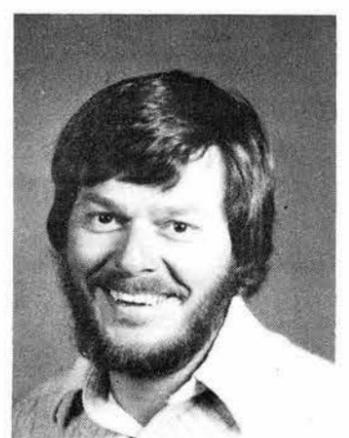
William Moore - 1171 30



Cecil Jordan - 3212 30



David Brown - 4747 30



George Steigerwald - 2341 15



Marv Coon - 3544 25



Grady Raybon - 4233 30



Robert Vargas - 1322 15



Ramon Garcia - 3425 30



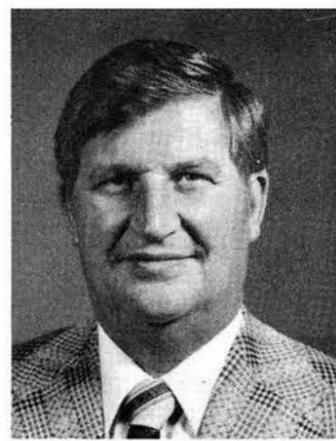
Les Lathrop - 1173 20



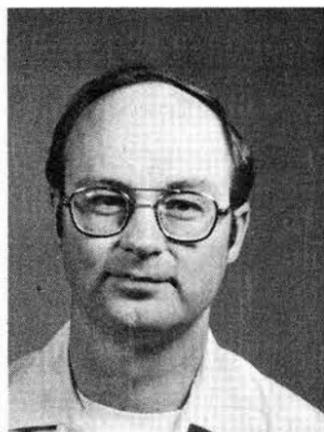
Richard Rohde - 5832 15



Richard Davis - 4338 25



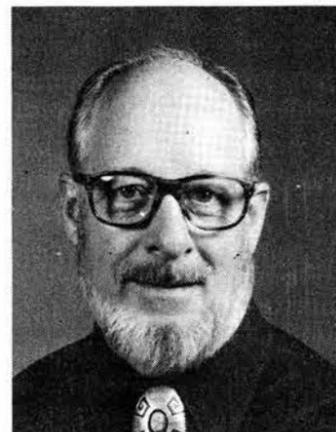
Bob Norwood - 3211 30



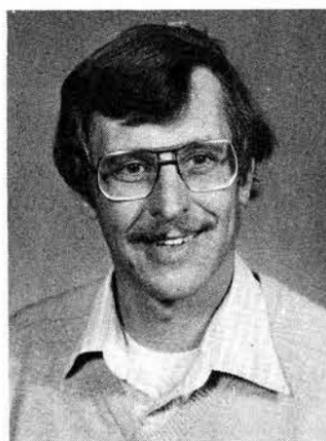
Ray Decker - 2552 10



Neal Rozell - 3611 30



Bob Brooks - 1211 25



Doug Garbin - 1111 10



Ramona Grandstaff - 2431 25



Ron Brooks - 2565 25



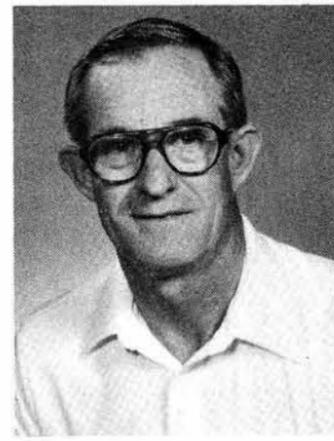
Dick Lujan - 3741 30



Vi Jockle - 3611 25



Virginia Miller - 1471 25



Frank Conrad - 1752 30



Wallace Hunt - 3423 25

My Favorite Old Photo



The First Snowmobile?—Back in the mid-30s in eastern Montana, winters were long and the snow took over from October until April. Andy Kappel, our mail carrier, had an 80-mile circuit out and back to the area ranches (one of them ours), and he modified his Model T for the job. There was a pair of skis out in front that could be elevated from the cab for the rare stretches of dry ground, but the principal element was the tractor-like chain and the two sets of idler wheels. It worked, giving service for several snow seasons. Mail delivery was a little different then—Andy's circuit took over a week to complete. At day's end he'd simply stop over at the nearest ranch.

(Earl Simonson— 3221)

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

MISCELLANEOUS

SMITH & WESSON K22 Masterpiece target pistol, .22 LR, 6" barrel, target grips, carrying case, \$250. Hannum, 296-2095.

SNOCRAFT snowshoes, 46" w/bindings, 3 pr., \$45/pr. Baczek, 255-3429.

OAK DESK, 57x22 w/wooden swivel chair & brass lamp, \$200; recording tape, 7" reels, \$1.50. Chappell, 268-9952.

KENMORE side-by-side refrigerator-freezer; all frostless, auto. ice maker, adjustable shelves, harvest gold, 21 cu. ft. Gabaldon, 266-0028.

ACCORDION, 120 bass, 3-keyboard shifts, 2-bass shifts, carrying case, \$100. Smiel, 865-9081.

ALBUQUERQUE Sunset Mausoleum niche for urn, eye level, below current price. C. H. Maak, 2734 South Oak, Wichita, KS 67217.

CHINA CLOSET, \$185; bunk beds, \$95; 7-pc. LR set, \$225; lamps; play pen, \$10; picture frames; kitchen items, much more. Chavez, 294-7933.

REDWOOD picnic table, heavy construction, 6', 2 benches, \$60. Horton, 883-7504.

FOUR-PIECE curved sectional couch, grey-white shiny fabric over foam cushions, arm covers, \$150 cash. O'Connor, 292-0592.

SCOTTS women's ski boots, \$40 or best offer, size 7-8. Bland, 265-6286.

PIONEER AM-FM 8-track stereo, \$50 or best offer. Shull, 265-6286.

WATCH BAND, man's turquoise & silver, flex band, \$75 or make offer. Hughes, 299-6674.

KING SIZE mattress & box springs. Zucuskie, 881-4086.

SHOP MANUALS, 1977 Ford truck, vols. 1-5, \$35; camp storage boxes for LWB pickup, includes 3 units 6' long, 19" high, compartmented w/lids. Wempe, 884-7325.

AQUARIUM, 75 gal. w/stand, light, under gravel filter, air pump, \$200; 20-gal. w/stand, light, \$50. Cox, 293-5518.

ALL or part of extensive stamp collection; used kitchen cabinets. Rexroth, 293-6025.

APT. size refrigerator, brown, 2 yrs. old, \$75. Biltz, 265-8274.

EXERCISE BIKE, Sears best, hardly used, \$35. Gosselin, 843-6760.

MATTEL Intellivision w/10 cartridges: blackjack, baseball, golf, hockey, football, sea battle, space battle, bowling, boxing & tennis, \$475. Kaiser, 884-7514 after 3.

GE drop-in stove, approx. 27" wide, controls in hood, coppertone, \$150; Norge gas dryer, \$50. Iverson, 869-3123.

WEIGHT LIFTING BENCH w/leg exerciser, squat rack & hanging weights, \$75; AP-74 .22 cal. LR, M-16 replica, \$120. Peterson, 884-7514.

20" SEARS gas range, new, still in shipping crate, white, has pilot lights, \$175. May, 299-5548.

WARDROBE, 24"x56"x76", \$50. Binder, 299-2937.

CHINESE CHOW CHOWs, AKC, 6 weeks on Feb. 8, \$100. Smith, 299-5060 after 6.

RB67 CAMERA SYSTEM; color TV; girls' white provincial bedroom set. Burd, 884-9133.

LEATHER, pile-lined coat, size 44, new, \$40; Winchester Model 94 30-30; Burgo .38 spl., 4" barrel, \$100 ea.; Lee load-all 12 ga. reloader, \$15; Ironstone dinnerware, service for 16, \$20. Edmund, 881-7974.

ULTRON V plush nylon carpeting, 16 sq. yds., briarwood/brown, new, in 3 pieces, cost \$400, sell for \$75. Burstein, 821-6688.

LOCKING SKI RACK for car, \$17. Benson, 296-4282.

PIANO, antique, completely restored inside & out, \$950. Moulton, 293-0373.

AUTOMOBILE security alarm, brand new, \$45; 18 pieces Hacienda Gold Franciscan earthenware, \$25. Pate, 293-5393.

BEN FRANKLIN, 26", w/5' of 8" pipe, screen, grating, used 1 yr. Casaus, 867-5785.

SQUARE DANCE lessons: learn to square dance with the Crazy Eights square dance club, lessons start Feb. 9. Waibel, 298-0067.

COLT Python .357 magnum, 6" barrel, target front sight, Pachmeyer grips, \$375. VanDenAvyle, 898-6474.

COFFEE SET, 4-piece silverplated, \$30. Lewin, 898-2303.

4 TIRES on chrome spoke rims, fit Ford or Chrysler 5-lug, barely used, Peerless Sprint GT G70-15 & G-60-15, \$200. Richerson, 298-0005.

PIANO, Kimball Whitney spinet, walnut finish, just tuned, \$1200. Haushalter, 821-2933.

SKI LIFT tickets for Sunrise, Ariz., at reduced price. Brinker, 293-0225.

CUBIC Zirconia gemstones, round brilliant cut, approx. 1 carat size, \$7/carat. Hellmann, 821-0357.

TOP OF STOVE Ovenette by West Bend, temperature indicator plus pans & rack, \$10. Henry, 266-6467.

COMPUTER, Sinclair ZX-81, assembled w/power supply & documentation, \$125. Harrell, 292-6850.

PORT-A-CRIB, \$35. Campbell, 256-1015, after 5.

TIRES, Uniroyal 9.50x16.5LT, tubeless blackwall, nylon, highway tread, on GMC 8-hole, 3/4-ton rims; 2 w/rims, \$75. Puetz, 294-8545.

POOL TABLE, regulation, w/cover, rack, cues, balls, \$150. White, 865-9229 after 6.

COLONIAL ROCKING CHAIR, massive w/3" thick seat, hardwood spindles; fp screen, fits opening of about 28"x34"; Garrard SL72 auto. turntable, dust cover, etc. Peters, 293-6356.

WINCHESTER model 70, .30/06, pre XTR type, new, \$310; Savage 110 .30/06, new w/scope, \$210. Haaker, 293-1077.

OLYMPUS OM10 1.8, 50mm, manual adapter, within guarantee, \$175. Pendall, 265-3008.

REGULAR BED, bookcase headboard, \$30; twin bed, \$20; folding ping pong table, \$10. Beeson, 299-6132.

MOVING SALE: Sat., Feb. 6th, 7200 Coalson Dr. NE, 9-5; plants, misc. items. Dana, 822-0130.

DOUBLE BED, frame, box springs, mattress & bedspread, \$250. Murphy, 881-1520.

GOLF CLUBS, 4 complete sets, \$30 to \$200. Gasser, 268-5681 after 5.

QUEEN SIZE SOFA sleeper, \$225; picnic table & benches, \$30; garden chaise lounge, double seat, \$15. Brooks, 881-3437.

FAIRBANKS 350 turbo torque converter, new, \$110; 4 used tires, mounted, late Chevy, \$80. Leonard, 865-5338.

B&W TV, \$35; dresser, \$35; night table plus queen headboard, \$25; medium dog house, almost new, \$40. Yaniv, 294-4490.

TRANSPORTATION

72 VW bug, yellow, auto., price neg. Boruff, 294-7013.

70 VW squareback, fuel injection, AT, seat covers, extra tires and rims, \$1300. Hannum, 296-2095.

77 DODGE Maxi-Van, fully customized, extras, low mileage, will take 8-cyl. pickup in good condition as part payment. Stuart, 265-7315.

MOTOR HOME, 24', Chev. chassis, generator, air, AM-FM radio, Base CB, roof storage, \$10,500. Campbell, 299-9195.

79 YAMAHA motorcycle, XS-400, 6300 miles, 50 mpg, tools, shop manual, hiway bar, fiamme horns, black & gold, \$1100. Gubbels, 884-3711.

77 DATSUN truck, 1/2-ton longbed, 5-spd. trans., 44,000 miles, camper shell, Michelin tires. Sandoval, 293-6261.

72 TOYOTA Corona 4-dr., \$1400. Stormer, 255-7060.

67 OLDSMOBILE 98 convert., 75,000 miles, PS, P windows, etc.; extra top, AT, AC, PS, PB, AM/FM/8 TR, \$2750 or make offer. Hughes, 299-6674.

68 HONDA Cl. 175, \$200 firm. Teta, 821-5172.

66 PONTIAC GTO, 389 tri-power, Hurst 4-spd., AC, PS, PB, 95% original. Mantelli, 298-2603.

78 CX 500 HONDA, water cooled, fairing, saddle bags (Vetter), w/extra accessories. Gonzales, 281-1319.

78 PONTIAC Grand Prix, V6, PS, PB, AC, AM-FM radio, \$4100. Hesch, 294-3298.

74 T-BIRD, 38K miles, new rubber, gold color, white vinyl top, make offer. Preston, 344-7722.

75 FORD Granada, 302 V8, 3-spd., PS, PB, AC, AM-FM-8TR, low mileage, \$1800. David, 298-1389.

75 AUDI FOX, 2-dr., green, AM-FM radio, 4-spd., new paint, 23/30 mpg., \$2395. Lord, 821-2282.

MONGOOSE BIKE BMX Motomag II, \$150 or best reasonable offer. Liguori, 256-3613.

80 DATSUN 310GX, AC, AM-FM radio, sun roof, 4-spd., front wheel drive, 18,500 miles, \$5250 (less than book). Quinn, 296-1810 after 4:30.

70 FORD LTD Brougham, vinyl roof, auto., AC, PS, PB, cruise control, \$450. Dana, 822-0130.

79 ALFA Sprint Veloce, AC, AM/FM tape, sun roof, 28,000 miles, \$7800 or offer. Benavides, 281-2507.

75 CHEVY Nova, 8-cyl., white, best offer. Nee, 299-2827.

81 YAMAHA Seca 550, 2000 miles, assume payments of \$79/mo. Rutledge, 294-5644.

77 MONTE CARLO, PS, PB, AC, red w/white vinyl top, many extras. Garner, 298-2562.

79 MERCURY Bobcat Runabout, 4-spd., AM-FM stereo cassette, moon roof, new paint. Brooks, 881-3437.

78 CHEVY Monza fastback, AT, V6, low miles; 72 Porsche 914, 2-litre, completely rebuilt engine. Hartenberger, 265-4153 or 256-3203.

REAL ESTATE

3-BDR. house w/mountain & city views, 1 1/2 bath, security system, 8 1/2% assumable VA, \$451 P.I.T.I. Young, 881-9342.

74 14x65 WHITTIER mobile home, 3-bdrm., 1 bath, appliances, washer & dryer, 40' awning, swamp cooler, \$9000, must be moved. Binkley, 869-6841.

TRAILER, 1978 14x70', 3-bdrm., 2-bath, floor heat, ceiling AC, storm windows, Zone II insulation, MTG. \$13,600/11%, equity neg. Baker, 294-3334.

72 RITZCRAFT mobile home, 12x52, 2-bdr., new carpeting, drapes, AC, near Central-Louisiana, quick possession, \$6500. Delnick, 298-5276.

ASSUMABLE 8 1/4% loan, 3-bdrm., 1 1/2 bath, NE hts., sprinklers, new carpet, lg. rooms, \$66,000. Brown, 299-6302.

FOUR HILLS, 5-bdrm., 3400 sq. ft.,

3-car garage, all brick, many extras & view, 2 yrs. old, 9 1/4% assumable loan, sell or trade on smaller house. Neal, 299-3587.

1/2 ACRE view lots, Los Lunas, utilities available, terms, \$10,000/lot; might trade for equity, Albq. house. Cook, 869-6921.

79 MOBILE HOME, 14x80 3 bdrm., 2-bath, double windows, fully carpeted, low down & assumable mortgage, 4-Hills Park. Shaw, 299-3202.

3-BDR., 2 bath brick house on 5 irrigated acres (1/2 acre chainlink fence around home), Los Chavez. Leonard, 865-5338.

1/2 ACRE corner lot on Ridgecrest in Sierra Hills, underground utilities, view of mtns. & city. Harvey, 265-3055.

WANTED

BOOK, "Historic Albuquerque Today," by The Historic Landmarks Survey. Potts, 884-9781 after 5:30.

RUGER .22 semiauto. pistol, in good working condition. Hughes, 299-6674.

USED, serviceable gasoline engine power mower; anyone interested in joining an informed creative writing group. Altwies, 292-3884.

HARDBACK COPY of John Nichols' "The Milagro Beanfield War." Northrop, 884-4718.

GOOD used car. Asher, 299-1668.

FEMALE roommate to share lg. 3-bdr. house near UNM Law School, on bus route, \$125 plus utilities. Zamora, 266-0632.

BULLET swaging dies, .30 caliber, for use in std. reloading press. Dawirs, 281-3630.

GOLF CLUBS for right-handed boy 10-13 yrs. old, need irons, woods & bag. Thome, 296-8173.

BOY'S dirt-bike-type bicycle. Carson, 898-8847.

SKIS & BINDINGS, 140 or 150 cm & 170 cm. Schnetzer, 292-0733.

ELECTRIC DRYER, used but in good working condition; old kitchen cabinets & counters. Young, 842-0348.

PLAYERS for 1A fast pitch city softball league team, all positions welcome, special need for pitcher. Geer, 298-7914.

FORMER Air Force officers possessing engineering or scientific AFSCs who wish a Reserve assignment. Taylor, 844-7837.

14 to 16" Motocross bicycle. Cropp, 296-1877.

CONTRACTOR'S wheelbarrow & extension ladder; willing to pay good price for high quality equipment. Kerschen, 821-2848.

KILN, small, approx. 11-12" diameter, 1-2' height, with sitter & furniture. Hamblett, 298-6052.

INFANT CAR SEAT, used, prefer Strolce but will consider other brands. Garner, 298-2562.

MEDIUM SIZE DESK w/drawers, wood, in good condition. Bisbee, 293-0356.

Ladies' Night Announced

TONIGHT at Happy Hour the music starts early—Tom Black and the Fugitives play for dancing from 5 to 7:30, then the Three Del Fi's take over from 8 until midnight. In the meantime, special prices are in effect all evening with the dining room open for *a la carte* menu service from 5:30 until 9. A special section of the ballroom is reserved for singles.

Starting tonight and continuing every Friday night in the future, Coronado Club members who have young children may stash them at the KAFB East Nursery (located across the street from the Club) for 80 cents an hour from 5 p.m. until 1 a.m. The Nursery provides excellent care and will supply supper for the children. Call 4-2314 to let them know you're coming. You'll have to show your C-Club membership card.

TOMORROW is Variety Night featuring the movie *Treasure Island*, a Walt Disney pirate classic, and several kinds of goody sandwiches for members and kids. To continue the showing of quality films at Variety Night, the Club has announced a nominal charge of 25 cents per person for attendance. Sandwiches are available starting at 5, the movie starts at 6.

MONDAYS have been declared Ladies' Night at the Club. Bob Manhart (3151), Club PR man, says the Club is honoring ladies who work 8 to 4:30 (9 to 5 sounds better in the song) with their night at the Club featuring 25 cent well drinks and draft beer. Also, Bob says, the Club is installing a portable dance floor in the main lounge by the juke box so Happy Hour folks with happy feet can get their kicks. The dance floor will remain in place through Thursday evenings. That means troops who attend the Tuesday and Wednesday Happy Hours may also dance if they get the urge.

NEXT FRIDAY, Feb. 12, also features two bands in the ballroom. Starting at 5, Enchantment headed by drummer Paul Metoyer (3435) plays for dancing, followed by Youngblood from 8 until midnight. The

To Sleep, Perchance To Dream . . .

Taking a snooze is not as simple as it sounds. This was made clear in a January colloquium, "Sleep: That Important Third of Your Life," offered by Dr. Fernando Miranda who runs the Sleep Lab at Lovelace-Bataan Medical Center.

Miranda explains that something called the Reticular Activating System (RAS) is "fantastically designed to provide an ideal alertness system." Sleep occurs when the RAS "disconnects" between the brain stem and the rest of the brain. This was first realized in the late 1930s when a cat's brain stem was surgically removed. When the animal immediately went to sleep, the researcher realized he had cut something important.

"Even though the connection between the brain stem and the brain is destroyed," says Miranda, "the brain reconditions itself in a few weeks to the sleep-wake cycle. Other parts of the nervous system take over the functions of removed or destroyed parts. Not 100%, but enough to function—that's why people who have had strokes recover."

Miranda describes REM (rapid eye movement) sleep as a "very curious phenomenon." Fish and reptiles have a "quiet phase" but from birds on up to man, REM constitutes 20-25% of sleeping time. It is generally known that dreaming takes place during REM, and there is a theory that REM "engraves" incidents from the previous 24-48 hours in the mind. "If you dream about more distant events," explains Miranda, "something in the last 48 hours must have reminded you of it."

Sleep disorders come in three categories: (1) excessive daytime sleepiness, (2) insomnia, and (3) abnormal nocturnal behavior.

Excessive daytime sleepiness may be caused by narcolepsy—a condition causing sudden sleep attacks which can occur while eating or even driving a car. Miranda relates the case of a narcoleptic Philadelphia trucker: "When he suddenly fell

asleep on his wedding night, his wife thought she had killed him, then got very upset when she realized he was only asleep."

In insomnia one cannot fall asleep or, once sleeping, keeps waking up. The first symptom is generally caused by psychological reasons, the second by organic problems. "An unusual case of sleeplessness was that of the Baltimore journalist who routinely stayed awake 28-36 hours, then slept for 12-16 hours," says Miranda. "Another was that of a professor who had never slept in his life. His mother recalled the ordeal of having a four-year-old running around the house all night."

In the last category—abnormal nocturnal behavior—are hypnagogic hallucinations in which people have weird dreams dealing with their own imminent death. Sleep terrors usually affect children—they sit up suddenly, utter an incoherent cry, and are inconsolable. Terrifying dreams include repetitive nightmares which are vividly recalled. In nocturnal sleep drunkenness, the subject wakes up violently—there have been cases where a bedroom was destroyed.

"Sleepwalking — somnambulism — usually occurs in children and sometimes follows sleep terrors," explains Miranda. "It's not true that sleepwalkers can remember where everything is. There've been cases of somnambulists walking out of second-story windows."

Sleep apnea (brief cessation of respiration) is strongly suspected as the leading cause of crib death; it also may afflict obese, middle-aged males who have suffered coronary attacks.

"Spouses—or couples who sleep together regularly—do very interesting things in bed, after they're asleep, that is," observes Miranda. "They coordinate their body movements so they don't go crashing into each other during the night."

If you want more information on sleep problems, you can reach Dr. Miranda on 842-7250.

dining room opens with menu service at 5:30 and Happy Hour prices are in effect all evening.

THE BIG ONE this month is scheduled Saturday, Feb. 20. The evening features a prime rib buffet (members pay \$7.75) and music by Marci and the Talk Abouts. Reservations are not required.

CORONADO SKI CLUB meets Tuesday, Feb. 16, at 7 p.m. George Brooks, coach of the UNM men's ski team, will show videotapes (including the Olympics) and discuss competitive skiing. Door prizes will be awarded.

THE KIDS KARNIVAL, an annual event for Club member youngsters, is set for Saturday, Feb. 27, from 10 until 2. The ballroom will be converted to a carnival atmosphere with booths, games, wandering clowns and lots of popcorn, hot dogs, etc. Mark your calendar now.

TRAVEL DIRECTOR Frank Biggs (4231) reports that popular demand has brought a couple of changes to the itinerary of the upcoming bus trip to Las Vegas on March 14-17. "We made some changes and reduced the price," Frank says. "We'll spend two nights in Las Vegas and one night among the riverside casinos of Laughlin, Nev. The price is now \$130 which includes lunch and treats on the bus going and coming. There are optional group dinners and shows.

"Now that Southwest Airlines flies to Las Vegas," Frank continues, "we are working on an economy air package. Plan to stay at the Maxim April 4-7 for \$185. The trip includes airfare, lodging, transfers and baggage handling."

Other trips scheduled include Chaco Canyon (April 24, \$20), and Washington, D.C., and vicinity (April 3-10, \$300 plus airfare).

See Frank in the lobby tonight between 5 and 7 and talk about travel.

Sunday **Y** February 7

"YOUR TAX RETURN:

The Bottom Line on Improving Your Form."

Hosted by: Robert "Benson" Guillaume

IRS tax specialists will show you how to fill out your federal income tax returns and will answer tax questions over the phone.

Note: this program runs Sunday, Feb. 7 on Channel 5 from noon to 3 p.m. IRS phone is 1-800-527-3880