



NEW ENERGY EXHIBITS at the National Atomic Museum on KAFB illustrate major ERDA programs such as fission, fusion, coal gasification and liquefaction process, solar power and conservation. Animation, visitor-operated exhibits, films and lecture-demonstrations are used in the display. Museum Aide Rick

Ray, left, and Lynnie Grace, historian, report that many groups and individual visitors are enjoying the exhibit. The Museum is open from 9 to 5 on weekdays, from noon until 5 on weekends:

LAB NEWS

VOL. 29, NO. 3

FEBRUARY 11, 1977

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

Labs Payroll Figures Announced

The Sandia Labs payroll for calendar year 1976 amounted to \$112.7 million at Albuquerque, and \$18.2 million at Livermore. For CY '75, these figures were \$98.9 million for Albuquerque and \$16 million for Livermore. Salaries of some 70 Sandia employees at Nevada Test Site and Tonopah Test Range are included in the Albuquerque figure.

At the end of CY '76, 7114 persons were on roll, including 981 at Livermore. The total is about 460 more than at the end of CY '75.

Assets of ERDA's installations operated

(Continued on Page Four)

TOTAL ENERGY CONCEPT

Labs To Manage Solar Program

Sandia Laboratories has been named technical project manager for ERDA's Solar Total Energy Program (STEP). Funding for the effort totals \$1.2 million for the fiscal year ending in October.

The effort will be centered in Solar Energy Projects Department 5710, which will monitor technical goals and schedules for the nationwide program. The Labs will also provide in-house technical support and undertake tasks complementary to those performed in the industrial sector. Overall direction of the program is under ERDA's Division of Solar Energy.

The solar total energy concept calls for the use of solar systems to fill a range of

energy needs. For example, the experimental system recovers the high-temperature fluid exhausted from a solar-powered electric turbine generator and uses it for space heating and air conditioning, thus utilizing a higher percentage of the collected solar energy.

Use of such low-temperature energy, normally wasted in the course of conventional generation of electricity, may help to make solar energy more competitive.

Although a broad potential market exists for solar total energy systems, much technical development remains to be done before solar total energy systems can

(Continued on Page Four)

Afterthoughts

Energy, Energy

If you're a fireplace fancier, you may not want to continue reading this item (from REA's newspaper Enchantment): "A cord of pine produces about 14 million BTUs. It sells in New Mexico for \$45 to \$75 per cord. That means wood sells for \$3.15 to \$5.30 per million BTUs. Natural gas sells for \$1.93 per million BTUs. Electricity sells for \$9.40 per million BTUs." You say you cut your own wood? OK, but don't overlook transportation costs.

"Solar heating can now compete economically with electric resistance heating for well insulated new homes in many major cities of the U.S. Our goal is a 50 percent reduction in the cost of solar installations by 1980 through market competition, improved performance and possibly incentives. At that price, solar heating could be competitive with all fuels, including natural gas, in most regions of the country." -- Henry Marvin, Director, Division of Solar Energy, ERDA

"The Sky Is Falling Energy Store, an unlikely establishment with an unlikely name, opened in an unlikely location near downtown Washington, offering solar energy devices to an undetermined clientele." --The Washington Post

* * *

Hail Mail--On Monday afternoon our Tech Library, filling a request by ERDA in Richland, Washington, placed the requested item in the outgoing mail where it was picked up by the Sandia mail carrier around three in the afternoon. Next morning, Tuesday, an amazed caller from Richland related to an equally amazed listener in the Tech Library that the item, sent by ordinary 1st class mail, was actually in her hands. Now if we could just find out what went right...

* * *

Power of the press--An exasperated but satisfied reader called to report the number of calls she received in response to her ad in LAB NEWS for a dog house: 18. We'd like to think/hope that the rest of the paper is read as fervently.

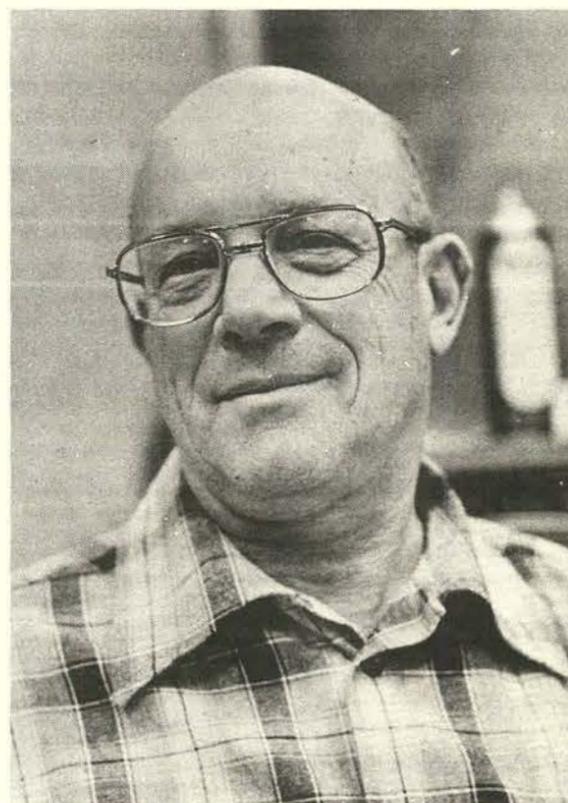
* * *

"Do not shorten the morning by getting up late; look upon it as the quintessence of life, as to a certain extent sacred." Schopenhauer
*js

Retiring



Ted Siegrist (9582)



Hyder Burress (1133)



Charles Farmer (3433)

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FEBRUARY 11, 1977



'Energy and Society' Symposium Continues

"Energy and Society--The Next 30 Years," a symposium sponsored by the Museum of Albuquerque Association, will continue tomorrow and next Saturday, Feb. 19.

Tomorrow's sessions, starting at 8:30 a.m., include speakers discussing aspects of "Current Energy Outlooks," "Nuclear Effects," "Energy for Transportation," and "Energy and Environment."

Sandia speakers scheduled on Feb. 19 include Glen Branvold (5710), "The Potential of Solar and Wind Power"; Arlyn Blackwell (8110), "The Potential of Energy Conservation"; and Wendell Weart (1140) "Nuclear Waste Storage and Usage."

All sessions of the symposium will be held in the Convention Center. Admission is free. Call the Museum, 766-7878, for more information.

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bill laskar does picture work
so does russ smith

&

lorena schneider reports on livermore

Supervisory Appointment



Don Gallagher to supervisor of newly created Grounds and Contract Maintenance Section 8257-4, effective Jan. 16.

After joining SLL in Sept. 1958, Don was a stockkeeper, toolkeeper, shop clerk and order analyst. In 1966 he was promoted to staff assistant.

Over the past 15 years, Don attended evening classes in electronics, math and accounting at Contra Costa, San Joaquin Delta, San Jose and Modesto Junior Colleges. He has been a volunteer fireman with the Manteca/Lathrop Rural Fire Department for four years, serving as president, vice president and, currently, fire officer on-the-scene.

He also helped form a Manteca Chapter of the Future Farmers of America.

For hobbies, Don enjoys growing grapes on his 50-acre vineyard and teaching leather craft work to 4H classes. He and his wife Shirley and their son and daughter reside on East Peach Avenue in Manteca.

Sympathy

To Gene Aas (8266) on the death of his mother in Fargo, N. Dak., Jan. 9.

To Rudy Grund (8257) on the death of his mother in Homewood, Ala., Dec. 25.

To Ed Cull (8165) on the death of his father in San Francisco, Jan. 15.

To Clarence Loveless (8183) on the death of his mother in Amarillo, Tex., Jan. 26.



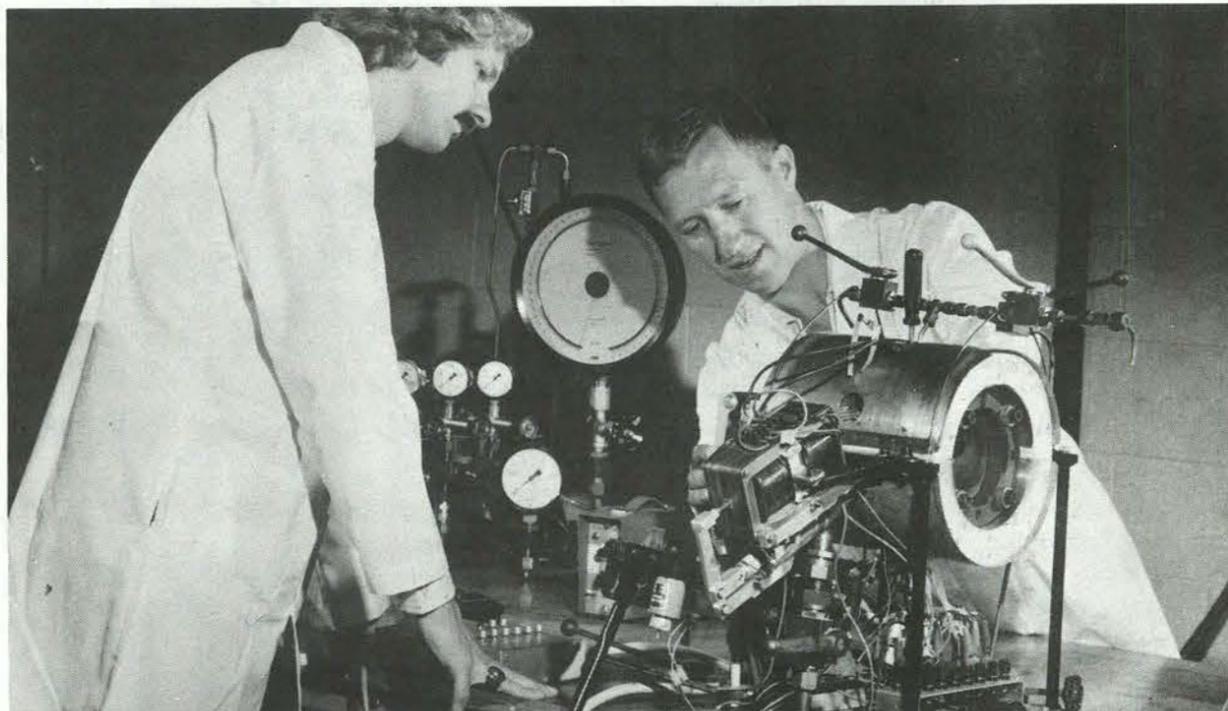
SCHOLARSHIP — Mike Soderstrand (8159) and Carolyn Kramer (8312) congratulate Helen Ordaz, a Work Experience Program employee in 8323, who has been named a finalist in the national SPE scholarship competition. Mike is local chapter president of the Society of Professional Engineers; Carolyn is scholarship committee member. As a finalist, Helen receives an award at the National Engineers Week chapter meeting on Feb. 23 at Emperors Garden Restaurant; Edward Teller is featured speaker. The public is invited; contact Fred Holdener (LLL), phone 7-7338.

LIVERMORE NEWS

VOL. 29, NO.3

LIVERMORE LABORATORIES

FEBRUARY 11, 1977



PREPARING THE "COMBUSTION BOMB" for a series of tests using fuel-injection are Mike Dyer (8116), left, and Udo Renger, an engineer from Volkswagen Research in West Germany. The stratified charge engine simulator incorporates two windows for making high-speed optical measurements of the combustion process.

VW and SANDIA

Looking For That Better Idea

As part of SLL's automotive combustion research program, a unique "shot-at-a-time" combustion chamber is being used to gain a better understanding of the performance of stratified charge engines.

Volkswagen, which developed the chamber, has loaned the experimental apparatus to Sandia under an ERDA/VW cooperation program. Sandia is combining its capabilities in advanced diagnostics with VW's research and design talents in the joint venture.

Known as a "combustion bomb," the VW device enables researchers to look inside this engine simulator, using ultra-slow motion cameras and advanced optical measurement methods, to see exactly what happens during a single combustion event in a stratified charge engine cylinder. The work may lead ultimately to improved fuel economy and reduced exhaust gas emissions.

Subjects under investigation are fuel/air mixing in both direct-injected and carbureted stratified charge engines, and the role of fluid motion in enhancing lean flame propagation.

Principal investigator Mike Dyer (Combustion Applications Division 8116) states that the chief advantage of stratified charge engine is the relative ease of control of nitrogen oxide exhaust emissions. Once the nitrogen oxide is brought under control, automotive engineers believe that elevated levels of hydrocarbons and carbon monoxide—the other major exhaust emis-

sions—can be reduced by thermal reactors or simple catalytic devices. Control of nitrogen oxides is critical in engines of the future under proposed Federal emission levels.

The secret to stratified charge combustion is that a small, fuel-rich and easily ignitable mixture "pocket" is ignited by the spark plug. This pocket burns quickly and the flame spreads to the lean mixture (more air, less gasoline) regions, which are normally more difficult to ignite. Nitrogen oxide emissions are reduced because the rich and lean mixtures burn at lower temperatures than the mixture in a conventional gasoline engine.

Stratified charge engines have two designs. Fuel injection into a swirling air charge followed by ignition is one design. VW is concentrating on a design in which the combustion chamber is divided to separate rich and lean mixtures. Combustion of the rich mixture then ignites the lean mixture in the main chamber. In Sandia's combustion research activities, both designs are being considered, and preinjection fluid mechanics, spray formation and fuel/air mixture distribution, ignition and flame propagation, and post-combustion mixing and transport are under study.

Besides improved fuel economy and reduced exhaust emissions, stratified charge engines may someday be less expensive than present engines because costly emission-control hardware may not be needed.



NEW WIND TURBINE SHAFT, is emplaced on a 5.5 m base east of Area I. With the anemometer tower added later, total height is 33.5 m. The revolving shaft will eventually support three experimental blades (arranged to form a 17 m diameter sphere) and drive a generator. Here Bob Grover and Carl Longfellow (both 5715) debate the delights of riding a crane-lifted cage to bolt on the anemometer tower. (Both lost out to Ralph Rusk, also 5715.)

CONTINUED FROM PAGE ONE

Labs to Manage Solar Program

become cost competitive with more conventional sources of energy.

STEP's objectives are to evaluate and demonstrate the technical, economic and institutional feasibility of the solar total energy concept in wide applications.

The program is also designed to promote solar technologies within private industry which offer the prospect of being economically competitive with other energy sources.

The early design and construction of several large-scale experimental systems in the 200 to 500 kilowatt (electrical) size range are included in STEP. These facilities would be followed by demonstration plants with two megawatt capacities. These demonstration facilities would involve industry, probably to the extent of shared funding.

A total installed capacity of 30-megawatts—five electrical and 25 thermal—by the end of 1982 is a specific STEP goal.

The demonstration facilities will help to establish the economics of the solar total concept for specific applications, and maintenance and operation of the facilities will provide test data on component development and system design.

The STEP plan also includes a large demonstration facility of about 60 megawatts—10 electrical and 50 thermal—to become operational by 1985. It would provide energy to a community having a variety of energy demands.

ERDA test facilities for the program are the Sandia Solar Total Energy Test Facility, which produces 32 kilowatts of electrical energy, and the Solar Steam Generating Plant and Test Facility, a 400 kilowatt thermal central receiver at Georgia Institute of Technology. In addition to testing components and systems, these facilities may serve as training centers for operators of future demonstration plants.

CONTINUED FROM PAGE ONE

Payroll figures

by Sandia totaled \$355.9 million at the end of CY '76, compared to \$329.5 million in CY '75. These figures represent the undepreciated value of buildings and facilities at Albuquerque, Livermore and Tonopah Test Range.

Purchases by Sandia in New Mexico amounted to \$48.9 million for CY '76. More than 98 percent of the amount, or \$48.1 million, went to Albuquerque firms. Purchases from other ERDA contractors are not included. Purchases in the state in CY '75 amounted to \$34.5 million.

Events Calendar

Feb. 11-18 — "Buttons and Furbelows," featuring Bernie Umland's (retired Sandian) collection of buttons, Museum of Albuquerque's Mini Museum, First Plaza.

Feb. 11-13 — UNM and AAU track meets, Tingley Coliseum.

Feb. 11, 12 — New Mexico Symphony Orchestra, Popejoy Hall, 8:15, 265-3689.

Feb. 14 — Czechoslovakia's Prague Chamber Orchestra, Popejoy Hall, 8:15, 277-3121.

Feb. 16 — General Meeting, NM Mt. Club, St. Timothy's Luth. Church, 7:25 p.m.

Feb. 17 — "Paris and the Parisians," travel film, Popejoy Hall, 7:30, 277-3121.

Feb. 18-20 — Shrine Circus, Tingley Coliseum.

Feb. 19 — NM Mt. Club, 5-6 mile hike to "Sandia Stonehenge," 9 a.m., El Dorado Square, 298-1526.

Feb. 22 - Mar. 20 — "Star Spangled Girl," Ole Henry's Dinner Theatre, 293-5060.

Feb. 23 — "Sherlock Holmes," Royal Shakespeare Company, Popejoy Hall, 8:15, 277-3121.

Feb. 24 — Patrick Moynihan, UNM Speaker's Committee, Popejoy Hall, 277-3121.

Commuter Info

Yellow-Checker Cab has announced new limousine rates which may be attractive to groups of four to ten Sandians wanting front-door pick-up and delivery to the Labs each morning and return each evening. Mileages shown are from the first pick-up point to the destination; fares shown are per person one-way:

MILES	4	5	6	7	8	9	10
0-3	\$.50	.40	.34	.57	.50	.45	.40
3-5	.75	.60	.50	.86	.75	.67	.60
5-7	1.00	.80	.67	1.15	1.00	.89	.80
7-9	1.25	1.00	.84	1.43	1.25	1.12	1.00

(The reason for the fare hike at seven people is that at that point a second vehicle is required.)

If you get a group together, call the cab company at 247-8888 for scheduling. Arrangements must be made at least 24 hours in advance. Rates for longer distances are available from 4-RIDE.

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SAM VARNADO stands before "Tourist Map of Georgia" during recent trip to Soviet Union.

RUSSIAN IMPRESSIONS

Moscow Is A Chilly Place

Americans are visiting the Soviet Union in increasing numbers, and one who did so recently is Sam Varnado, head of Systems Analysis Division 5742. Sam was one of five American scientists invited by the Russians to participate in a fusion reactor workshop. His itinerary took him to Novosibirsk in Siberia, to Moscow, and to Sukhumi on the Black Sea. We talked with Sam, taking notes on his reactions to various things Russian.

Moscow— Landing at their international airport, I was struck by the way the customs people examine your passport and visa—very, very carefully, very seriously—it wasn't like England or West Germany where they wave you through with a smile.

"The city isn't what you'd call friendly. But maybe that's because it's like any other city with eight million people. You'd go out any time, day or night, and the sidewalks would be crowded. Not too many autos or, for that matter, bikes or motorcycles. But their public transportation—electric buses and the subway—is excellent. Fare is about a nickel.

"On a cold wet Sunday afternoon we noted the line at Lenin's tomb in Red Square. There were many families in it with little children, and we were told the line was about three hours long. Even the kids were very docile—I don't think Americans, especially our young people, would be that patient."

The food—"A gourmet's delight it's not. Very bland. We gave up trying to get scrambled eggs for breakfast and finally succeeded in getting them over easy after considerable negotiation. I like my coffee first thing, but there's no way to get it then. They always serve the coffee or tea after the meal.

"A good dinner runs about two bucks. Down at Sukhumi on the Black Sea we finally got some food that wasn't so bland. They use a sort of Russian equivalent of our green chili as a spice. Unfortunately, it goes on everything so that everything tastes pretty much the same.

"The best food—really quite good—is served at the official banquets. Several were given for the U.S. delegation."

Housing—"Very tight and almost entirely apartments. The homes of our Russian hosts in Novosibirsk were generally three and four-room apartments with tiny rooms."

Science—"Their labs reminded me of labs at some of our universities that aren't too well funded—crude but generally adequate. They do remarkably well with what they have, especially when you consider the meagerness of their computer support. I can understand why they are eager for us to export our computer technology to them.

"Their scientific people at our level are excellent. Peers don't hesitate to criticize each other at these meetings, sometimes in very strong terms, but when the head man—the academician—says 'it's going to be this way' you don't hear a peep. I got the impression that their top people, the ones with the title of academician, have more authority than their American counterparts in approving expenditures for experiments.

Air travel—"It's the way to go in the Soviet Union. Aeroflot is, of course, subsidized, and it's possible for a Soviet citizen to make a 1000 km flight for ten dollars or so. Consequently the planes are crowded and they aren't exactly champagne flights—in fact the most we ever got was a glass of water and a piece of hard candy on a four-hour flight to Siberia."

Dress—"One day I was strolling down the main street in Sukhumi, decked out in my double-knit form-fitting slacks, a turtleneck and blazer, and patent leather shoes. I passed a group of young Russians, males and females in their late teens, moderately dressed up but wearing the shapeless baggy pants that everyone wears. They sure gave me a long once-over. Maybe it was a little wistful."



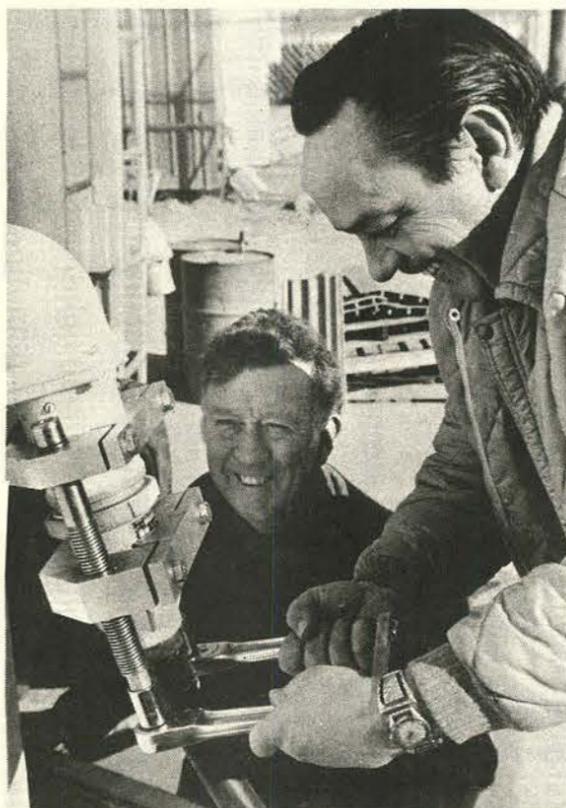
New Tool Solves Connector Problem

Leo Dunn (9414) and Gerry Hastings (9655) have developed a simple device which solves a problem that has bugged Sandia field testers for years. The tool makes it easy to disconnect the large electrical cables plugged into instrumentation vans.

"Think of the problem as a lamp cord connected into a wall plug," Leo says, "only the plug is three inches in diameter, with four pins 5/16ths of an inch in diameter by two and a half inches long.

"After use in the field for three or four months with high current going through the cables, the plug is almost impossible to disconnect. The copper material corrodes, fuzz builds up, and they just won't come loose. They break when we use force with conventional tools. What we needed was something that would provide exact straight line pull in opposite directions on the mated connectors."

The new tool consists basically of two clamps connected by two threaded shafts. Two ratchet wrenches linked at the handle are used to rotate the shafts simultaneously, moving the clamps apart (or together). By clamping the opposite parts of the connector in the tool, the parts can be easily separated or mated without damage. Separation forces of several hundred pounds can be generated by the tool.



NEW TOOL — Leo Dunn (9414) and Gerry Hastings (9655) demonstrate how their device disconnects mated cable connectors on an instrumentation van. Clamps, threaded shafts and two ratchet wrenches linked at the handle make it possible to apply straight line force of several hundred pounds on the two parts of the connector.



Depression — The Common Malady

By Arlene Price
Clinical Psychologist
Sandia Medical

Depression is a major health problem in our country. Yearly, as many as eight million Americans report an episode of depression serious enough to keep them home from work or send them to the doctor. Millions more suffer depression but are afraid to admit it, not realizing that it is a normal and universal problem. The fact is that depression has no social or economic bounds. The basic problems and symptom patterns are similar for all groups including minorities, men, women and children.

Depression has been medically recognized for over 2000 years. Hippocrates, in the 4th century BC, referred to the condition as melancholia because of the belief that it resulted from an excess of black (melan) bile (chol). In the 2nd century AD Plutarch described the sufferer as a person who refused all aid and who felt he deserved to be punished.

In modern history, notable figures who suffered from depression include Abraham Lincoln, who was so depressed at times that friends were concerned about his well-being. Winston Churchill's writing alludes to the "black dog" that shadowed him throughout life and had the power to immobilize him. Van Gogh, in a notorious incident, sliced off his ear and mailed it to his girl-friend during a period of depression.

Actually, almost all of us have experienced some depression in our lives.

What is depression? How can it be recognized, and what can we do about it? Depression is defined by our thoughts, feelings, motivation, behavior and physical manifestations. In general, the depressed person tends to be unduly self-critical; he feels sad and unhappy; he loses interest in things around him; he no longer participates to the same extent in his daily activities; and he may experience somatic concerns such as loss of appetite, weight loss, sleeplessness or excessive fatigue.

Typically, depression is characterized by a sense of helplessness, hopelessness, loss. The individual may be reacting to changes in his life — death, divorce, illness — or to daily situations involving family life and work. Also, he may not be able to perceive solutions to his problems although solutions exist. Although not inevitable, one consequence of depression is suicide, the 10th leading cause of death in our country.

Fortunately, we can all do something about depression if we recognize its signs. First, seek professional help. Your physician or a mental health agency can help. Here at Sandia, as staff psychologist in the Medical Department, I can offer advice and suggest referrals.

But whether depressed or not, all of us can help ourselves cope with the problem:

- We can try to keep tensions within manageable bounds, and we can talk over problems with friends.
- We can pace ourselves through the day and plan our work so as not to feel overwhelmed.
- We can reevaluate our personal goals and the standards by which we judge our performance; if need be, we can adjust



Arlene Price

them to more realistic levels — And finally, we can learn how to relax; sometimes physical activity — participating in a sport or exercise — can bring relaxation.

The point is something can be done about depression. It is not mysterious. Don't be reluctant to seek help.

As part of the mental health program here at Sandia, we have developed two videotapes, one of which describes my role in the Medical Department and how I can be of help to Sandians; the other tape deals with recognizing the signs of depression and what to do about the condition. Contact me at the Medical Department on 4-1057 to arrange a showing.

Sympathy

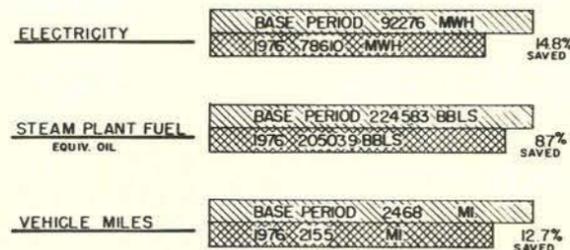
To Richard Yoshimura (5432) on the death of his mother in Holt, Calif., Jan. 30.

To Ralph Rayner (9572) on the death of his wife Feb. 1.

To Ruth Bontrager (3532) on the death of her mother-in-law in South Bend, Ind., June 29.

ENERGY SAVINGS

COMPARED WITH USAGE IN BASE PERIOD - JULY 1972 THRU JUNE 1973
CURRENT REPORTING PERIOD ENDING DEC '76



commuting
information
DIAL 4-RIDE



FUN & GAMES

Boating—The Coast Guard Auxiliary is again offering courses in boating safety. Basic Skills and Seamanship starts Feb. 17 and runs once a week for 13 weeks from 7:30 to 9:30 p.m. Principles of Safe Sailing starts March 8 and runs once a week for 7 weeks from 7:30 to 9:30 p.m. Classes are held at the 1st National Bank, San Mateo and Central. Cost is \$6 for the first family member. Contact: Curt Mueller, 299-8074; Ed Bultmann, 821-0672; or Ben Gardiner, 298-0116, to sign up or get additional information. Most insurance companies offer a reduction in premiums for boat insurance upon completion of either course.

* * *

Triathlon of Albuquerque—Is set for Sunday, March 20, starting time 8:30 a.m. Contestants will set out from the Base gym (east side) on their bikes for the ten-mile circuit. Completing the bike phase (at the gym), they will then run five miles, winding up at the Olympic swimming pool behind the gym where they will conclude the Triathlon with a quarter-mile swim. There are no scheduled pauses between the three phases. Winner has shortest elapsed time overall. Twenty people, including two women, have thus far signed up. Entry blanks and other info: LAB NEWS, 4-1053.

* * *

Orienteering—With the Triathlon as a warmup, you should be ready for the state's first competition in orienteering, which a recent article in Time magazine defined as "speed hiking over a prescribed course in unfamiliar terrain, using only a compass and a map to navigate." It's a kind of race, but speed alone doesn't determine the winner because, in your haste, you may miss one (or more) of the checkpoints on the course. In fact, many contestants do the course at a fast walk. The first event, over a five mile course with 12 checkpoints, is being held next month in the Tome area. If you're interested, send a stamped, self-addressed envelope to: Orienteering Race, General Delivery, Tome, N.M. 87060.

* * *

Volleyball—League play starts at the end of March. According to Marshall Berman (5411), "B and C teams are pretty well organized but we need more A players." If you are interested, call Marshall, 4-1545.

* * *

Golf—The Sandia Women's Golf Association is holding a cocktail party for new, prospective and current members on Tuesday, Feb. 22, at 4:45 p.m. in the El Dorado Room of the Coronado Club. For additional information on women's golf, contact Mary Gonzales (2124), president, 4-8609.

* * *

Tennis—The Coronado Tennis Club is still open for membership. If you are interested, contact Phil Stanton (5131), 4-1097; Joe Tillerson (5162), 4-5575; or Lewis Sisneros (3723), 4-7927.

* * *

Bike Maps—New 1977 Bikeways Maps of Albuquerque are now available in the LAB NEWS office, Bldg. 814. No phone calls, please.

Take Note

Frank Tuffs (9750) informs us that the public is invited to a forum titled "APS—A Time for Healing" on Feb. 15 at 7:30 at the First United Presbyterian Church off I-25 at the Grand/Central exit. Presentations will be made by APS superintendent Ernest Stapleton, ACTA president Lydia Wright, former school board member Hank Willis (3520) and North Area Citizens Advisory Council chairperson Mag O'Keefe. A panel discussion on communication and organization will follow.

* * *

Emery Chavez represented the Labs at last month's American Indian Advisory Committee meeting, hosted by ERDA's San Francisco Operations Office. The committee examines ways and means to encourage young American Indians to continue their education and to enter industry.

* * *

A young man lies paralyzed from the neck down in St. Joseph's Hospital. A gymnast, he fell while practicing on a trampoline and injured his spinal cord. Dr. Herman Weiss, the hospital's chief orthopedic surgeon, is searching for ways to rehabilitate this young man as well as other



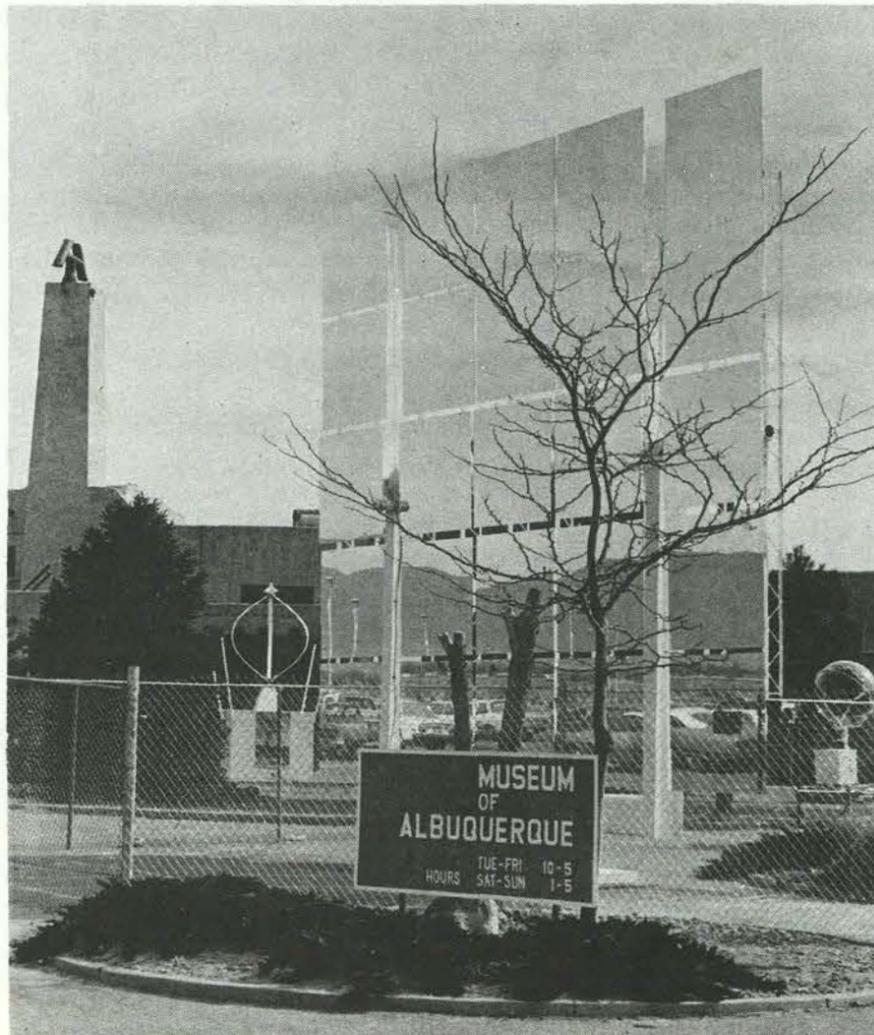
GREEK TRAGEDY it's not. It's a swinging modern version of a Greek satire, Aristophanes' *The Birds*. Crawford MacCallum (5231) plays a buzzard, Patty Davis (9572) a flute. *The Birds* plays at the Vortex Theatre (106A Vassar SE) Feb. 11-13, 18-20, and 25-27 at 8 p.m. Admission is \$2.50; reservations not required.

patients with severe afflictions. Dr. Weiss believes one approach would be to use special design apparatus, but St. Joseph's is a little thin on the engineering talent needed to come up with workable equipment. If you're interested in volunteering some time to help Dr. Weiss, call LAB NEWS on 4-1053 for further information.

* * *

When you get your new FTS directory, don't throw the old one away—drop it off at your building's recycle center.

* * *



SANDIA LABS is providing a dozen of the displays for the current "Energy and Society" exhibit at the Museum of Albuquerque. Other agencies and private firms are cooperating in an impressive show which deals with energy generation of the past and possibilities for the future. Coordinating Sandia's participation in the exhibit is Community Relations Division 3163. The exhibit will close March 13.

feed^oback

To get a response to your comments and questions about Sandia Labs, complete a Feedback form [available near bulletin boards] and return it to the Feedback administrator. The substance of questions and responses of wide interest is published in LAB NEWS.

Q. Why has Sandia changed from Xerox copy machines to IBM and Van Dyk?

A. The primary reason for replacing Xerox machines in some locations with either the IBM II or the Van Dyk 4000 is cost. Sandia Labs evaluates new and competitive machines as they become available on the market as do other government installations.

K.A. Smith - 3100

Q. To whom should I direct a request for better custodial service?

A. Any questions concerning type, quantity, or quality of custodial service rendered in any given area should be directed to Organization 3422, phone 4-2444, 4-4146 or 4-8556.

Any malfunction of fixtures should be referred to Telecon, 4-4571.

D.S. Tarbox - 3400

Q. I feel the time has come to end Sandia's noble experiment with the flexible lunch period, doing away with the limbo condition that now exists between 11:30 a.m. and 1:00 p.m. Let's regain an hour of productivity.

A. The 30-minute lunch period was adopted in November of 1973 in response to the President's request for greater conservation of energy and in cooperation with the Air Force and AEC facilities on the Base. The Sandia Bulletin announcing this change states that "cutting building occupancy by half an hour will represent a significant saving; in addition, we will be conserving a good deal of gasoline by reducing noon-hour driving, increasing car pools and busing." Our experience is that these expectations have been realized to a significant extent.

To make maximum use of available restaurant facilities, employees were scheduled for half-hour lunch periods between 11:30 and 1:00. Since the need to conserve energy continues and since no additional restaurant facilities are available, the procedure will not be changed at this time.

J.R. Garcia - 3500

Q. As a new employee I am appalled by the cafeteria in Area I. It is especially distressing since the 30 minutes allotted means employees don't have time to go outside the area for lunch. I have asked more senior staff members and they are as perplexed about the cafeteria as I.

A. You ask whether anything can be done to "upgrade the quality and selection of fare in the cafeteria so employees can obtain an acceptable lunch in the time allowed?" The question is hard to answer because "acceptable" is, of course, a highly subjective criteria. The problem we face is

pay. This problem is further complicated in these days of rising costs by the fact that we all remember "how it used to be."

You are right in stating that the half-hour lunch break restricts employees to eating on base. Many employees prefer to carry their lunch; the rest may use the Coronado Club, the 839 Cafeteria, the ERDA cafeteria, the Military Cafeteria, or the various vending machines in the area. The food served at the 839 Cafeteria is cooked at the Coronado Club and transported to Building 839. Some loss of quality from this process is unavoidable.

If the plans for a new cafeteria east of Building 860 outside the Tech Area materialize, food will be cooked and served on the premises. Better quality should result. In the meanwhile, you might want to call Dave Foster, the local Szabo manager, to discuss your thoughts on what constitutes an "acceptable lunch." You can reach Dave on 265-6791.

J.R. Garcia - 3500

Q. I understand the Labs will no longer stock carbon sets for internal memos, but that we may request them on a purchase requisition. I can't see the logic in this. It is so much easier and economical to roll in one or a few tissues than to run xerox copies of each memo. In addition to the obvious dollar savings, sometimes one's xerox machine is nonoperational.

A. You have some good comments regarding the use of copy sets vs. making all copies on Xerox duplicating machines. Unfortunately, though, many secretaries almost refuse to use carbon. They justify this by saying that it takes too long to erase and correct mistakes when using carbon paper. They compare correcting mistakes on two or more pages of carbon copies, and resulting smear problems, with the quick, simple use of snopake. Because of this the use of the copy sets referred to in your feedback comments dropped to such low usage that we could not justify keeping them in stock in General Stores.

However, when we decided to take carbon sets for internal memoranda out of stores, we intended that plain carbon sets be substituted. Hopefully, secretaries will not object to using the plain copy sets — only the words "To" and "From" are missing — and the plain sets are in stores.

C.R. Barncord - 3200

Q. For a short time, wood shipping crates and cartons were put in the scrap pile and the gates opened from 4:15 p.m. to 4:30 p.m. Fridays. Now most of those crates are being hauled to the city dump grounds. The gates are still being opened, but is there a particular reason these crates are not put in the scrap pile?

A. It is a routine practice at SLL to save and reuse wooden crates and cartons for various shipping and storage packaging

needs. The physical condition and/or the hazardous nature of the materials transported (such as radioactive or toxic materials) within these containers determine their acceptability for reuse. Also, since these containers are stored outside for further use, environmental degradation can result in their disposal. In most cases, the containers hauled to the dump are unfit and/or unsafe for reuse by anyone. In a few cases, some containers filled with other scrap materials have been hauled directly to the dump. Whenever possible, a sincere effort is made to make surplus containers available to all. Incidentally, the scrap yard is open on Fridays from 4:15 p.m. to 6:00 p.m., rather than 4:15 p.m. to 4:30 p.m.

C.H. DeSelm - 8200

Q. Why is the self-service stockroom in Bldg. 802 so poorly stocked? For example, I went there today to get a few [5] 4 foot lengths of hook-up wire. I counted over 40 empty spools on the racks. Of course, I didn't get the colors I needed. Several times I've had to make a trip to the Bldg. 880 stockroom to get what I need.

A. For the 15-month period ending last September the self-service stockroom in Bldg. 802 was stocked with material valued at \$348,000. However, there are occasions when an out-of-stock condition for material is experienced.

Due to an oversight in replenishing stock, the hook-up wire in question was not ordered from General Stores and placed in Building 802 self-service stockroom. The out-of-stock condition for hook-up wire has been corrected and at present there is sufficient material in stock to accommodate, for approximately a 30- to 60-day period, day to day repair and maintenance activities provided employees do not withdraw an excessive amount of material to support their requirements.

If continued problems are encountered concerning the availability of stock in the Building 802 self-service stockroom, please contact F.A. Baczek, 4-7566.

L.S. Conterno - 3700

Q. What arrangements are being made for motorcycle parking between building 831 [Medical] and gate 4, now that the portable metal buildings have been completed?

A. The Safety Organization and Plant Engineering have reached agreement on traffic changes which will allow a return to use of the concrete slab which was installed for motorcycle parking. It is planned to have motorcycles enter and exit at the NW corner of the slab (in front of Medical). Changes to the barrier around the slab, because of pedestrian interface, will have to be made. Safety plans to issue a traffic bulletin when this slab is reopened.

R.E. Hopper - 9700

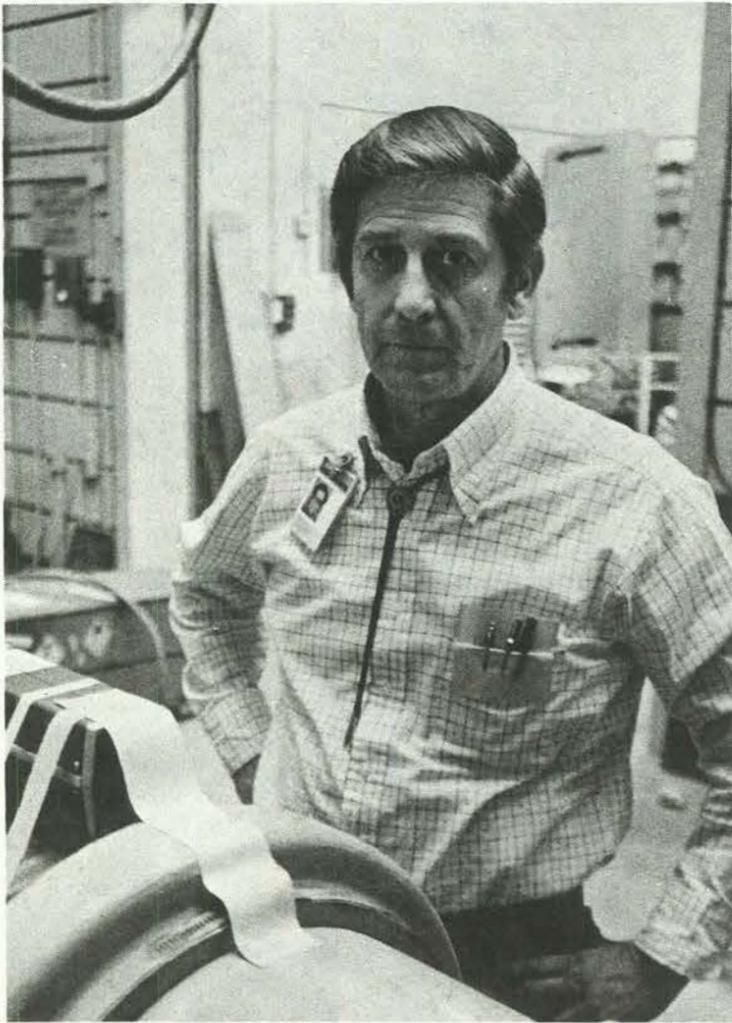
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LAB NEWS
FEBRUARY 1977



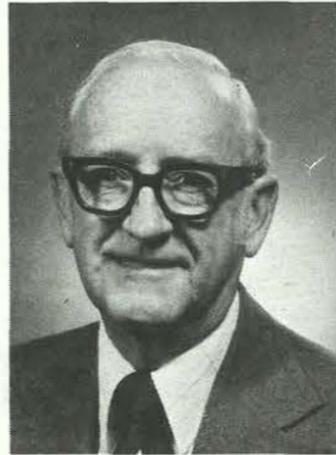
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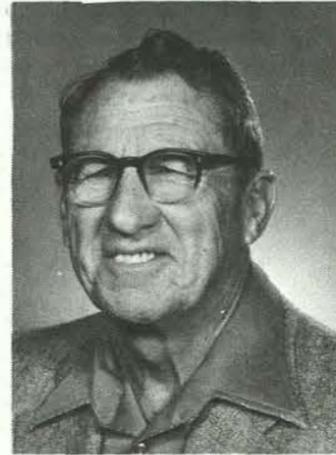
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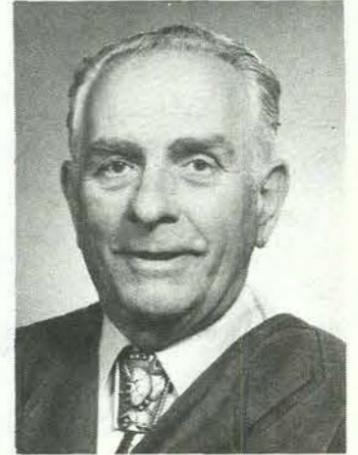
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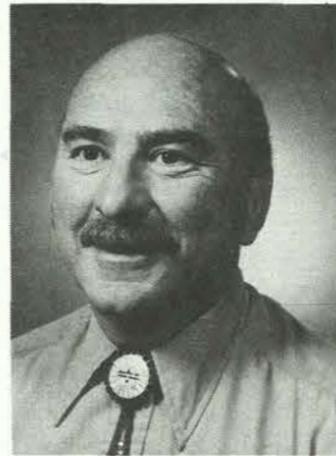
James Kelly-2000 25



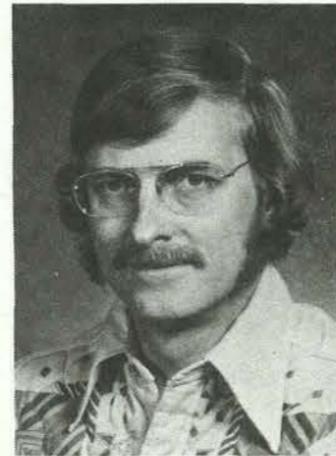
Lamar Treadwell-4323 25



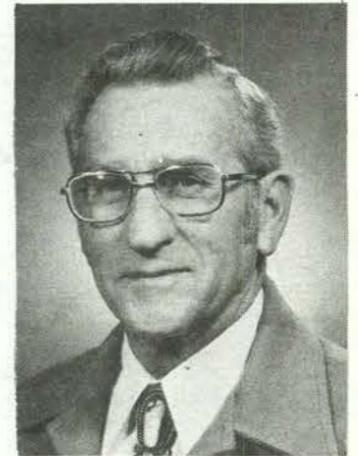
Roxley Kent-2316 25



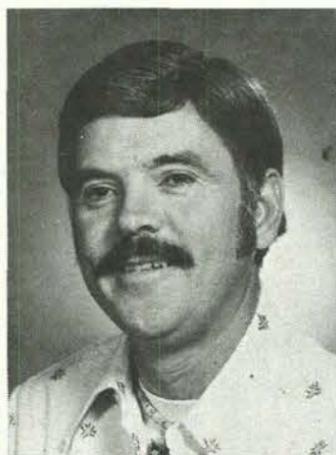
Marcel Reynolds-1733 20



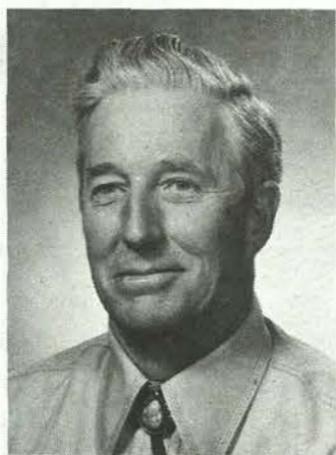
Robert Huguen-1353 15



Joseph Gregory-1213 25



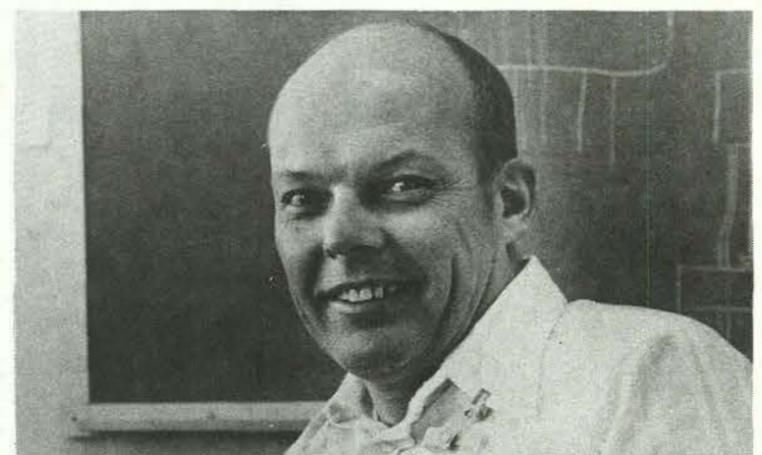
Fred Bauer-1245 25



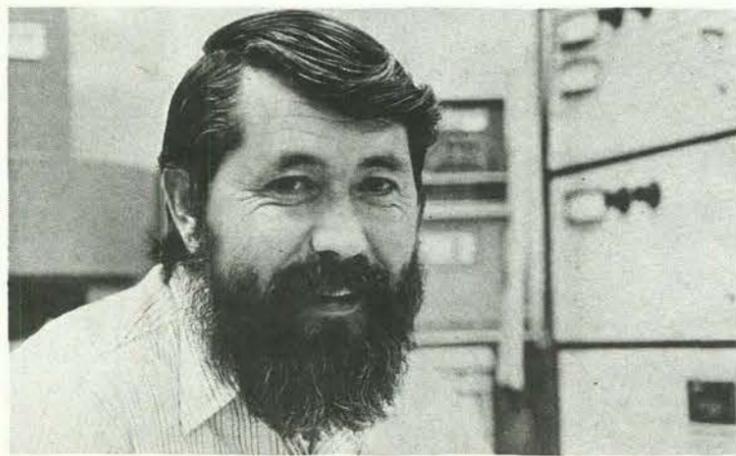
Lane Peterson-9523 25



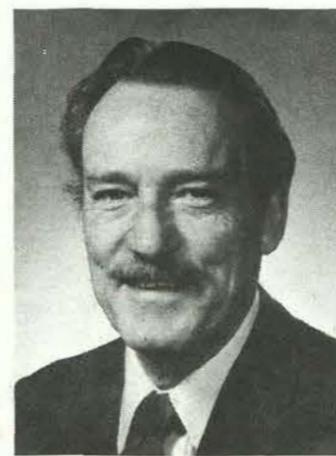
Earl Brooks-1710 25



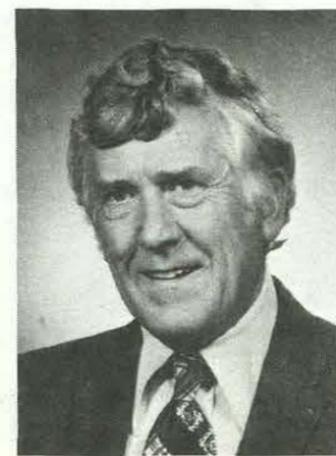
Richard Eno-1733 20



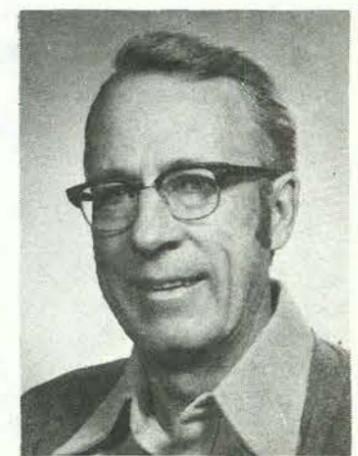
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George Thorne-3512 25



James Jones-9512 20



George Duke-1752 25



Walt Troy-3433

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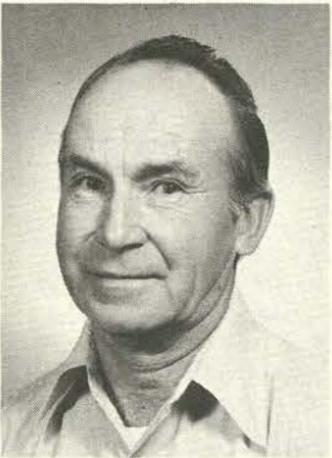
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Lyle Davis-2142

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Manuel Chavez-3421

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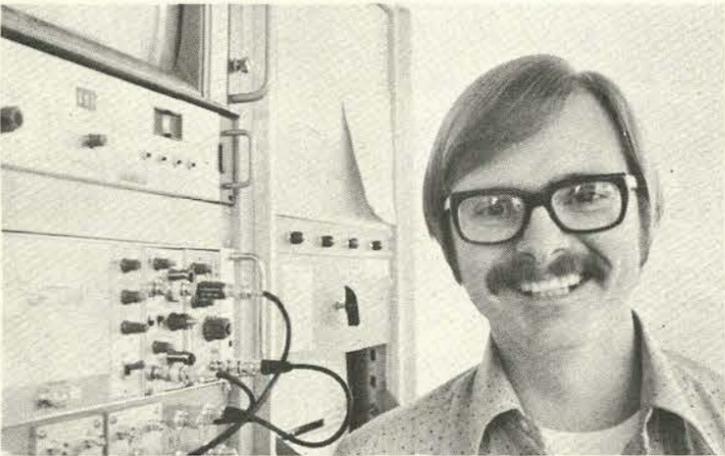
Robert Wehrle-2522

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Richard Davis-4338

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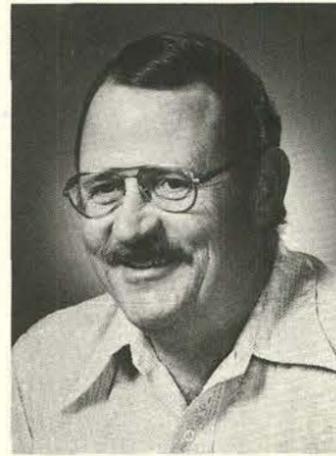
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W.B. Norwood-4121

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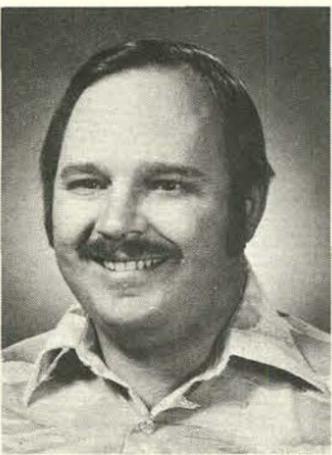
Bob Manhart-3151

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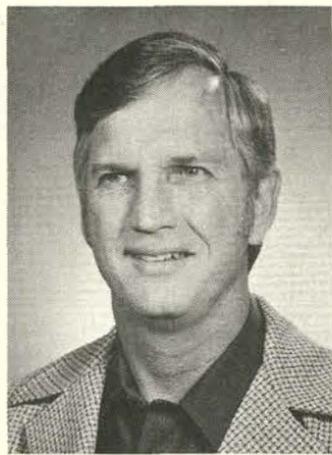
Ralph Fries-4314

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Robert Varga-9652

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Don Pitts-3213

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Wallace Hansen-9655

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Terry Mason-9571

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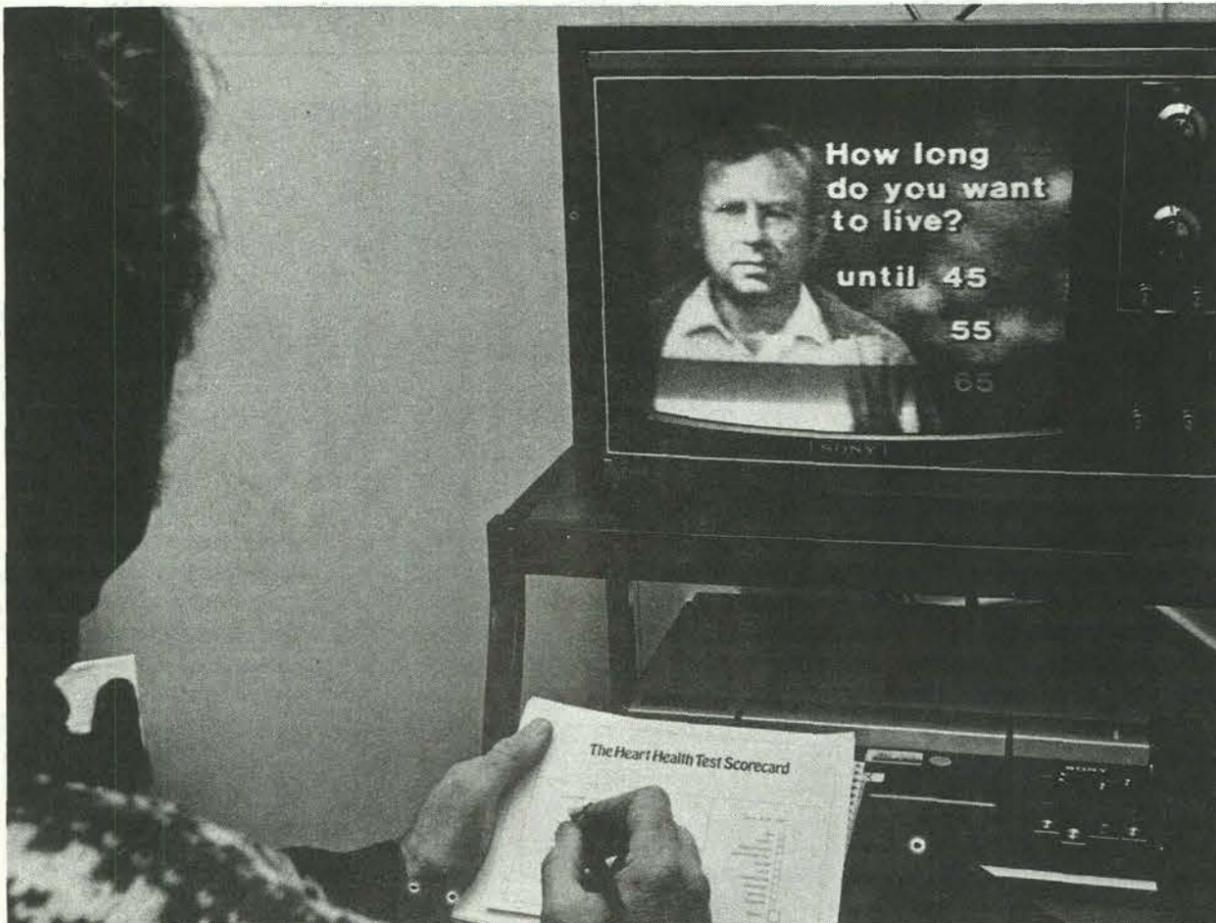
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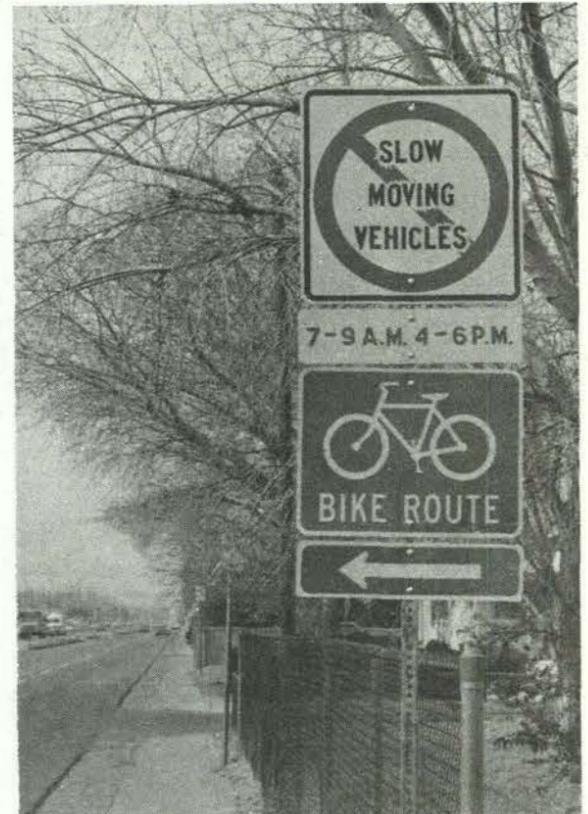


Neal Rozell-9753

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HOW LONG DO YOU WANT TO LIVE? is the provocative title of this videotape that will be shown in theatre building 815, outside the Tech Area, on Thursday, Feb. 17, at noon. Prepared under the Stanford University Heart Disease Prevention Program, the 45-minute film offers a quiz that enables you to calculate your risk of a premature heart attack and, at the same time, suggests ways to reduce that risk. Drs. Mossman and Ewing from Sandia Medical will be on hand for discussion after the showing. Bring a pencil.



UNLESS you can move that Schwinn Special along at 35 to 40 mph, you'd better stay off Candelaria between Carlisle and Juan Tabo, at least during the hours indicated on Monday through Saturday. A "Slow Moving Vehicle" is one which impedes traffic, and bikes, pogo sticks, skate boards and the like generally qualify. The signs are up, and word from APD is that citations will be issued to slowpokes.

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.

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 ERDA employees.
6. No commercial ads, please.
7. Include name and organization.
8. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

MISCELLANEOUS

IN-THE-WALL elec. oven, used. Frigidaire, complete, needs replacement broiler pan, \$50. Shoup, 299-6360.

PIANO, upright, antique 1881 Wegmen, stripped for refinishing, \$50. Esch, 292-0754.

SINGER Zig-Zag sewing machine, walnut cabinet, buttonhole attachment, \$80; Raleigh Sprite 10-spd. bicycle, many accessories, \$110. Sheives, 821-9285.

AMMO, 30 cal. M1 carbine, new GI ball, \$750 box of 50 rounds. West, 345-0165.

SKIS, Atomic 205's w/Nevada bindings, boots & poles included, best offer over \$125. Baca, 299-3340.

TIRE CHAINS, bar reinforced, fits 6:40-15, 7:35-14, 7:35-15, 7:00-14, 6:50-15; \$15. Carnicom, 281-3421.

TWO SWEDISH modern chairs, \$150 each. Pope, 255-6702.

SKI BOOTS, maroon Henke, 6 1/2 or 7, \$10; Vega parts, engine runs but has scored block, \$45. Bassett, 898-1840.

4 PEERLESS 11-15 flot track, all terrain tires mounted on 6-lug Chevy wheels w/1 pr. chains, \$225. Escin, 247-9166.

35MM REVERE slide projector, \$20; Kodak Signet 35mm camera (Argus C-3 counterpart) w/flash attachment, 3.5 lens, \$25. Atkins, 298-5762.

CABOVER CAMPER for compact truck, sleeps 4, stove, sink, ice box, jacks, intercom, \$750. Martin, 299-6768.

TOPCON 35mm camera, Topcon 135mm telephoto lens, \$175 for both Super 8 movie camera & projector, \$150. White, 293-2219.

MOBILE HOME, '65 ArtsCraft, 12x52, partly furnished, 2 bdrs., washer, \$4500. Shively, Box 310, Bernalillo, 87004, 867-5439.

ADDING MACHINE, elec., paper tape print-out, Smith-Corona, \$35. McIntire, 294-5884.

TV, RCA 24" color console, needs work, make offer. Whelchel, 293-8775.

17' TRAVEL TRAILER, sleeps 6, ice box, 3-burner stove, oven, heater, 3-way lights, elec. brakes, no potty, \$1200. Brown, 296-9009.

FIREPLACE heating grate, 19 1/2" wide, 19 1/2" high 17" deep. Haycraft, 299-3220 evenings.

TYPEWRITERS: manual Royal, \$30; Olympia std., \$40; chrome Sunbeam Mixmaster w/stainless steel bowls, \$25. Bear, 881-7128.

DOUBLE DOOR steel wardrobe, 36" wide, \$30; imitation mink stole, \$20. Benderman, 298-7354.

WHITE Rotary sewing machine, straight stitch, w/cabinet, \$50; 72-75 Travelall shop manual, \$10. Caskey, 294-3218.

PIANO (practice); canning jars & equip, basketball basket, backboard. Anderson, 299-5727.

DRIVER, Wilson staff, std. length & shaft, used 1 season, \$16. Holmes, 292-0898.

DOUBLE BED FRAME, white French provincial four-poster w/canopy, new value \$143, sell for \$60. Ripi, 298-5170.

2 FIAT RIMS w/mounted usable radials, 165-13, both for \$25. Lane, 298-3366.

TRAILER, self-contained, AC, new battery, sleeps 2, 16' Santa Fe. Turner, 344-7082.

REMINGTON elec. adding machine, \$25; city garbage bags, \$4.50 per box of 50. Bagley, 294-4706.

4 MICHELIN radial tires, size 2:15x15, \$95; 4 Chevy 5-hole 14" rims, tires & hubcaps, \$36. Snelling, 294-5751.

MACRAMES, Lovato, 247-2854.

CROSS-COUNTRY light touring skis, no-wax fiberglass, 195 cm, bindings, used 5 times, \$40. Wilson, 344-5373.

AQUARIUMS, complete set-ups, 5 and 10-gal., plus other accessories. Van Deusen, 299-4328 after 6.

GARAGE SALE including arts & crafts, 10 a.m. - 4 p.m., Feb. 19, 20, 26 & 27, 5902 Hannett NE, Brown, 265-2831.

SONY AM-FM tuner, Panasonic home 8-track, Loyds speakers, \$80; 2-yr.-old neutered house cat w/shots, free. Campbell, 294-6000.

CHAIN SAW, Homelite XL model, auto. oiling, 10" bar w/carrying case, \$90. Wilkinson, 299-8327.

TENT TRAILER, '66 Nimrod, \$180, sleeps 4 w/more possible, no other facilities. 76 license. Luhrs, 281-3875.

CRIB, Cosco, w/mesh sides for safety, full-size, \$20; high chair, \$8. DeVore, 266-6159.

DINETTE table, formica top, 35" x 58" & 6 chairs, \$40. Eldredge, 881-4528.

BUSHNELL 7x50 Bino-Foto binoculars w/adapters for single or twin lens reflex cameras, for viewing or photography, \$75. Goodwin, 266-6216.

HI-FI SYSTEM: Grommes amplifier, \$30; Garrard auto. slim turntable, \$30; Frazier walnut loudspeaker, \$50. Quinlan, 296-1852.

GERMAN 7.65 mm auto. pistol, .32 cal., \$45 or trade for sword or knives. Smitha, 881-1001.

CUSTOM GUN STOCK refinishing & stock repair; also minor gun repair. Malin, 344-6981 or 344-9337.

150 BALES alfalfa, 4th cutting, covered all winter. Hansen, 869-2716.

2 BOY'S suede jackets, \$5 ea.; bathroom vanity & faucets, 22x27, \$25; ceramic tiles, pink & white, make offer; plastic bead curtain, 15 1/2/8x 34 1/2", \$2. Lohkamp, 298-6494.

CAMPER SHELL for short wide bed; saxophone & guitar. Herrera, 836-0765 after 5.

WATER SKIS, 2 pair, tow rope, \$40 for all. Falacy, 881-1802.

SKIS: Head std., 180 cm, Salomon bindings, \$45; Head 320, 193 cm, Nevada Grand-Prix bindings, poles, \$50. Anderson, 299-5447.

TWO G60x15 fiberglass belted tires, mounted on Ford 8x15 U.S. Indy mags, best offer. Binder, 299-2937.

DRIVER, Golden Pro, graphite, reg. shaft, \$37. Knox, 255-3145.

TRANSPORTATION

'69 **MUSTANG** Grande, PS, AT-V8, AC. Miziker, 296-4601.

'74 **FIAT** stn. wgn., radials, AC, \$2200. Pope, 255-6702.

'73 **350cc** motorcycle, \$525. Gallegos, 344-3290 after 5.

'72 **FORD** Courier, 44,000 miles, HD bumper, CDI, steel belted radials, will consider trade, \$1775 NADA. Lackey, 898-6638.

'67 **RAMBLER** Classic, 327, AT, AC. White, 293-2219.

'73 **CAPRI** 2600 V6, factory air, 4-on-the-floor, disc brakes, \$1950. Montoya, 883-9115.

'74 **OPEL** stn. wgn., 1900 engine, 30,000 miles, factory air, AM-FM, radials, \$2095. Weig, 883-7333.

'67 **CHEVY** stn. wgn., 327 V8, PB, PS, AT, AC, new battery-starter-water pump-paint-upholstery- brakes, \$700. Whelchel, 293-8775.

'71 **CHEVY** Malibu, 4-dr., V8, AT, PS, AC, 49,000 miles, \$1650, \$100 under book. Schultz, 881-7588.

'71 **VW** Super Beetle, sunroof, new tires, AM-FM radio, new engine w/6 mos. or 6000 mile guarantee, \$1600 or negotiable. Wilson, 298-0078 after 6.

BOAT, 15' Lonestar w/canopy, 35 HP Johnson elec. start outboard, tilt trailer, \$650. Pacini, 881-8075.

'74 **CHEVY-10** 350 VAN, AT, PB, AC, carpeted, curtains, oversize mag wheels w/locks, side pipes,

equipped for CB, \$3700. Ripi, 298-5170 after 5.

'74 **TM-400 SUZUKI**, Cantilever Mulholland shocks, \$400. Healer, 298-6967.

MAN'S 3-spd. bicycle, \$10; rear bike carrier for child, \$3. Anderson, 299-5727.

'65 **CHEVY** Malibu, AT, AC, 6-cyl., PS, PB, \$400 or trade for motorcycle. Young, 842-1938.

'71 **SUZUKI** 250 X6 Hustler, \$300 or best offer. Walter, 293-5020 after 5.

'72 **MERCURY** Comet, PS, AC, AT, 4-dr., 59,000 miles, below book at \$1495. Thunborg, 898-0863.

'72 **4WD BLAZER**, 350 V8, AT, AC, PS, Positraction, \$300 below book or best offer. South, 821-4303.

'14' **BOAT**, 50HP Johnson outboard, trailer, \$900. Falacy, 881-1802.

'63 **FORD** stn. wgn., lifetime battery & muffler, almost new tires, \$300. McIlroy, 293-2458 or 299-4977.

'63 **T-BIRD**, PS, PB, AT, 2-dr. HT, white over blue. Herrera, 836-0765 after 5.

'73 **FORD** Torino, 8-cyl., 4-dr., PS, AC, AT, \$1500. Stevens, 867-5713.

'73 **VW** square back, 2-dr., 51,000 miles, stick shift, 5 new tires, 8-track, 2 speakers, book \$2350, asking \$2000. Bauer, 299-4688.

'72 **FORD** F-250 pickup, 3-spd., AT, PS, PB, AC, radio, custom cab, 360 CID, V8. Nelson, 265-7482.

'69 **SCOUT**, V8, 4-wd, R&H, luggage rack, low mileage, \$1990. Clauser, 296-1948.

'74 **FORD** Courier w/camper shell, 8000 miles, \$2775 or best offer. Abbin, 296-7678 or 883-8665.

REAL ESTATE

SEVEN ACRES, Bosque Farms, \$7500/acre. Baca, 869-6637 after 3:30.

3-BDR. HOUSE, kitchen, DR, LV, den, 1 1/2 baths, carpeted, FHA appraisal \$26,700, sell for \$26,300. Metzgar, 345-1668 or Gallegos, 831-2393.

PROPERTY on Brazos River near Chama, 4400 ft. river frontage, excellent access, \$2200/acre. Baack, 296-2312.

FOR RENT

LAKE FRONT CABIN, Vallecito Lake, Colo., 3-bedrm, fp, fishing, sailing, horseback riding, Durango, Silverton, Mesa Verde nearby, reservations. Croll, 881-7235.

NEW 1-bdr. apt., frost-free refrig., private patio, furnished/unfurnished - \$210 or \$180/mo., utilities paid. Aragon, 541 Espanola SE, 293-3238.

3-BDR., 4-bath villa, tropical Mexico, resort club facilities, ocean beach, sail-fishing, golf, tennis, weekly/

monthly rates. Brass, 293-9728.

CONDOMINIUM: Purgatory Ski Basin, sleeps 6, linens, fully equipped, kitchen, fp, ski to the lifts, reservations. Smatana, 299-6278.

WANTED

TAILLIGHT LENSES for '55 Studebaker Tsutsumi, 898-7193.

CHEATER music books, one liners. Hayes, 298-4682.

WANT TO RENT dial gauge to set ignition timing on motorcycle, willing to take full responsibility. Seidner, 298-4685.

SKI BOOTS, 6 1/2; skis, 150 cm. Lutheran, 293-8364.

GOOD ELECTRIC WATCH w/luminous dial & sweep second hand. Shunny, 265-1620.

OLD TRAINS, no H.O. please, will purchase. Shepherd, 294-7297 after 5.

ANVIL & BLACKSMITH tools; 10" table saw. VanDen Avyle, 898-6474.

STEEL 2-step folding step for pickup camper. Gregory, 867-2432.

TRAYS for 35mm slides, 36-compartment Yankee Model R36 or equivalent, for Revere & Wollensak projectors, or Revere MT-836. Stevens, 299-6086.

SHOP manual for '72 International Travelall. Donohoe, 299-4076.

TRUNDLE BED, sturdy, twin size. Olman, 298-5024.

SERVICE MANUAL for '68 Plymouth Baracuda. Esch, 292-0754.

FABRICS: wool, cotton, silk or nylon; pieces left over from sewing, partly worn articles, Korak, 266-7445.

CHEST-OF-DRAWERS, not over 34" wide, prefer dark finish. Seaburn, 299-2215.

ACETYLENE & oxygen tanks with or without regulators. Hansen, 869-2716.

CASSETTE TAPE PLAYER, stereo; speakers not needed. Falacy, 881-1802.

SOPRANO SAXOPHONE. Wentz, 881-7125.

LOST AND FOUND

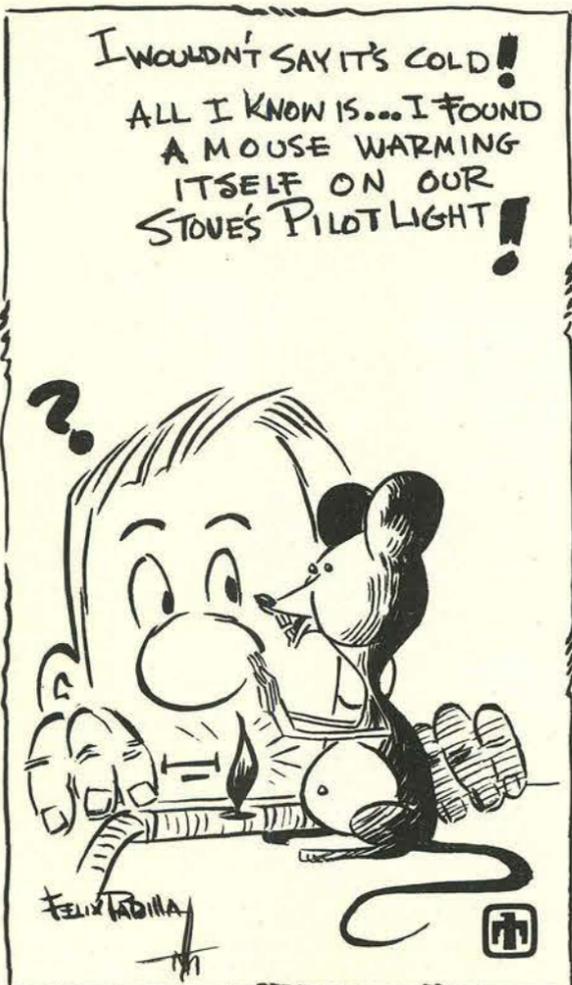
LOST - Man's black LH lined glove, silver/turquoise heishi necklace w/inlay center triangular stone, green wallet w/checks & credit cards; man's blue ski jacket, blue zippered briefcase w/papers and engineer workbook; necklace w/turquoise beads w/dangling heishi.

FOUND - Ladies black size 6 shoes, hearing aid from Regent Standard Forms, "Schlage" key, ladies' navy blue knit gloves w/leather palm. **LOST AND FOUND**, Bldg. 832, tel. 264-1657.

FRIDAY	SATURDAY
11—HAPPY HOUR BBQ RIBS BUFFET Adults \$3.50 Under 12 1.92 CHARLIE B	12—TEEN DANCE 7:30-10:30 MAX Mbrs. .50 Guests \$1
18—HAPPY HOUR POT ROAST BUFFET Adults \$3.25 Under 12 1.92 COUNTRYMEN 4:30—Retiree Night	19—CHINESE NEW YEAR Cocktails-6 Dinner-7 MELLOTONES Mbrs. \$5.75 Guests \$6.75

MAKE — final plans now (and pick up tickets by tomorrow) for the centuries-old but brand-new Saturday Night Special coming up on the 19th. It's a Chinese New Year, and John Blaze is coming into town to do the QA work on the sweet and sour pork from Hunan, jade shrimp from Peking, beef with green peppers from Szechwan, chicken Cantonese from Canton (you thought maybe Geneva?), sub gum fried rice from Canton, egg roll, fried wonton, Chinese tossed salad with snow peas, bean sprout salad, jasmine tea, and fortune cookies. Sake will be available as an authentically Oriental pre- or postprandial libation. Chopsticks will be available as an authentically Oriental prandial utensil. The entertainment continues the contrasts—see the photo and cutline. *The Mellotones* will give you a yen to dance later.

YOUR — lil ol' heart will just go "Pitty-Pat" (that's cause Pat can't make it) tonight when the Club shows off its 0.00484-acre spread. It's stocked with barbequed ribs, corn *au naturel*, potatoes



fried in the Old Western (France) manner, and, of course, beans. Lots of salads too. Later, *Charlie B* makes music to make you happy. Make it on over.

WORDS — fail us (a rare occurrence) when we take typewriter in hand (a weighty matter) to tell you about the glory that's Australia and the grandeur that's New Zealand. So we won't say much except that Feb. 18 is your last chance. Info is available at the Club or from Ed Neidel or Bruce Hawkinson.

TENDER — (the legal type) is what it doesn't take as much as you'd expect of to visit London this spring. Airline fares begin under \$500 for round trip. You arrange the rest—under Ed's super-tutelage.

AND — don't forget Rio. You'll never forget Rio if you sign up now for the April 23 - May 1 jaunt. It's \$669 for the package.

SWEET — little children (both of them out there) can have their dreams come true on the Club's trip to Disneyland, Marineland, Universal Studios, and optional other attractions April 5 - 9. You know that fine print at the bottom of the contract that says prices are subject to change without notice? For the first time in recorded history, the prices have gone *down* by \$30. That makes parents only \$189 each and kids only \$129 each. (The dates have been changed to qualify for the new "peanut flight" rates.) Oh, yes, mean little kids are welcome too.

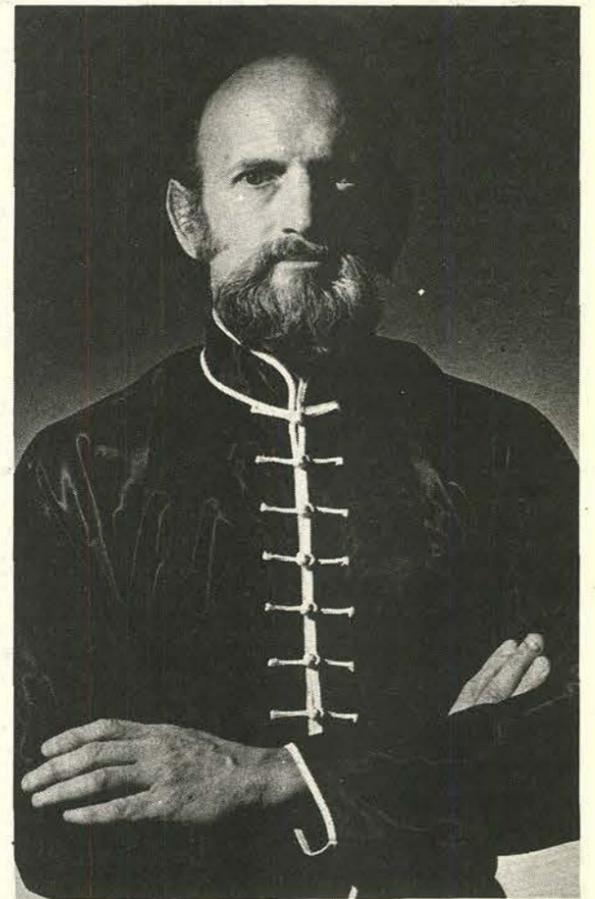
TODAY — is the last day to decide on Yucatan. Given the sights there, the dollars here aren't bad at all. Call the office now.

FOR — next Friday, the Happy Hour buffet features pot roast *jardiniere*, country-fried chicken, mashed potatoes with cream gravy, lots of other stuff. For dancing later, it's *The more-versatile-than-the-name-implies Countrymen*.

TOMORROW — teens, is the day of *Max* dancing pleasure. Parents: tickets before or at the door.

YOU — retirees be sure to remember the special Retirees Night next Friday at 4:30 in the El Dorado Room. Your host Frank Loomis will lead you to hors d'oeuvres, a Happy Hour bar, soft music, good friends old and new.

MAY — Coronadoubles become a Clubhold (not a household) word. That's Julian Lovato's fondest non-private dream at the moment. A Coronadouble is a double-sized drink of your choice in a beautiful 12-ounce ERDA/Sandia/C-Club/Wolf-pack-inscribed glass you'll want to



FRANK TREON is the only living master of the centuries-old Chinese form of meditation and self-defense known as Gohn-Dagow. While his students demonstrate, Frank will discuss the flowing motions from ancient dances which, when sped up, become an amazing defense technique. See, hear, and be fascinated at Chinese New Year on the 19th.

keep—and you can. At \$2 each, they're cheap at half the price (which, translated to logical English, means cheap at twice the price).

HAVE — you finally decided to accept responsibility for what your feet do on a dancefloor? Good. (Hear that sigh of relief sweeping across town?) Sign up now for Mike Haley's six-week course for beginners and intermediate-advanced (\$20 singles, \$35 couples) that begins on the 17th.

TO — survive the rest of this ski season and all the later ones, don't just pay lip service to safety. Pay seat service: make a sitzmark on a C-Club chair on the 15th at 7 when Gordon Lipe, nationally known ski safety type, addresses the Ski Club. Movies, other goodies too.

EAT — at one of the local Chinese restaurants on the 16th. Then come by the Club for an Oriental dessert—slides of Hong Kong by Bob Donahoe who, the Club newsletter tells us, was there with "a sharp eye, an alert mind, and a loaded camera." Which is lots better than a sharp camera, an alert eye, and a loaded mind. Travelogue Night is at 7:30 on the 16th.

THEM — Club parents as has littl'uns should oughta mark the calendar now so as not to fergit the Kids' Karnival comin' up on the 16th from 11 till 2:30.

MORE INFO — 265-6791