



SPECIAL SHIPPING CASK containing four fuel elements from Sandia Engineering Reactor is raised for radiation readings by Health Physicist Charles Berglund (3311). Work is being done in connection with final shutdown of reactor after many years of service.

## Ceramics For Imaging— Another Step Forward

A new fabrication technique that improves the optical characteristics of ferroelectric electro-optic ceramics has been developed at Sandia Laboratories. Materials produced by the new method are more transparent and more homogeneous than those made by conventional hot-pressing. Ultimately, these ceramics are expected to have application to memory and display devices similar to those used in computer systems.

The increase in transparency and homogeneity means that images generated with the ceramics have "whiter whites" and "blacker blacks." Black-white contrasts of 4000 to 1 can now be achieved compared to contrasts of about 1000 to 1 for material produced by the earlier method. Aside from making the material more useful in display applications, the greater contrasts increase the application of the ceramic in optical memory devices.

The improved process is used in the production of lanthanum-modified lead zirconate-lead titanate (PLZT), a ceramic introduced by Sandia in 1970 as a medium for optical information storage and display.

While very thin slices of the original hot-pressed material (measuring up to .25 mm) were so transparent they resembled glass, the



TRANSPARENCY is the goal in these ceramics for electro-optic applications, and Gene Haertling (2317) displays, at left, the improved transparency resulting from his new fabrication technique.

## Engineering Reactor Dismantled

Sandia Engineering Reactor (SER) has been retired after eight years of operation.

The five-megawatt steady-state nuclear reactor was shut down because the demand for steady-state reactor experiments dropped off and its regular maintenance and operating manpower costs continued. As expressed by Bob Jefferson, supervisor of Reactor Source Applications Division 5221, SER had all the maintenance attributes of a nuclear power plant but with no demand for its power.

The newer Annular Core Pulse Reactor, which can be operated in either a pulse or steady-state mode, is considerably cheaper to operate, easier to maintain and more versatile.

Used primarily to study the effects of nuclear radiation on materials and electronic components, SER had a full career. Its first self-sustained chain reaction (criticality) was achieved on Oct. 5, 1962. Five months later, it went to one and a quarter megawatts, or 25 percent of power, producing its first visible Cerenkov radiation—the bluish glow caused by the optical shock wave of Compton electrons traveling faster than the speed of light in water.

Following the last run on June 26, 1969, after its 1840th experiment, SER was placed on a standby basis. This first stage in its retirement allowed the reactor to cool. After permission was received from AEC for

complete shutdown, the 32 enriched uranium fuel elements were removed and shipped, four at a time, in a special cask, to the Idaho nuclear facility for reprocessing. The last shipment left Sandia this week.

Internal components, including control rods, reflectors, fuel storage holsters, and control rod drive mechanisms in the upper portion of the 28-foot tall stainless steel pressure vessel will be removed. After lowering the water level in the vessel, a platform will be constructed across the diameter of the vessel about halfway down; the water itself is not radioactive.

About 10 tons (six yards) of gravel will be placed in nylon bags on the platform to fill the cavity and serve as a removable shield. A serpentine tube is woven through the layers of gravel-laden bags from the core area to the top of the vessel. Thus, after water in the lower portion of the vessel is drained, air can be pumped through the tube to dry out and preserve the reactor vessel. Should the vessel and other systems ever be needed again, they could be returned to service.

Floor space formerly used in connection with SER, with the exception of the irradiation cell, will be used for laboratories.

SER's shutdown will not effect personnel requirements of Division 5221 which also operates ACPR and Sandia Pulse Reactor II.

transparency decreased with thickness. Recent investigations showed that the reduced transparency is primarily the result of microscopic voids or pores, ranging from 1 to 10 microns in diameter, in the material.

PLZT inventor Gene Haertling (2317) then discovered that the ceramic's porosity could be decreased by hot-pressing it in an oxygen environment. Reduced porosity was demonstrated by an increase to more than 99.9 percent of the maximum theoretical density as compared with the earlier value of 99.6 percent. Increased transparency of samples of about one centimeter thick is easily discernible to the unaided eye. Gene also was able to improve the homogeneity of the ceramic.

\* \* \* \* \*

The respected trade journal *PRODUCT ENGINEERING* has cited ceramic imaging work at Sandia as "the research breakthrough of 1970." In a survey of technical developments of 1970, the article states:

"Surely, the research breakthrough of 1970 that was most pertinent to design engineers was the advance in ceramic imaging announced last May by Sandia Laboratories . . . The last few years have witnessed the introduction of several new experimental systems for imaging, but the ferroelectric ceramics developed by Sandia, and now being applied at Bell Laboratories, appear to be the most promising."

Gene Haertling (2317) and Cecil Land (5153) are the principal investigators of this research at Sandia Laboratories.

# Vista New Mexico

(Ed. Note — Fred Norwood, a mathematician in Org. 1721, and a member of the staff of Chicano Studies Center at UNM prepared the following article.)

## Spaniards and Horses

Although the modern horse evolved millions of years ago in North America, from where it spread to Asia and South America, it became extinct here and was not seen again in the western hemisphere until the Spanish explorers brought 16 of them from Spain.

When the Spanish came to the Americas, they had the best horses in the world for speed and endurance, lighter than those used by knights. Even before the Moslems came into Spain with their Arabian horse, the Spanish had developed a breed suited for the semi-arid and mountainous terrain of Spain. By the time of the conquest of Mexico, the jennet, a mixture of Spanish and Arabian breeds, had evolved.

With these horses, the Spaniards were able to travel great distances under armor; with neither armor nor horses, the Indians were no match against the invaders. Horses and firearms explain why Cortes, with a few hundred men, could fight his way into Mexico City under extreme odds. The Spaniards were well aware of their advantage and wrote "of greatest importance is the horse; because with its aid we have been able to make so many and such valuable conquests, and have discovered so many regions and have spread so far in so short a time through so many and extensive lands."

During colonial times, the Spaniards took every precaution to prevent Indians from gaining possession of the horse. In New Mexico, however, the rancheros made the fateful mistake of using captive Indians as mounted herders. Horse and Indian were (and are) a particularly apt team, and mounted bands of raiding Apaches were soon commonplace. The way of life of the Plains Indians was also significantly altered by the horse, for it gave them high mobility for bison hunting and warfare.

Besides its use in exploration and conquest, the horse played an important role in the introduction of new religions to the Americas. Missions in the Southwest were situated from each other at the distance that a horseman would travel in one day. In northern Sonora (Mexico) and southern Arizona, Pimería Alta, the work of settlement was begun in 1687 by the Jesuit Father Eusebio Francisco Kino. Italian by birth, Bavarian by education, he was ordained in Spain. Father Kino founded the mission of San Xavier del Bac, the most impressive

monument that Spain left in the Southwest, located near present-day Tucson, on April 28, 1700. In 24 years of service on the border, Father Kino, "el padre a caballo" (the priest on horseback), made over 50 journeys to Indian villages, travelling up to 30 miles each day in uncharted territory.

The "American" horse came almost entirely from the Spanish stock established in New Mexico and Florida. From New Mexico Spanish horses spread to the midwest, primarily through the offices of the Plains Indians. From Florida, Spanish horses went to the English colonies. One reads, for example, that Patrick Henry was in the habit of sending to the Pawnee country "for the best and most pure Spanish breed."

With large-scale migration to the West, many new words and techniques about horses were absorbed. Things that served to characterize the cowboy as a type were largely taken over from the Mexican vaquero: utensils and language, methods and equipment. The word "cowboy," unknown before 1836, is a literal translation of "vaquero," from vaca (cow). The Spaniards brought the horned saddle, to be distinguished from the English "muley" saddle, to the New World; and long before they crossed the Atlantic, the Spanish had taken over this saddle from the Moslems.

From the vaquero, the cowboy took over and adapted in his own way, the Spanish horned saddle, bridle, bit and spur. Even the "ten gallon hat" comes from a mistranslation of a phrase in a Spanish-Mexican corrido "su sombrero galoneado" which referred to a festooned sombrero. The technique of horse-breaking as practiced by the cowboy was based directly on the technique of the "domador" or professional Mexican horsebreaker.

No language in the world is so rich in hairsplitting terms to distinguish the exact color markings and characteristics of a horse as Spanish. Many of these are part of the Southwest language of the range: alazan tostado, andaluz, azulero, barroso, bronco, canelo, cebruno, grullon, moro, mesteño (or mustang), palomino, pinto, tordillo. The cowboy has also adopted lariat from la reata, calaboose from calabozo, hoosegow from juzgado, mesa, canyon, barranca, rodeo, corral, remuda; all these, and many more, are Spanish-Mexican in origin.

Long before the move to the West began, the Mexicans had a fully developed system of brands and brand registration. Like much of the lore about cattle and horses, Mexican brands are based on the Arabian rubricas or signs used first as a signet or signature, then later added as a flourish when the writers learned to spell their names. Many Mexican brands were also copied from Indian pictographs and Indian symbols for the sun, moon, and stars. Spanish brand books and the system of registering brands were in full use in Mexico as early as 1545. Under this system, when a horse or cow was sold, the old brand was stamped on the shoulder, as a bill of sale, and the new brand was burned below this marking. The American law of brands and the various brand registration systems in use today stem directly from these ancient Spanish-Mexican customs.

\* \* \* \*

PANORAMA LOCAL, a new television show that discusses cultures of various ethnic groups in the Southwest, begins Sunday, Feb. 28, at 8:30 a.m. on Channel 7.



NEITH POLLARD

## Volunteers Sought For International Technical Service

VITA stands for Volunteers for International Technical Assistance. VITA is an organization of 6500 professional technical people who make available their technical know-how for worthwhile projects throughout the world. As it turns out, the help goes chiefly to the "emerging" nations—new countries trying to enter the modern world.

Neith Pollard, supervisor of Engineering Applications Division 2442, has been a member of VITA since 1964. He reports that the emphasis of the organization is shifting from overseas projects to self-help projects in poverty areas of the USA. Requests for assistance are increasing and more volunteers are needed.

He figures that Sandians can provide a valuable service through VITA. "Sandia employs highly trained, technical people," Neith says, "and these are the kind of people that VITA needs."

Here's how the organization works:

The volunteer files a resume listing his training, skills, interests and experience with VITA headquarters in Schenectady. When a request for assistance comes into VITA and the volunteer seems suited to the problem, he is contacted by headquarters. The volunteer then works directly with the requesting group and makes periodic reports to headquarters.

Neith has served as a consultant on one request—a project of a school in Rwanda, Africa, to make and export furniture. Neith channeled their thinking toward custom wood art items rather than trying to produce a standard product for mass markets.

"There were many problems," Neith says, "including the cost of transportation. I corresponded with the school for several months and received some satisfaction from my small contribution. The reason that I was asked to help on this project is that woodworking is one of my hobbies. So far no one has needed any help from a microelectronics specialist."

Other VITA volunteers have come up with a solar oven made from aluminum foil that is seeing widespread use in South America and a pump made from bicycle parts to bring water up from wells in remote areas of the Philippine Islands.

"Now that VITA is working on domestic projects," Neith says, "we need more management-type people to help with business surveys and evaluations of markets. We need accountants, systems people, training experts, and personnel specialists."

Interested?

Then write to VITA, College Campus, Schenectady, N.Y. 12308.

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### SANDIA LABORATORIES

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CENTREX at Livermore—First call using Sandia/Livermore's new centralized telephone service, CENTREX, is made by Sandia President John Hornbeck in Albuquerque (where Labs already has CENTREX) to Vice President Tom Cook in Livermore. One of the major advantages provided by CENTREX over the former PBX system is the capability for employees to dial outgoing calls and receive incoming calls directly without switchboard assistance.

# LIVERMORE NEWS

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## Take Note

Bruce Held of Safety Engineering and Environmental Health Division 8263 was guest speaker at the monthly meeting of the San Joaquin Chapter of the Professional Engineers Society in Stockton. He discussed the subject, "State of California Activities Affecting Environmental Quality."

Bruce was also the author of an article which appeared in the January issue of WESTERN MANUFACTURING, a magazine published for Western plant managers and engineers. Title of the article was "Acoustical Tile: When, Where, and How to Use It for Controlling Plant Noise."

Jack Wilson, supervisor of Standards and

Calibration Section 8121-1, was guest speaker recently at the monthly meeting of the Golden Gate Chapter of the Society of Manufacturing Engineers. His talk was entitled "Is the Metric System the Answer?"

\* \* \* \*

Joe McManus, supervisor of Technical Art Section 8231-2, recently judged a group of black and white prints and color slides submitted by members of the Livermore Camera Club at their monthly meeting. The judging included comments on the photographic composition, visual impact and tonal values of the entries.

\* \* \* \*

Scotty Romine of Safety Engineering and

Environmental Health Division 8263 spoke recently to a regular meeting of the Livermore Lions Club on "Industrial Accidents." His talk included a showing of the Film, "Our Aching Backs."

\* \* \* \*

Roger Baroody, manager of Product Engineering Department 8160, was guest speaker at a recent meeting of the Livermore/Amador Twin Valley Fire Chief's Association. He discussed Sandia Laboratories' history and mission and showed the film, "The Sandia Story." Sandia/Livermore, a participant in the Association's mutual aid program, hosted the meeting.



NOW YOU KNOW what a hangdog expression is. Actually, this is the happy countenance of a basset hound. Owner Mrs. Larry Posey musters the troops.



GEORGE EDGERLY (4221), past president of the Sandia Dog Obedience Club, urges his Irish setter over a barrier to demonstrate advanced skills of the dog.

## Your Dog a Dog? Send Him To School

Sunday, Feb. 28, will see about 20 Sandians and their dogs participating in an American Kennel Club-sanctioned dog show and competition at the Kistler-Collister parking lot at San Mateo and Lomas. The match starts at 1 p.m. Admission is free and the public is invited.

Promoting the show are members of the Sandia Dog Obedience Club. George Edgerly (4221) is past president of the group.

"We primarily conduct a school," George says, "to teach dogs and people how to live together. Twice a year we hold these shows with the Rio Grande Kennel Club to allow members to show their dogs and to gain AKC confirmation and ranking for their pets."

The club, a non-profit organization, starts a dog obedience class every two weeks. The fee is \$20 for the 12-week course. The class is

conducted by a club member volunteer holding a trainer rank. The dog and his owner both attend. The owner learns how to give commands, and the dog learns how to respond. The result is a well-behaved dog and well-adjusted owner.

"Since 1950," George says, "the club has trained about 2500 dogs in the basic course. Sometimes this training has made the difference between being able to keep a dog in the city or having to give him up. Any kind of dog is eligible for training. AKC papers are not required."

The club also provides other courses leading to "advanced" dog degrees. The group meets once a month for business and social sessions at 2404 San Mateo Place NE. Visitors are welcome. Call George at 898-2983 for additional information.

## AIAA Aerodynamic Testing Meet in City March 10-12

The complete velocity range, from low subsonic through hypersonic, will be discussed during the American Institute of Aeronautics and Astronautics' Sixth Aerodynamic Testing Conference, to be held in Albuquerque March 10-12.

Conference chairman Randy Maydew (9320) has arranged the meeting to provide an exchange of information on advanced facilities, new testing techniques, and new problems. Other Sandians working with him are Warren Curry (9322), administrative chairman; Amado Trujillo (9322), membership chairman; and Jim Reed (9322), tour chairman.

The 46 papers selected cover hypersonics, aerodynamic interference, flow diagnostics, laser instrumentation, dynamic stability, new test techniques, transonic testing, and ground facility/flight test comparisons.

Robert Sheldahl and George Wright (both 9328) will present "A Channel Test Device for Arc Jet Material Ablation Studies," and Danny Hartley (8351) will present "Experimental Gas-Mixing Study Utilizing Laser Raman Spectroscopy."

The sessions will be held at the Hilton Hotel.

## Sight Saved by Safety Glasses

Safety glasses are the best eye insurance against the unexpected. This was proved once again in the Scientific Glass Laboratory 4221-4 last week.

Dennis Gutierrez was making a small glass sleeve using a hand-operated press to compress powdered glass into a preliminary shape.

On the compression stroke, the steel punch unexpectedly shattered. Pieces of the tool struck the center and deeply pitted the left lens of his safety glasses. Another piece pierced his cheek. Thanks to safety glasses, Dennis' eye was not injured.

He now becomes a candidate for Sandia's Wise Owl Club—members are employees whose sight was saved through the use of safety glasses and other optical protection gear.

Since the accident, all punches in the Lab have undergone safety inspection and a protective guard has been placed around the press.



DENNIS GUTIERREZ (4221) displays a punch similar to the one which shattered recently as he shaped a part in the Scientific Glass Laboratory. Safety glasses prevented serious injury to his sight.



ONE OF the members of Sandia's Board of Directors, Joseph West, visited the Laboratories recently with his staff for discussions with President Hornbeck. Mr. West is Executive Vice President of Western Electric.

## PhD Awarded

The University of Hawaii has awarded a PhD degree in Meteorology to Barry Bodhaine, who is on educational leave-of-absence from Sandia.



The title of his dissertation was "The Role of Ammonia in the Electrical Effects of Freezing and Splashing Water Drops and Its Effect on a Thunderstorm."

Barry came to Sandia in 1963 after receiving his BS degree in electrical engineering from the University of Washington. Two years later, under the Technical Development Program, he received an MS in EE from the University of New Mexico.

## Promotions

Bruce Affeldt (8271) to Staff Assistant-Laboratory  
Douglas Cain (3428) to Mail Clerk  
Lena Mae Chavez (3521) to Steno Clerk  
Charles Herrera (3428) to Mail Clerk  
Jeffrey Tingley (3428) to Mail Clerk  
George Neufeld (4518) to Plant Technician  
Lloyd Burright (4513) to Plant Technician

## Variable Annuity Unit Value

March 1971	1.615
February 1971	1.556
Average 1970	1.417

## Anti-Smokers Close Ranks— Resent Second Hand Smoking

In our last issue, LAB NEWS carried a list of suggestions by Glenn Case (2652) advocating, among other things, the more stringent regulation of smoking within public areas at the Laboratories. The suggestions prompted several responses from anti-smokers:

"I concur wholeheartedly with all of Glenn's suggestions. Perhaps one day smokers can be made to realize they are in the minority and they do not have a right to contaminate the air breathed by non-smokers. And non-smokers might stop being apologetic for insisting on their rights to breathe clean air."

Alan Swain - 1644

"... I definitely believe the prohibition of smoking in public areas should be enforced or, rather, enacted. When someone lights up in a crowded area it isn't possible to move away from the pollutants. These pollutants burn the nose and eyes, causing temporary degradation of vision (especially for those who

wear contact lenses) and leave an irritating odor in clothing and hair."

Terry Vance - 2622

"What about the fundamental human right of non-smokers to breathe air not contaminated by tobacco smoke? Who has the more basic right—the smoker to smoke or the non-smoker to fresh air?"

"I am one of many who are allergic to tobacco smoke. I take regular shots to help counteract the effects of the second hand smoke I am forced to inhale. The shots help, but only to make existence among smokers tolerable, not comfortable.

"I hesitate to make much of an issue of the smoke problem because I am quickly labelled as intolerant, unreasonable, etc., when I suggest my rights relative to smoking ... and complaining doesn't help work relationships."

(name withheld by request)

LAB NEWS hasn't heard the smokers' case. But then they may not have one. . .

## Sandians Fire 27 Rockets in Florida

Twenty-seven rockets were fired by Sandians recently into the upper atmosphere above the Gulf of Mexico as part of a series of experiments by the Advanced Research Projects Agency of the Department of Defense. The firings took place at Eglin Air Force Base.

Ed Hansen, supervisor of Experiments Projects Division II 9223, and John Eckhart, manager of Upper Atmosphere Projects Department, were Sandia project directors for the operation.

Six of the rockets released vaporized barium into the upper atmosphere where it was ionized by sunlight. The ionized gas, violet in color and visible for several hundred miles, expanded and striated along the earth's magnetic field.

The remainder of the rockets carried instrumentation to gather data on the interaction of the cloud with the atmosphere and the magnetic field. These rockets were fired over a period of about one hour following each of the barium rockets.

"Sandia was called into the project because of our experience with sounding rockets in the test readiness program," Ed Hansen says.

"The operation was a success. The aeroballistics people working under Bill Barton, supervisor of Rocket and Recovery Systems Division 9324, accurately put our rockets on target into a moving cloud — no small achievement."

A total of 47 Sandians participated in the project.

Bill Walker (9224) was responsible for rocket systems; Lynn Fisher (7252) for range engineering; and Gunner Gunderson (4612) for logistics and administration.

## Death

Jack McCollum, an inspector in Inspection Calibration Division 4213, died Feb. 15 after a brief illness. He was 52.

He had worked at Sandia Laboratories since January 1969.

Survivors include his widow, three children and a grandson.



## ECP Committee Makes 1970 Reserve Fund Allocation

Jonathon is four-and-a-half years old, a youngster suffering from cerebral palsy. He is currently receiving special therapy at the New Mexico Rehabilitation Center, in part through the generosity of Sandia employees.

The ECP committee recently allocated the 1970 reserve fund and \$200 was given to the Rehabilitation Center for Jonathon's therapy. It is believed that with intensive therapy he should be able to enter regular school.

The ECP reserve fund is distributed at the end of each year to participating agencies who make specific requests for items not covered in their regular budgets. Here's the way the rest of the reserve fund was spent:

—\$200 for four youngsters to attend camp operated by the Albuquerque Association for Retarded Children

—\$224 for four tumbling mats to be used by the Old Town Albuquerque Boys' Club

—\$150 for therapeutic equipment for the Albuquerque Child Guidance Center

—\$75 for a ping pong table and a blender for the Chaparral Home & Adoption Services

—\$150 for two phonographs for Christina Kent Day Nursery

—\$220 for an audio system for therapy for the Hearing and Speech Center

—\$369 for tools, camping equipment, nuts, bolts, etc., for the Martineztown House of Neighborly Service

—\$200 for basketball standards for the Salvation Army

—\$375 for "learn-by-doing" geometric structures for the Special Education Center

In April 1970, the ECP allocated \$750 from the reserve fund for the Junior Chamber of Commerce rubella inoculation campaign. The ECP reserve fund is normally one-half of one percent of the ECP funds but was higher in 1970 because the National Foundation (March of Dimes) voluntarily withdrew from ECP participation.



JONATHON receives special therapy at the Rehabilitation Center, funded in part from the ECP reserve. The ECP committee allocated the 1970 reserve last month.



CITY CHARTER REVISION COMMITTEE is shown here fielding questions from audience in Bldg. 815 at noontime meeting. Third in a series of such meetings will be held Tuesday noon, March 2 at the same place. All employees are invited. Among items under consideration: a full-time paid mayor; pay for city council members; and districting for the election of council members. Come to the meeting.

Noon Hour Fashion Show

**Coronado Club Previews**

**New Spring Styles**

A single paragraph in the LAB NEWS brought a tremendous turnout for a noon hour fashion show last week at the Coronado Club. Not only were the guys there but at least 100 women eyeballed the new spring styles.

Omar's Boutique showed mini skirts, cocktail dresses with plunging necklines, pant suits, a batwing thing and something called hot pants. As far as we could see, hot pants aren't much more and maybe a little less than the good old mini skirt which LAB NEWS has endorsed for a long time.

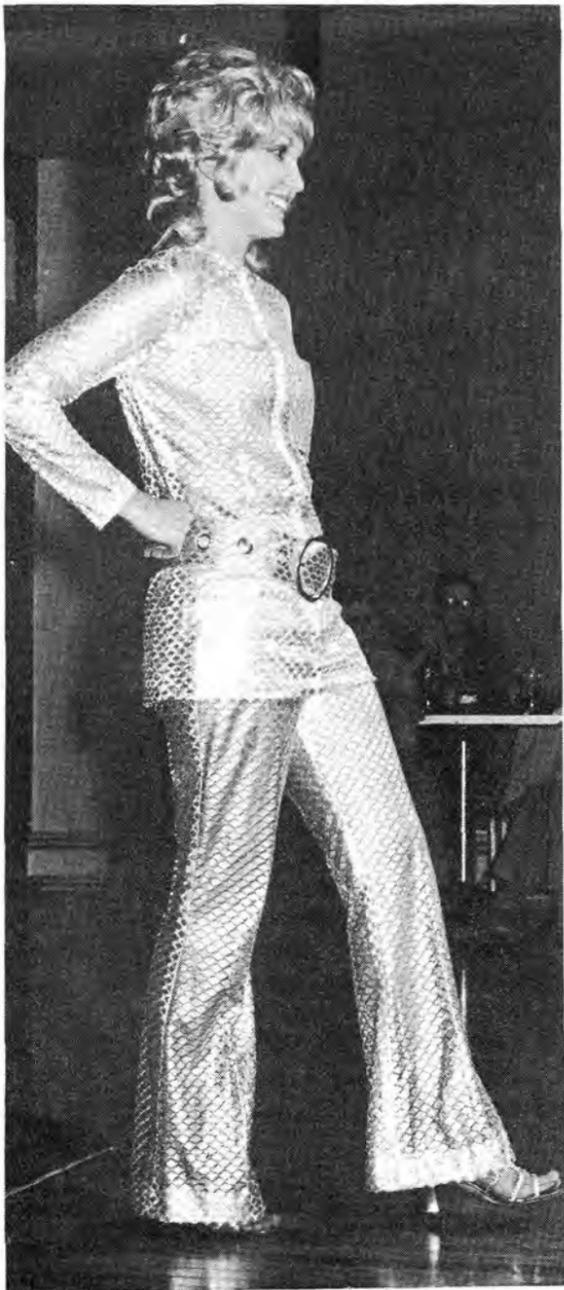
It was a good show with a sharp commentary by Linda Sanchez of Omar's Boutique, piano background music by Yolanda Adent (7250) and five lovely models — Soila Candelaria (2314), Claudia Garlick (5314), Peggy Stevens (5310), Bertie Denman (4332) and Lynn Brosman (AEC). And not one of the girls wore a midi.



SOILA CANDELARIA



LYNN BROSMAN



CLAUDIA GARLICK



PEGGY STEVENS



BERTIE DENMAN



PEGGY STEVENS

## Service Awards

### 25 Years

William Jamieson 8235, Raymond Schultz 7420, Allen Hall 4232, C. H. DeSeim 8200, Howard Austin 9124, Fred Schneider 4373, Ben Bright 7510.

### 20 Years

James Phillips 2442, Eloy Barela 4231, Harold Payne 4232, G. J. Hildebrandt 9520, Vicente Garcia 4514, Andrew Lunsford 4518, Elizabeth Rainey 4220, Sam Baca 3520, A.C. Carabajal 9132, Paul Kirby 4115, Fidel Chavez 4232, Harold Kindschi 4514, Raymond Poetzi 7411, Ormond Birdsong 9115, Robert Hewes 4338, Luther Beatty 3520, David Watt 4221, Thomas Harrell 4364, Harold Gustafson 7611, John Pupelis 7614, Gino Carli 7624, R. R. Middlesworth 9224, Fred Harrison 2492, Harold Thomas 2492, Samuel Allen 4211, Dorcas Gabaldon 4221, Reuben Villanueva 4233, Claude Baca 4513, Frank Fox 4553, Matt Bustos 4614, James Hockett 4113, F. E. Mitchell 4131, Richard Miller 4614.

### 15 Years

Richard Petersen 1734, Joseph Pelletier 2492, Alice Brinkley 7600, John Thomas 7424, Donald Graham 3432, John Benson 7434, Don Yearout 8164, Johnson Hays 9222, Milton Zimmerman 9223, Everett Click 2335, Ralph Carter 3452, Elias Gabaldon 4514, C. R. Eisenhower 7225, Donald Hosterman 3134, Fidel Gonzales 4515, Richard Duran 4614, Robert Luikens 1534, Edward Barber 7653, Ernest Niper 9223, Boney Vigil 9411.

### 10 Years

Robert Meier 2441, Richard Heckman 5322, Helen Walsh 5300, Thomas Edrington 2625, Richard Braasch 1222, Marie Brenton 8274, Ward Mitchell 8275, Thomas Cleveland 4222, Cecil Lang 7372, Carl Schoenfelder 8311, Jerrel Lochner 2332, Jack Rider 2491.

## Sympathy

To Joe Pitti (4622-3) for the death of his brother in St. Louis, Mo., Feb. 8.

To Fred Krauss (2491) for the death of his wife in Hillsdale, Mich., Dec. 29.

## New Conservation Group For Sandia Mountains

Conservation and ecology groups are springing up where the need exists — in this case, along the east side of the Sandia Mountains.

Organizers of the newest group include Gerry Wilson (7523), Gene Farnum (5154), Fred Brown (7326), and Ken Bauhs (7223). "We've been attracting between 50 and 75 persons to our meetings. Most of them say they're interested in the issues, but didn't like to have to drive into town to attend meetings," explains Gene, who is the vice president.

The organization, which calls itself the Sandia Mountain Wildlife and Conservation Association, has applied for affiliation with the State WCA.

To fulfill its purpose of educating the residents, the Sandia Mountain group has taken an open stand on several contentious issues. One of these was a debate on the proposed Ellis Loop Road (on Sandia Crest) which had Jack Miller, the Forest Service's Sandia District Ranger, opposing Dick Illing (9512) of the Albuquerque WCA who is an outspoken critic of the proposed road. Now that the Sandia Mountain group has had time to study the issue, a vote will be taken at the next meeting to determine if they want to support the State WCA in its opposition to the road.

An earlier meeting featured State Senator Fred Gross telling how lobbyists can influence legislators; a State Game and Fish Department representative discussing his agency's policies and projects; and Milo

## Retiring



BILL DOWD  
(3520)



BERT EICH  
(5529)



CLARENCE POGUE  
(4337)



KARL ZIMMERMANN  
(7434)

Conrad (9115) seeking support for the proposed Black Range Wilderness Area.

"Our next meeting March 3 will feature a panel discussion on coyotes," Gene says. "Participants will include a representative from the U.S. Sport Fisheries and Wildlife Department, a rancher, director of the Rio Grande zoo, and a member of the N.M. Predator Callers Association."

The group meets the first Wednesday of each month at the Methodist Church on North Highway 10 (near the Cedar Crest post office).

## • SHOPPING CENTER •

**CLASSIFIED ADVERTISING**  
Deadline: Friday noon prior to week of publication unless changed by holiday.  
A maximum of 125 ads will be accepted for each issue.

**RULES**

1. Limit: 20 words
2. One ad per issue per person
3. Must be submitted in writing
4. Use home telephone numbers
5. For Sandia Laboratories and AEC employees only
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.

### FOR SALE

#### MISCELLANEOUS

SKIS, 190 cm, Head Std., \$35; Sear's humidifier limit control, \$5; 24 VAC relay, \$2. Stevens, 299-6086.

COLOR TV, RCA 21" console, works but needs adjusting, \$75. Goodwin, 256-2216.

500 SHARES Computer Consultants stock, \$1.75/share; utility trailer w/spare wheel, 4 x 6 1/2', \$50; swing set, make offer, Gholson, 299-2663.

DANISH modern rocking chair, small, easy to recover, \$20. Jeffs, 268-3154.

PONY, medium sized, brown, trained, w/saddle, \$100. Miller, 282-3485 after work.

FREE to good homes: puppies, ready in about 2 weeks, mother — German Shepard/Airedale. Joseph, 299-6989.

22 SEMI-AUTO, rifle, 18-rd. capacity, \$50; 8mm Mauser sporterized w/sling & recoil pad, \$50. Pino, 299-5131.

HEATHKIT DX-35 transmitter w/VFO & crystals, 65 watts, CW, \$50; B&H 8mm movie camera, triple turret lens, \$50. Bishop, 298-8867.

COLLIES, AKC, Females, show quality, terms; horses, all kinds; Sear's elec. heater, used 3 wks., \$20. Rhoden, 294-0080.

FREE PUPPIES, mother part beagle, will be small dogs. Barnette, 2729 Tennessee, 298-9227.

NACO portable solid state cassette tape recorder w/AM/FM radio, new, never used, \$50; two 1/2-carat diamonds, both for \$300. Boatman, 298-6053.

3/4-SIZE walnut bed & mattress; Boy Scout bugle. Scheiber, 299-4743.

COMMERCIAL fire log saw, 30" circular blade, 4-cyl. Wisconsin engine, \$375 or trade. Kopp, 268-4048 evenings.

'69 MOTORCYCLE, 250cc Husky, new seals-gears-piston & ring, 34mm Mikuni carb, \$725. Chavez 299-8194.

5 EA. glass louver windows & 1 dr. w/metal frames & screens, \$40. Smith, 298-2142 after 5:30.

REFRIGERATOR, 12 cu. ft., \$50. Keltner, 298-7888.

DRAPES, Floor to ceiling, 28' wide, antique satin, champagne color; also sheer drapes, 12' wide, champagne color. Kelly, 255-7226.

MALE SPRINGER SPANIEL, liver & white color, reg. ped., obedience school graduate, 10 mos. old. Kelly, 299-7730.

GIRL'S bicycle, Schwinn 24", \$20. Gray, 265-1883.

REMINGTON port. sewing machine, forward & reverse, \$40; '46 car radio, Firestone, 6 volt, \$5. Longfellow, 299-7062.

ADMIRAL stereo record player w/AM-FM stereo receiver, solid state, \$75. Campbell, 268-8445.

TRAIL BIKE, dual sprocket for dirt or road, Bridgestone, \$125. Peterson, 256-7514.

'68 YAMAHA motorcycle, 100cc, low mileage, \$225. Duvall, 299-8744.

RCA Cassette Tape Recorder, never used, list \$49.95; sell for \$35. Matlack, 256-7371.

'67 HARLEY DAVIDSON sportster, metallic blue, elec. starter, street model, by original owner. Marchi, 268-6237.

PARTS for Travelall: chrome hubcaps fit 3/4 ton, Easylift frame hitch, West Coast mirrors, Kelsey Hayes brake control, other misc. Loepke, 299-7338.

HEADERS, two tube, fit 289 Ford, from Cobra, but might fit Mustang, best offer over \$15. Stark, 296-4971.

LADIES WIG, Dutch Boy style, med. brown, Penney's color six, worn once. Randall, 299-0372.

RCA CONSOLE, 21" simulated white oak metal cabinet, \$25. Goodman, 299-3652.

TWO split rims w/two inner tube liners for 3/4 ton Chevrolet or GMC pickup, \$30. Shack, 877-3728.

REFRIGERATOR, Coldspot, \$30. McRae, 298-0844.

FRIGIDAIRE electric range, \$150; Lady Kenmore port. top-loading dishwasher \$125; manual typewriter, \$30. Huff, 296-7977.

USED washer & dryer, Westinghouse Twins. Eichert, 255-2247.

LORD BYRON Pro-Line golf clubs, 4 woods, 9 irons, used 2 yrs., \$125. Wangerin, 298-6351.

COLORADO RIVER TRIP through the Grand Canyon, summer '71, group rates, for info. Call Sutherland, 299-0820.

SELLING OUT: '68 Cutlass; '67 Sunbeam Tiger; bdr. set; radial saw; wig; stereo; refrig.; picnic table; misc. garage sale 2/27-28. Peterson, 3211 Sierra Dr. NE, 344-2782.

DISHWASHER, Kitchen Aid, built-in, coppertone. Schmidt, 299-7305.

'64 APACHE Silver Eagle camping trailer, 7'x5'x4', 2 reg.-size beds w/3" foam mattresses, 6-ply nylon tires, \$425. Wilkinson, 516 Hillview Ct., 299-8327.

WHITE plastic sofa, \$50; crocheted table cloth, \$25; 1-wheel luggage trailer, \$60. Pope, 255-6702.

695x14 TUBELESS Firestone 500, 3/16 tread, \$10. Benton, 877-2473.

### WANTED

BICYCLE, 5 or 10 speed, good condition. Binder, 299-2937.

TO RENT 1-car garage w/elec., concrete slab floor & lockable doors, NE or SE city. Sutherland, 299-0820.

RIDE mornings from vicinity Valencia SE to parking area of Bldg. 887 or 880. Potts, 256-3753.

TO RENT pickup truck w/small camper to accommodate 2 people for month of June. Miller, 282-3189 after 6.

RIDE for 2 from vicinity 1000 block Dakota SE and 1100 block Calif., SE to vicinity Bldg. 880. Silva, 268-4008 or Milesosky, 255-8904.

JEEP Universal, '66 model or newer, must be in good condition, pay cash if Jeep & price are right. Gonzales, 299-7208.

SERVICE MANUAL for '62 Ford Galaxie series. Scheiber, 299-4743.

### FOR SALE

#### CARS & TRUCKS

'62 CORVAIR 4-dr. sedan, AT, \$325; travel trailer, 16 1/2' Aristocrat, fully self-contained, sleeps 4 adults, \$1400. Hughes, 299-6674.

'64 CORVAIR, 2-door, white, rebuilt engine, Thornton, 299-5747.

'69 TRIUMPH 650, \$950. Bell, 299-4643.

'60 FORD Falcon 2-dr., AT, \$275. Archuleta, 255-6781.

'60 BUICK LeSabre 2-dr., all power, AC, \$350; '61 Rambler Classic, 4-dr., \$250. Lannon, 255-8959.

JEEP Universal, 4-w-dr., "42" military, hubs & cab. Chavez, 243-2555.

'57 CHEV., 1/2 ton, rebuilt engine, new brakes, recently painted lt. beige, \$285. Rathke, 299-4944.

'62 CORVAIR Monza, AC, bucket seats. Fields, 299-6242.

'66 FORD Fairlane 500, 390hp, 4-sp., \$900. Clark, 296-8668 after 5:30.

'61 CORVAIR station wagon, AT, \$250. Buss, 298-1589.

'63 PORSCHE, Blaupunkt AM-FM, new Michelins, \$2400. Van Den Avyle, 265-0263.

'65 CHEVROLET Impala 2-seat wagon, AC, AT, PS, PB, \$1150. Sublett, 298-1004.

'65 BUICK LeSabre, 4-dr. sdn., fully equipped, 62,000 miles, \$900. Hartman, 296-2241.

### REAL ESTATE

ROBERSON 3-bdr., 1 3/4 bath, den, DR, utility rm., screened porch, many extras, good schools, assume 5 1/4 FHA, \$129/mo., low equity. Luna, 298-7337.

TRIPLEX, NE Heights, 2-bdrs. each unit, \$300 monthly income, \$27,000. Eaves, 268-0461.

BELLEHAVEN, all brick 3-bdr., den w/fp, drapes, carpets, built-in kitchen, sprinklers, front & back. Marshall, 298-4206.

LARGE ADOBE HOME on 6 acres in valley, close in, alfalfa, barn, stalls, orchard. Jolly, 877-2474.



BETTY JO ESPINOSA  
(7224)

**Coronado Club Activities**

# Soul Session Tomorrow— Lobster Dinner March 13

As the musician said to the artist, "Go, Van, Gogh!" It's Soul Session time tomorrow night at the Coronado Club and that means the ears have it. Freddie Williams and the Screaming Mimi Hungries (or something) will be wired into the bandstand playing rock modern. Happy hour prices will be in effect from 8:30 to 12:30. Members get in for free, guests pay 50 cents.

Something a little different will be a "Harvey Wallbanger" promotion with the potent potion selling for 55 cents during the evening. Anyone who tries one is eligible for a special drawing. Eight colorful T-shirts will be given away. Steak sandwiches and hamburgers will be available.

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HAPPY HOURS at the Coronado Club either end the week or start the weekend, depending on who your friends are. Tonight, for instance, Sol Chavez and the mighty Duke City Brass will be back on the bandstand and it's old home time. Sol's group is one of the best rehearsed bands in the city playing a friendly, happy sound. Happy hours always start right after work on Friday evenings and run with special prices until 9 p.m. Then Yo-Yo Adent takes over in the main lounge with a sing-along until midnight. A veal cutlet buffet will be spread from 6 to 8 p.m.

On Friday, March 5, Arlen Asher will play for dancing while a new menu for the buffet will be tried. Smiling Jim Noonan, Club manager, will feature a hand-carved baked ham with the works. The buffet will cost \$1.75 for adults, \$1.50 for kids.

Wildman Bob Banks will leap on the bandstand Friday, March 12, while Italian food—spaghetti and lasagne—is spread for the buffet.

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LOBSTERS, 300 of them, will be flown in for the New England seafood dinner Saturday, March 13. Tickets (\$6 for members, \$6.50 for guests) must be picked up by Monday, March 1. The menu will also feature king crab cocktail. A special wine taste is included. Music for dancing will be provided by the big nine-piece Top Hats.

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"HORSEFEATHERS" with the Marx Brothers is the classic comedy film booked for Saturday, March 6. The movie will be preceded by a stage show starting at 7 p.m. Pete Gallegos (2335), Club entertainment director, has lined up a variety show featuring music and magic. Singers Magdalene Mauldin, Mike McDaniels, Denny Gallegos, and the Trio Tecolote will provide the music; Gibb Richards will perform the magic. Happy hour prices will be in effect all evening and steak sandwiches and hamburgers will be available. Admission is free to members and families.

ONE HUNDRED AND THREE Coronado Ski Club members lived it up at Purgatory during the three-day George Washington's Birthday holiday. They report great skiing conditions and that they enjoyed both the Club race competition and the banquet. Paul Souder (1532) was chief honcho for the excursion.

SANADO CLUB will present "Mrs. Sanado" at a cocktail party Tuesday, March 9. Norm Ellenberger, UNM assistant basketball coach, will be master of ceremonies. The event is scheduled from 5 to 8 p.m.

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CORONADO BOWLERS who will be competing in the 1971 New Mexico Bowling Tournament include Pauline Gabaldon, Sam Baker, Eunice Frank, Eve Shubeck and Fran Fawver on the distaff side; Cliff Fawver, Basil Herrera, Donald Shubeck, Robert Simpson and Wallace Green for the men.

## Events Calendar

Feb. 26-28, March 3-7 — "Dracula," Old Town Studio. For reservations tel. 242-4602.

Feb. 27 — AAU-sponsored 26-mile marathon at Artesia.

Feb. 27—"Punch and Judy" puppet show for children, 2 p.m. Old Town Studio, 242-4602.

Feb. 28 — "You're A Good Man Charlie Brown," UNM Popejoy Hall.

Feb. 28 — Hike to Red Cloud Camp Ground. N.M. Mountain Club, leader Bill Grohe, tel. 243-1051.

March 1 — Audubon Film Series presents "Wild Rivers of North America." Popejoy Hall.

March 6 — Hike in the Manzanos. N. M. Mountain Club, leader Hank Taylor, tel. 265-9296.

March 8 — "Hadrian VII," Popejoy Hall.

March 11 — UNM Symphony Orchestra concert, Popejoy Hall.

March 12 — Musical "1776," Popejoy Hall.

March 12-14 — YWCA charter bus trip to Juarez. For information tel. 247-8841. Reservation deadline March 1.



FAY SPELLMAN (3417) demonstrates the Harvey Wallbanger technique and models one of the eight T-shirts to be given away during Soul Session at the Coronado Club tomorrow night.