

Multiple Cavity Laser System Invented by Murphy Landry

A multiple cavity laser system invented by Murphy Landry of Exploratory Instrumentation Development Division 1441 was recently patented by the AEC.

The device can produce multiple beams of laser light that can be controlled precisely in bursts as close as 20 nanoseconds apart with 20 nanosecond burst durations. Theoretically it would be possible to control the burst duration down to picoseconds and burst intervals to several nanoseconds.

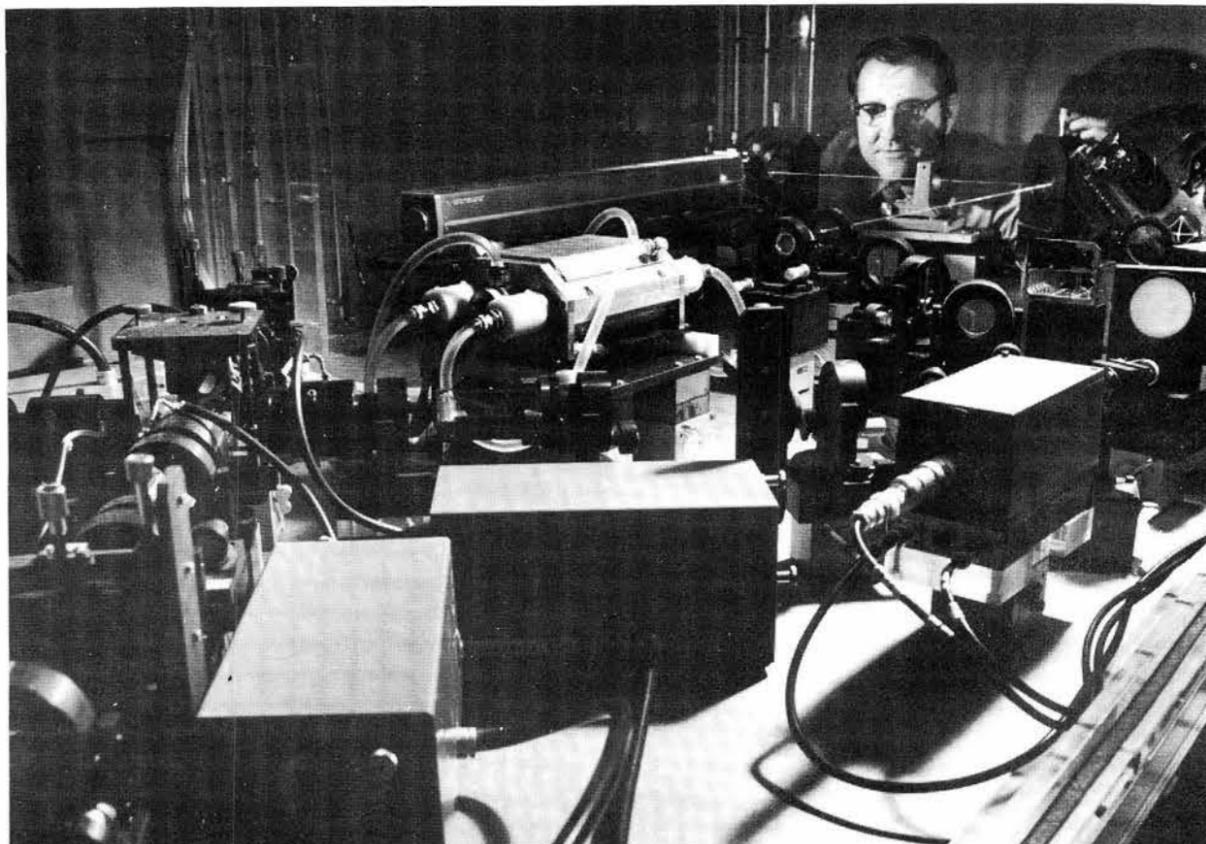
With this device it is possible to make holograms recording discrete events pertaining to material motion or vapors in explosions, surface erosion in plasma streams, time history of plasma electron density and other events that occur in the millisecond to nanosecond regime.

The laser device functions as a coherent light strobe as in conventional photography. The difference is that the laser beams are very directional and monochromatic.

The prototype model of the laser creates four separate beams from a single ruby rod. An optical prism directs the beams into the switch control section. The section consists of a Pockels Cell (PC), stack-plate polarizer, aperture and 100 percent reflector. These optical shutters are used to generate the giant pulses. The time separation between giant pulses is varied by introducing relatively delayed trigger pulses to the thyatrons used in switching the PC voltage.

In making holograms, the separate reference beams strike the film plate at different angles and at different times. The separate events are recreated by duplicating the angle of the original reference beams with the viewing beam.

Murphy joined Sandia while he was working on his PhD in physics at New Mexico State University. He worked two summers here before joining the Labs full time in 1965. He earned his Master's degree in 1963 and his Bachelor's degree in 1959 from the University of Southwest Louisiana at Lafayette. •dg



MURPHY LANDRY (1441) demonstrates his complex multiple cavity laser system which creates four separate beams from a single ruby rod in burst intervals as short as 20 nanoseconds. Art McCarthy (1441) and Henry Scheller (7651) assisted with the instrumentation of the laser system.

LAB NEWS

VOL. 24, NO. 24

NOVEMBER 24, 1972

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

Educator to Chair National Committee

Howard Shelton, supervisor of Engineering and Science Education Division 3134, has been elected National Chairman of the Continuing Engineering Studies Division of the American Society for Engineering Education. Howard is chairman-elect for 1973 and chairman for 1974.

Purpose of the Continuing Engineering Studies Division is to assist the practicing engineer in maintaining a high level of engineering competency. It helps him gain this level by urging schools, professional societies, and industry to develop and support continuing education programs for the engineer; and by fostering new approaches and activities in continuing engineering education.

CES Division sponsors an annual meeting to provide a forum for engineering professors and other professionals in engineering education. Howard was program chairman for the 5th annual meeting held in Albuquerque in 1970.



CONGRATULATIONS were exchanged last week when these Sandians got together. What do they have in common? All are winners in the recent election. Seated (l to r): Paul Gabaldon (7121), Valencia County Commissioner; Tom Hoover (1514), State Representative; Bill Warren (1721), State Representative; and Paul Becht (4332), State Senator. Standing (l to r): Ray Garcia (7542), State Representative; Bill Gaines (3311), Mayor of Edgewood; and George Elliott (3232), Bernalillo County Member of the State Board of Education. Berman Sanchez (4553), not available for this picture, was also elected to the Valencia County Commission.

Afterthoughts

The Moon & You & \$\$--Scheduled launch of the final Apollo moon mission on Dec. 6 brings to mind that business about the astronauts and the profits derived from what most of us assumed was strictly a non-profit venture. As I recall, it involved the sale of philatelic curiosities--stamped envelopes that had made the round trip. Following disclosure, there was a great amount of hand-wringing about the astronauts' gaffe, but it seems to me the larger view would note that one of the glories of our free enterprise system is that any young man can get out there and make a buck if only he will seize the opportunity and apply himself. And you know, I doubt that anyone ever said this principle was good only at participating planets.

* * *

Say It Ain't So--"Reading a house organ is like going down in warm maple syrup for the third time." Robert Townsend

* * *

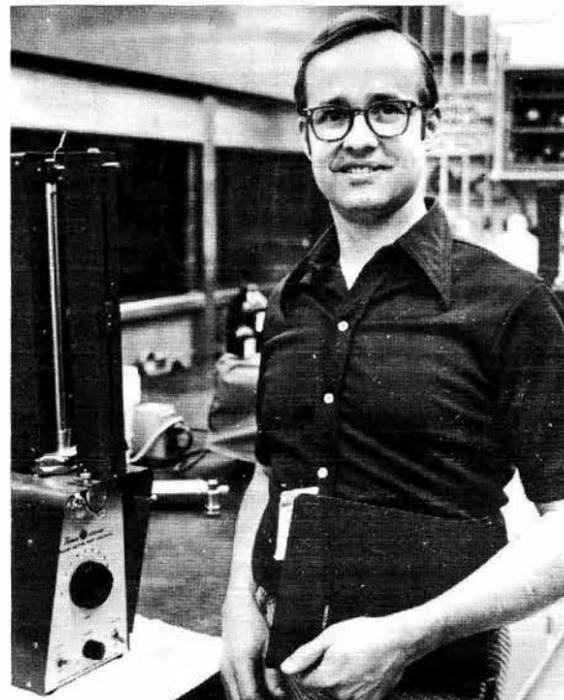
Thee & Me, Each Wants His Due--At a recent conference of people concerned with communication, I came away with a phrase whose aptness struck me: the philosophy of entitlement. It describes the belief, common to us all, that we've got something coming to us. For example, I feel I'm entitled to smooth roads for my taxes. Most plus-thirty people have a rather modest philosophy of entitlement, expecting no grander benefit from their membership in society than returns on the order of, say, smooth roads. Young people appear to have a much more ambitious shopping list of what they are entitled to. A job, not some mind-numbing task better performed by a machine, but interesting and meaningful work. Good medical treatment at modest or no cost. Educational opportunity, again for little or no cost. And so on. Like it or not, the younger view of the philosophy of entitlement will prevail--there is and will be more of them than of those willing to settle for smooth roads.

* * *

I Like It--May All Your Troubles Be Deep Snow

*js

Supervisory Appointment



NORMAN BROWN to supervisor of Materials and Explosive Components Division 1916 (newly created), effective Nov. 16.

Since joining the Labs in August 1965, Norman has been engaged in study of the chemistry and preparation of explosives and related materials.

He earned a BS degree from the University of California at Davis in 1962 and gained a PhD in metallurgy from the University of Utah in 1965. His doctoral dissertation was on explosives.

Norman is a member of the American Chemical Society. His hobbies include rock hounding and lapidary work. He and his wife Mary have two children -- six-year-old Neil and four-year-old Brenda -- and live at 6608 Loftus NE.

Events Calendar

Nov. 25 -- Mountain Club, San Mateo Wilderness, Lobo Statue, UNM, 7 a.m.
Nov. 26 -- Ski Touring Club. One-day tour, meet at Gulf Mart, 8 a.m.
Nov. 27 -- UNM Faculty Lecture Series, Samuel Roll and Marc Irwin, Dept. of Psychology, 8 p.m., Kiva.
Nov. 27 -- Basketball: UNM vs. Chile Olympic Team, UNM, 7:30 p.m.

Nov. 29 -- Cunningham-Acme Dance Group, 8:15 p.m., Popejoy Hall.
Dec. 3 -- Ski Touring Club, vicinity Santa Fe ski basin, Gulf Mart, 8 a.m.
Dec. 3 -- ASUNM Lecture Series, Rollo May, psychologist and author, 8 p.m., Popejoy Hall.
Dec. 5 -- ASUNM Lecture Series, Judith Bardwick, psychologist and author, 8 p.m., Student Union Ballroom, UNM.
Dec. 5 -- Basketball: UNM vs. NMSU, 7:30 p.m., UNM.
Dec. 6 -- ASUNM Lecture Series, Vito Perrone, educator, 8 p.m., Student Union Ballroom, UNM.
Dec. 7 -- UNM Orchestra Concert, 8:15 p.m., Popejoy Hall.

LAB NEWS

Published every other Friday

SANDIA LABORATORIES

An Equal Opportunity Employer

ALBUQUERQUE, NEW MEXICO
LIVERMORE, CALIFORNIA
TONOPAH, NEVADA

Editorial offices in Albuquerque, N.M.
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john shunny is editor
&
don graham ass't. editor

bruce hawkinson writes
as does norma taylor while
bill laskar takes/makes pictures

&
in livermore lorena schneider does all

Take Note

Donald Amos and George Steck, members of Numerical Analysis Division 1722, have been appointed to an international editorial board for a new publication, COMMUNICATIONS IN STATISTICS. The journal is devoted to presenting the formulation, discussion and solution of statistical problems. This new publication, which will be issued six times a year, will be a medium for the early dissemination of new ideas relating to statistics.

CU Bulletin Board

Social Security To Cost More -- President Nixon has signed into law a bill that will increase Social Security taxes and the wage base from which they are derived, as of Jan. 1, 1973. The new levels lift the rate from its present 5.2% to 5.85%, and increase the taxable base from \$9000 to \$10,800. This means that a person earning \$10,800 or more in 1973 will have \$631.80 in Social Security taxes withheld from his salary. Those earning less will pay 5.85% of whatever sum they earn. Starting in 1974, the Bill calls for increase of the taxable base to \$12,000.

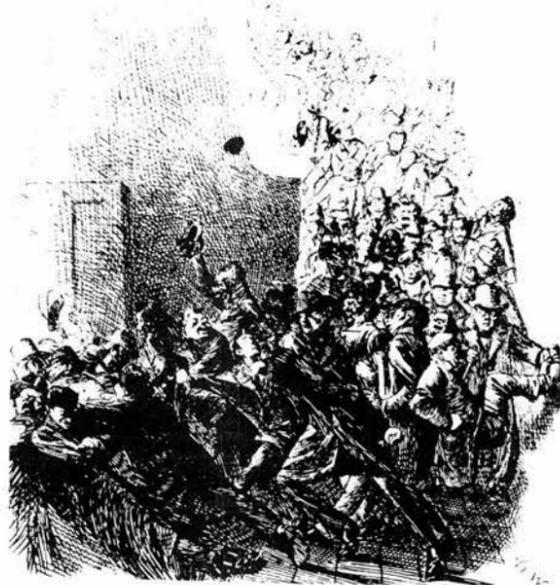
Promotions

Arnold D. Andrade (8312) to Technical Staff Associate
Arthur D. Bacon (4515) to Cleaner (Equipment)
Owen R. Berg (1555) to Technical Staff Associate
David B. Davis (9334) to Technical Staff Associate
Ernest R. Dunaway (4115) to Member of Laboratory Staff
Ronald T. Dunivan (8256) to Stockkeeper
Lawrence M. Ford (1544) to Technical Staff Associate
Donald E. Gluvna (7613) to Laboratory Staff Associate
Howard T. Lehman (1511) to Technical Staff Associate
Albert J. Luna (7133) to Wireman
Lucile S. Marcrum (3151) to Member of Laboratory Staff
Richard P. McKnight (9222) to Technical Staff Associate
Jon J. Pallitto (8256) to Stockkeeper
J. Berman Sanchez (4553) to Laboratory Staff Assistant
Jay P. Terrell (7133) to Wireman
Francis M. Thatcher (4518) to Laborer (Vehicle Operator)
David J. West, Jr. (8256) to Stockkeeper
Fidel Salazar (3148) to Mail Clerk

So What Are You Doing for Lunch?

If "you are what you eat," then most of us are sandwiches. That's one possible conclusion from a LAB NEWS survey sent 10% of Sandians Albuquerque. About 75% responded.

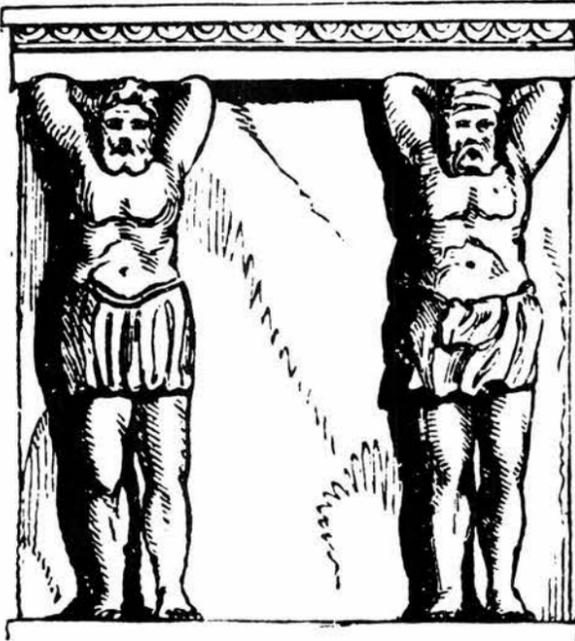
We're interested in what Sandians do on and off the job. Each of us spends about a month's worth of eight-hour days every year doing something (or nothing) between noon and 1 p.m. — sometimes here at Sandia, more often away from the work site. We're interested too in changes — trends, to the sociologically oriented — so we asked about lunch hour activities of a few years ago as well.



802 stairway at 12:01 p.m.

What is that something we do at noon? It usually involves eating — only 6% do without lunch. Midday sustenance is a pretty well-engrained habit, thanks to conscientious moms. And most of us bring (53%) or buy (6%) a sack lunch and eat it while reading during the hour. So we're a brown bag community, albeit a literate one. Yet, on any given day, about a third of us use a car at noontime, either in pursuit of lunch or just to run errands. We use the hour for other activities too. Note the *What Else We Do* table.

Another question concerned cash spent by those who go out to lunch. Exactly half spend a buck to a buck and a half; 16% spend \$1.50 to \$2; 4% spend more than \$2. Among the lighter eaters, 29% spend 50 cents to a dollar;



Physical fitness freaks abound.

WHERE (or Whether) WE EAT

	Current Percentage	Percentage A Few Years Ago
Bring sack lunch	53	55
Eat at off-base restaurant or caf	10	10
Lunch at home	8	8
Eat at Area I caf	6	5
Buy sack lunch	6	4
Don't eat lunch	6	4
Eat at Officers Club	4	3
Eat at Area III caf	3	3
Eat at Coronado Club	3	5
Eat at Base caf	2	3
Eat at NCO Club or Bowling Alley	1	1

(rounding error acknowledged)

WHAT ELSE WE DO

	Current Percentage	Percentage A Few Years Ago
Read	19	14
Play games (bridge, etc.)	18	18
Exercise	13	17
Attend noon class	12	20
Run errands	10	8
Talk with friends	9	8
Work on Sandia projects	8	6
Work on other projects	5	3
Listen to radio	4	3
Nap	1	1
Play musical instrument	<1	1
Other	3	2

(rounding error acknowledged)

1% get by for less than 50 cents. Had they told us where or how, we'd pass it on.

A related question asked how much people would be willing to pay. Both the under 50 cents and the over \$2 groups remain the same, but the \$1.50 to \$2 group rises from 16% to 21%. Some of us are big spenders.

We also asked a question or two about staggered lunch hours. A few jokesters had fun with "staggered," but 11% would like a staggered lunch hour so that not everyone hits cafeteria, restaurant, or street at the same time.



Working through lunch can annoy colleagues.

The defenders of the present system were vociferous, especially as they saw the noon-hour class program jeopardized. Many of the fiercest defenders of the program aren't even taking classes; some never have.

Then there's the guy who favors a three-hour "lunch and siesta" break. And the poet who needs "an hour of peace as an island in the middle of the day."

If your survey isn't quite a page long, respondents traditionally fill the space left with comments. It wasn't and you did. Came up with two major themes plus a variety of miscellaneous ones.

The most frequent theme concerned quality of food at the Coronado Club and/or Area



Bridge can be frustrating.

I cafeterias. More precisely, it concerned lack of quality. One respondent suggested that Furr's be given the contract; another favored McDonalds. One trenchant quote: "A couple of years ago, I enjoyed the Coronado Club for lunch, but nowadays the food is terrible. Luckily, they don't give you very much."

The second most frequent theme concerned working hours: The survey didn't ask, but several people volunteered their view that we shouldn't "be constrained by rules (such as 8 - 5) carried over from production shops of the early years of the century." Others mentioned the concept of variable working hours in which everyone puts in eight hours a day (or 40 hours per week) and everyone is on the job between 10 a.m. and 3 p.m. (core time or contact time). But each employee (or working group) decides when he'll come to work



Seeking some mental nourishment.

before 10 a.m. and when he'll leave after 3 p.m. For example, I may come in at 7 a.m., work half the lunch hour, and leave at 3:30 p.m. You may arrive at 9:30 a.m., take a full hour for lunch, then leave at 6:30 p.m. According to the magazine article clipped to one response form, the scheme is catching on in Western Europe and is getting some attention in the States.

Among the miscellaneous comments were a handful favoring a four-day week, a lone voice crying for hot soup vending machines, and one complaint that the survey was a waste of time.

We don't think so. •bh

Travels with Marion, John & Tony

Americans generally are traveling more, both at home and abroad, and people at Sandia are no exception. Here are some comments on three interesting trips:

MARION BURNETT (8411) — Greece, Egypt, Lebanon, Syria, Israel

"Israel opened up a whole new world for me. The contrast not only in the geography but in the people — the Jews and Arabs — is striking. I hadn't expected the different religions to be sharing so many of the same shrines. I also wasn't prepared for what I saw of religious sites that are considered the most sacred. They build churches over these sites instead of keeping them in their original state. For instance, in Bethlehem I learned that it wasn't a stable where Christ was born but a cave located below ground. The cave is decorated with a sort of ceramic star in the middle of the floor and curtains and candles. It is difficult to have the feeling you'd like to experience, knowing the event that occurred there. The Holy Sepulcher Church shared by several religions has a shrine over what is claimed to be Christ's tomb — but it's much different from the garden tomb north of Jerusalem discovered by a man named Gordon in the 1800's. Gordon doesn't have too much support for his claim, but to the visitor his site appears more authentic.

"Egypt was another high point," adds Marion. "The obvious presence of the military at the airport and the extensive poverty were noteworthy. And the poor living conditions and hunger were eye-openers, as well as the contrast between old and new —



A camel provides Marion Burnett (8411) transportation to the Great Pyramids at El Giza outside Cairo.

new automobiles and native drawn carts."

* * * *

JOHN COSTELLO (8168) — Finland, Sweden, Russia

"I was surprised by the contrast between Russia, at least in the Leningrad area, and Finland — one of the main differences being in the upkeep of the farms and forests," says John. "There doesn't seem to be any incentive in Russia for maintaining the agricultural land — you see great blocks of land with just a few patches of potatoes, the rest lying idle. The Finnish forests were cleaned out and well maintained, while in Russia there was a tremendous amount of underbrush.

"Our hotel in Leningrad was well staffed, but the service was poor. On the other hand, the employees of the Russian tour agency, Intourist, were very cooperative. They were well dressed compared with the Russian people who as a whole appeared poor. We noticed that so much in Leningrad was built by the Czar, with little evidence of what they have been doing since that era. Interestingly, the city wasn't built by Russian architects, rather by Italian and French architects who were imported to raise the cultural level.

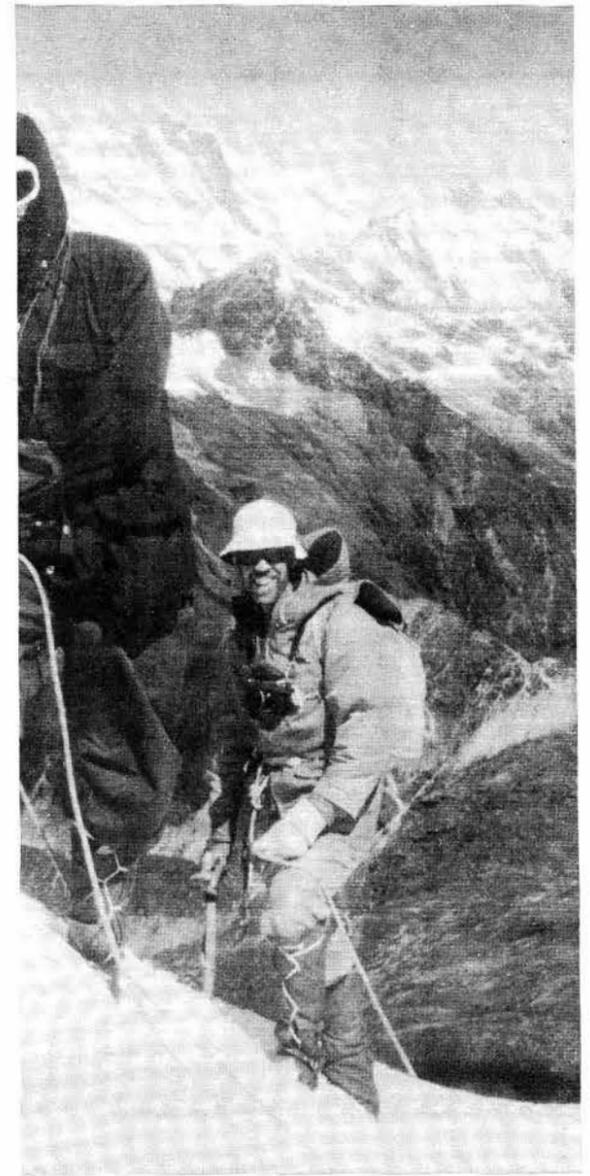
"One of the pleasant surprises in Russia was the theatre, which is excellent. They seem to go all out, both with costuming and sets. I guess this is one place where they can express themselves. A good example of contrast within Russia is the old opera house where I saw a ballet and the new, well-designed Soviet theatre where they had a folk ensemble.

"Going into Russia, there seemed to be a great number of soldiers, all well dressed. When the soldiers weren't around, the people would wave to us; when they were around, only the children would wave. We were treated very properly, but I felt isolated from the people. In Finland and Sweden, everyone is exceptionally friendly and greatly interested in America. A land of lakes, Finland is a beautiful country and the Finns seem prosperous."

* * * *

TONY THOMPSON (8313) — Mountain climbing in Cordillera Blanca range of Peru

"Our trip to the Andes was aimed at mountain climbing, but I found the area fascinating because of its culture which predates the Incas. The customs, clothing, and most of the landscape are much like what they were over 1500 years ago. Surprisingly, the uniformity of the Spanish culture is far less than one would think. Outside the towns, the Spanish language is not prevalent. Where we were, one of the Inca languages, Quechua, is spoken, and many of the old Inca festivals and religious celebrations continue to be observed. Of course, the Christian missionaries have renamed these occasions; for example they were celebrating the summer solstice, now called the Feast of St. John. Why should St. John be big in rural Peru? It just happens the day of St. John coincides with the summer solstice, when the Incas celebrated the Feast of the Sun. So, in a way they practice both religions simultaneously. One of the natives of Huaraz told us that during planting in the spring they still sprinkle some wine and a bit of flour from the previous year's wheat crop in a corner of the field — for the god of the field. I wondered what the priest would say to that.



In the Andes Mountains, Tony Thompson (8313) and friend at the summit of 18,000-foot Mt. Jatunmontepuncu.

"Actually, seven of us (all former MIT students) had set out to climb three mountain peaks — first 18,000-foot Mt. Jatunmontepuncu which has been climbed a number of times via the north ridge. We took a route on the west face which had not been previously done. This new route turned out to be more exciting than it looked. Photographs had made it seem straightforward, but we found it much steeper and more difficult. The two other peaks, Chinchey and Pucaranra, were both over 20,000 feet high. We could never get good enough weather conditions to do the ridge we'd selected on Pucaranra. Our route on Chinchey duplicated that of the three previous ascents, except for the way we reached the col, which in mountaineering is a saddle between two mountains. Our group was the first to climb the col from the west."

Tony has been climbing about seven years — in the Tetons, Canada, Sierra Nevada, and short climbs in Yosemite and similar areas. In 1968 he did some climbing in the Alps and is looking forward to going back there for some, what he terms, "serious" climbing. • Is

Take Note

Elaine Volk (8313) was guest vocational speaker at the recent "bosses' night" banquet held annually by the Livermore Valley Charter Chapter of the American Business Women's Association. She discussed "My Past Work with the Police Department." About 12 Sandia gals attended with their bosses. Ernie Alford (8256) delivered the "bosses' reply" during special ceremonies, and Nancy Hunt (8433), Glenda Kamppinen (8139), and Lupe Martin (8161) provided some entertainment.

LIVERMORE NEWS

VOL. 24, NO. 24

LIVERMORE LABORATORIES

NOVEMBER 24, 1972

Touring Northern California

Humboldt County, located along the California coast about 200 miles north of San Francisco, can be reached via Highway No. 101. A portion of the newly established Redwood National Park is located in the northern part. Home of the world's tallest trees, Humboldt County is the commercial and industrial center of northwestern California.

Following are points of interest in the area; check the accompanying map.

A. Garberville. Depot for Squirrel Redwood Tour, unique sightseeing bus trip (June-Sept.) along the "avenue of the giants" — Route 254, a 30-mile stretch of two-lane scenic parkway.

B. Humboldt Redwoods State Park (still on 101). Rockefeller Forest, preserved through \$2,000,000 gift; Pepperwood, redwood grove memorializing UN's Dag Hammarskjold.

C. Scotia. Town entirely built of redwood. One of world's largest lumber mills offers guided tours; museum.

D. Fortuna. Dairy and farm center; cider factory and cheese works offer informative tours.

E. Eureka. Victorian-style homes, including Carson Mansion, spectacular home of lumber baron of 1880's. Clark museum — Indian artifacts, historic relics. South of Eureka, Humboldt Bay Atomic Power Plant, PG&E's unique underground boiling reactor; a working model of the plant is on public view.

F. Ft. Humboldt Historical Museum. Capt. U.S. Grant served here in 1853. Logging museum recalls pioneer woodsmen.

G. Arcata. Flowers bloom in Azalea State Reserve, late spring. At Humboldt State College, aquarium and fish hatchery open to public. Near Bayside, drive across newest redwood-covered bridge (Brookwood).

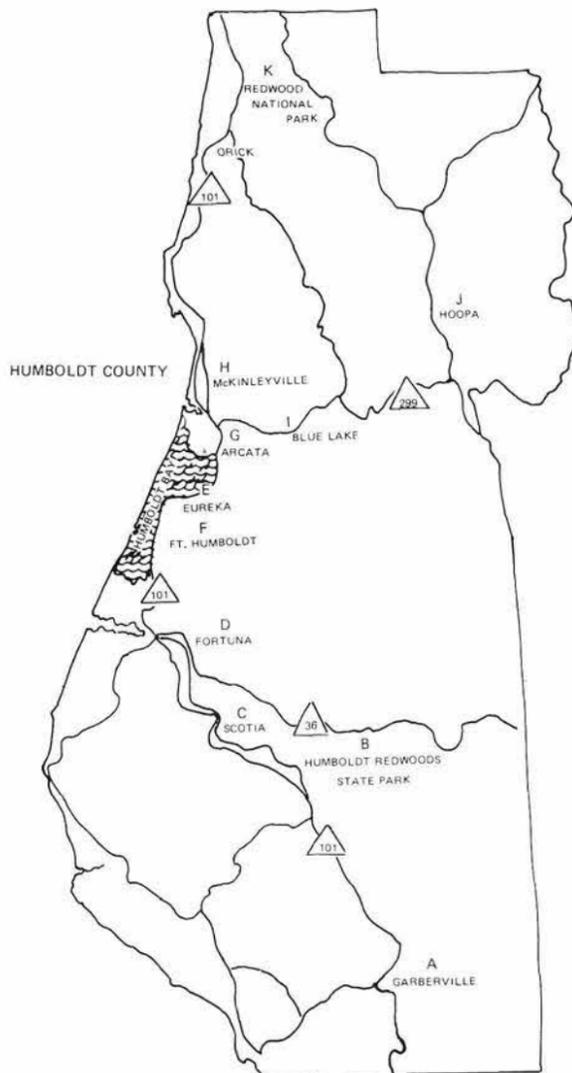
H. McKinleyville. World's tallest totem pole (160 feet) carved from a 500-year-old redwood tree.

I. Blue Lake. Gateway to hunting, fishing in northeast Humboldt-Trinity Alps. Annie-Mary railroad train rides, summer.

J. Hoopa Indian Reservation. "Big Foot" country; last known sighting of legendary man-beasts was in Dec. 1971.

K. Redwood National Park. Gateway to newest national park in Orick. Southeast, world's tallest tree — 368-foot redwood; foot trail to tree area. Within Prairie Creek Redwoods State Park elk are found in tree groves and fern canyon; naturalist guide service and campfire programs; trail for the blind; in gold bluffs area, gold dust still to be found on dark sand beach.

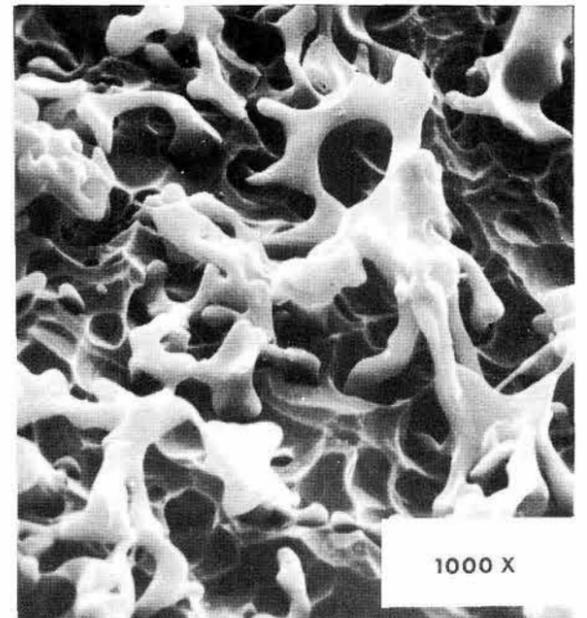
Additional information on this area may be obtained from Public Relations Division 8235.



Marlin Pound Reelected To LARPD Board

In the Nov. 7 election, Marlin Pound (8236) won his bid for re-election to a four-year term on the board of directors of the Livermore Area Recreation and Park District. The only incumbent, he got more votes than any of six candidates filing for two vacancies.

Marlin has been active with the LARPD since 1962, serving first as chairman of the Personnel Commission for four years. In Nov. 1968, he was elected to the board of directors and last year was board chairman. LARPD is a tax-supported special district created by the California Legislature to provide recreation and park facilities for residents within a 245-square-mile area in the Livermore-Amador Valley.



INTERNATIONAL RECOGNITION — Randall German of Metallurgy Division II 8313 received a second place and an honorable mention in the 1972 International Metallographic Exhibit, sponsored jointly by the American Society for Metals and the International Microstructural Analysis Society. In the scanning electron microscopy category, he was recognized for his display of an open porosity network in a stainless steel flow resistor.



SANDIA LABORATORIES' COMPTROLLER Bob Kern (4100), left, made his initial visit to Livermore recently for briefings and a tour of facilities. Shown with him are (from right) Leo Gutierrez (8100) and Byron Murphey (8300).



Think Small

The word "micrographics" means, literally, "tiny writing." So we should put this story in two-point type. Because it's about a whole seminar devoted to the subject: microfilm, microfiche, aperture cards, computer-output-microfilm, and the storage and retrieval of same.

Sponsored by the Labs, the Nov. 15-16 seminar was attended by supervisory and staff people involved with micrographics systems throughout the AEC complex.

Several Sandians played key roles in the seminar. Charles Barncord (7600) made the opening remarks; Charley Hines (3148), Marv Torneby (3141), Don Robbins (5424), Ken Lloyd and Ed Hirt (both 7632), and Gordon Bjork (8433) were on the program. And Mike Michnovicz (7632) chaired the whole thing.

Recreation Notes

FUN & GAMES

Bill Emrick (7425) helped coach a Young American Football League team through a winning season, play-off game and the Super Bowl championship at UNM stadium. In addition to winning the championship for their division, "The Longhorns" (10-12 years old and 74-88 pounds), also received the "Good Sportsmanship Award" and finished the season with a 7-1-1 record.

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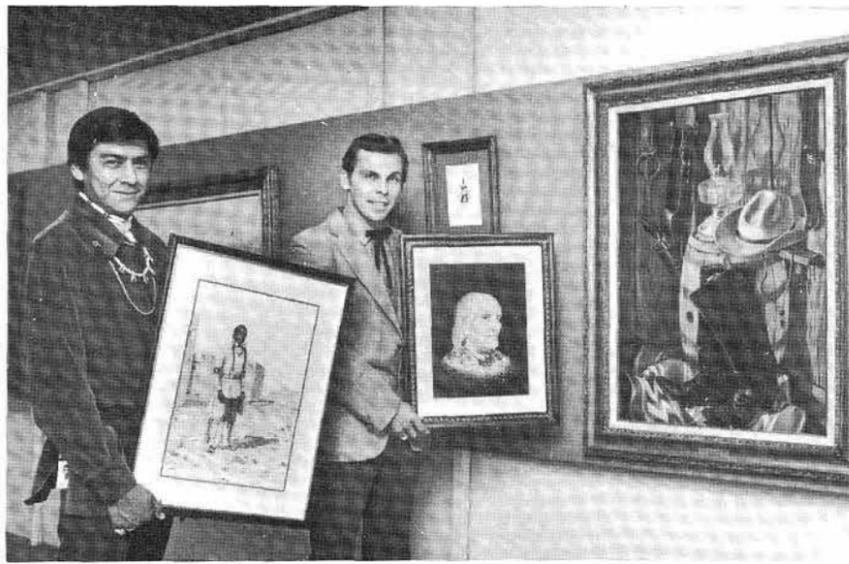
Snow Biz — That white stuff is here again. A few notes on Sandians who have more than a passing involvement in the noble sport. Dave McVey (5626) is president of Coronado Ski Club; and officers include Bob Neel (1534), Luke Stravasnik (1554) and Paul Montoya (1551). In the city's largest ski club, the Sitzmarkers, Bob Lassiter (3131), Ken Flynn (1226) and Jim Davis (1721) preside in various functions. On a national basis, in the Rocky Mt. Division of US Ski Association (18k members), Allen Church (9132) is on the Board of Directors while Walt Westman (7414) is VP for Membership and Recreation. Allen and Walt are also officers in the Southwest Ski Council. Ski touring is coming on strong, and Sam Beard (5628) is president of the NM Ski Touring Club; Guy Coburn (1300) is VP and George Barr (1721) is head instructor. Dick Claassen (1400) will again instruct in the Sandia Peak Ski School and there's about a dozen Sandia types on the Ski Patrol who will swoop down to put you back together again should you somehow injure yourself. Paul Souder (1513) and Pete Stirbis (1542) were chairman and ass't. chairman of the Patrol's recent Ski Swap.

Sandian Posted to Germany



Andy Lieber, manager of Systems Analysis Department 1710, has taken a two year leave of absence to serve with the Advanced Research Projects Agency. He will be director of ARPA's European activities and, in this capacity, will work out of the ARPA office in Stuttgart, Germany.

ARPA, a DOD agency, is concerned with the application of technology to defense problems.



SANDIA ARTISTS Max Ortiz, left, and Fred Lucas (both 7652) prefer authentic detail in their sketches and paintings now on exhibit in Bldg. 802.

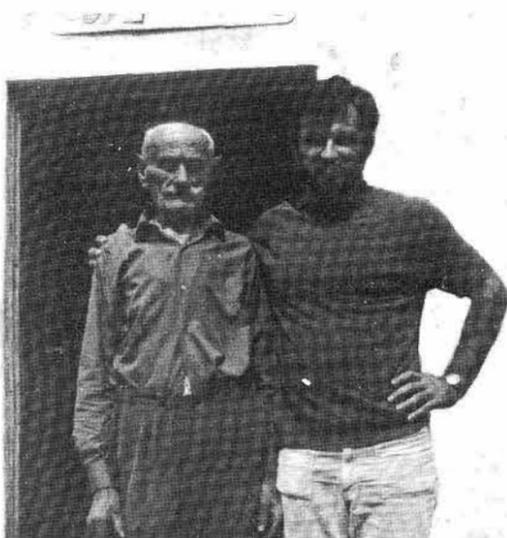
Southwestern Art on Display in Bldg. 802

Fred Lucas and Max Ortiz of Design and Drafting Division 7652 work on construction designs for Nevada Test Site projects during the day, sketch and paint scenes of the southwest during leisure hours. Work of both Sandians is now on display in the elevator foyer of Bldg. 802.

Fred spends up to 200 hours on his large oil paintings, not including research time. He strives for authentic detail in his western scenes. His work is sold through galleries in San Antonio and Scottsdale.

Max, a San Juan Pueblo Indian, uses native American themes in his work. The current exhibit includes a number of paintings of Kachina dolls.

Both Sandians are preparing work to be shown in a local gallery. The current exhibit in Bldg. 802 will hang through mid-December.



BACK IN AUGUST, Bill Saric (5643), right, presented a paper at the University of Moscow during the International Congress of Theoretical and Applied Mechanics and then took the long way home. He spent four weeks touring Russia, Yugoslavia, Greece and islands in the Mediterranean including Rhodes and Crete. One of the highlights of the trip was visiting with his father's relatives in Jasenica, Yugoslavia. Above, he poses with his father's uncle.

Letter to the Editor

Dear Mr. Editor:

In your "Afterthoughts" column (November 10), the symptoms of Drug A (heroin) and Drug B (nicotinia tabacum) are listed. You no doubt intended to point out the folly of using tobacco, and society's inconsistency in its thinking about the two drugs.

Despite your good intentions, the comparisons could lead a naive reader (or one who would like to justify use of strong drugs) to the impression that heroin is relatively harmless.

That impression must be dispelled.

I know one young man who has permanent hearing damage as a result of an overdose of heroin. In another case, a young man very close to me died of an overdose of drugs — not heroin in this instance, although he had used it in the past.

Thus, the statement that heroin has "no organic damage potential" has a dangerously hollow ring.

Sincerely,
Hank Willis — 3130

Deaths



Goepfert

Elmer Goepfert, a shop clerk in Tester Fabrication Division 7133, died Nov. 14 after a short illness. He was 47.

He had worked at Sandia since November 1952.

Survivors include his widow, a daughter and a son.

* * * * *



Hostetler

Charles Hostetler of Antenna Development Division 1423 died Nov. 6 after a short illness. He was 56.

He had worked at Sandia since June 1956.

Survivors include his widow, two daughters and four grandchildren.

* * * * *



Ketner

James Ketner III of Instrument Repair, Calibration and Training Division 7512 died Nov. 8 after a long illness. He was 64.

He had worked at the Laboratories since October 1953.

Survivors include his widow, two daughters and two sons.

We Should Have Sold Stock In The Thing



Noontime book sale outside LAB NEWS office is good money-maker.



Five (of nine) children peer from doorway of their two-room house in Manzano.



This little lady was pleased with her new shoes.

Back in '63 a small group of people in Tech Info Department (now 3150) organized a low key Christmas project to help some of the poor families on South 10 in the villages of Chilili and Tajique. By Christmas the group noted with delight its \$200 kitty, bought a bunch of food wholesale, and delivered it as well as other donations of clothing, toys and the like to some half dozen families down there.

Last year, same project, a gross of nearly \$2000, several truckloads of donated stuff, and purchases of food, medical supplies, shoes, and toys; and lunch at the Soda Straw and a movie for 40 or so kids. The kids came from (if you go south on Rt. 10): Escabosa, Chilili, Tajique, Torreon, Manzano, and Punta. In spite of the ten-fold increase in revenue, the project remains reasonably low key. People from eight departments participate to the precise extent that they wish to participate — there is no arm-twisting.

Key to the success of this Christmas project lies in two factors. First is that the project remains a person-to-person enterprise. Those associated with it get to know or meet the people they are helping, whether they be children bussed into town for shoes or the families themselves in the various villages. Second is the ingenious means used to raise funds. Only 5% comes from direct contributions. The bulk is raised, fairly painlessly, through the project's book and bake sales, and significant amounts are realized through such devices as the used jewelry and white elephant sales. Last year a follies (sic) brought in \$117.

Book sale is conducted daily outside the LAB NEWS office during the noon hour. Donated paperbacks are sold for 25 and 35 cents — a good deal for buyer and seller alike. Hard cover books, also donated, are individually priced. And now there's even a free table: if the stock doesn't move, give it away. Lots of customers re-donate the books they've bought and read, and some books have been sold several times.

The bake sale consists of one or two people volunteering to bring in goodies on a scheduled date for sale at break time. The cookies and cakes usually represent favorite recipes — hard on waistlines but good eating. These sales brought in \$900 last year.

Departments active in this project include 3130, -40, -50, and -60; 3230, -40, and -50; and 7540. Bill Benedick (5134) makes the South 10 families a year 'round concern and acts as



The Montoyas of Escabosa cut and sell firewood.

chief advisor. Over and above the project's Christmas activities, it has succeeded in scheduling a mobile dental unit for four days next spring (@\$100/day). The unit will set up shop in one of the villages, and people associated with the project will pick up and deliver local children, many of whom have never seen a dentist.

The South 10 project is chugging along nicely, thanks. But there's always room for more. If you wish to donate — books or clothing or whatever — call project chairman Ruth Bontrager (ext. 2051) or the LAB NEWS office (ext. 1053). Volunteers with pickups or carryalls are also needed. •js



Delivering goodies on South 10 can be an adventure.

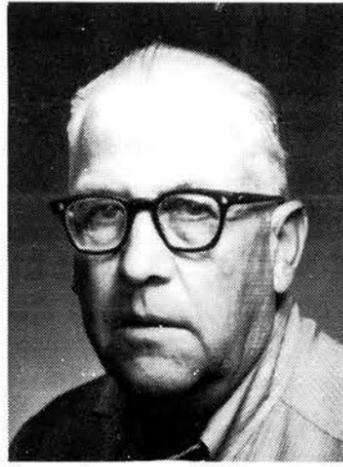


Bill Benedick (5134) playing Santa.



Eileen Fitzmorris — 7542

10



Cosme Lovato — 4518

10

MILEPOSTS

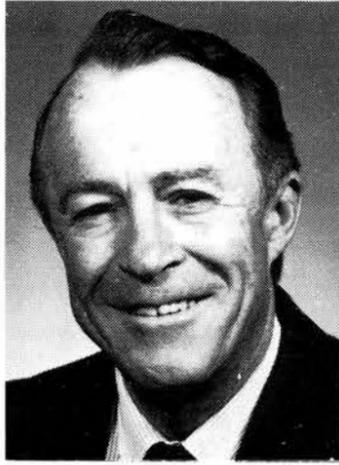
LAB NEWS

November 1972



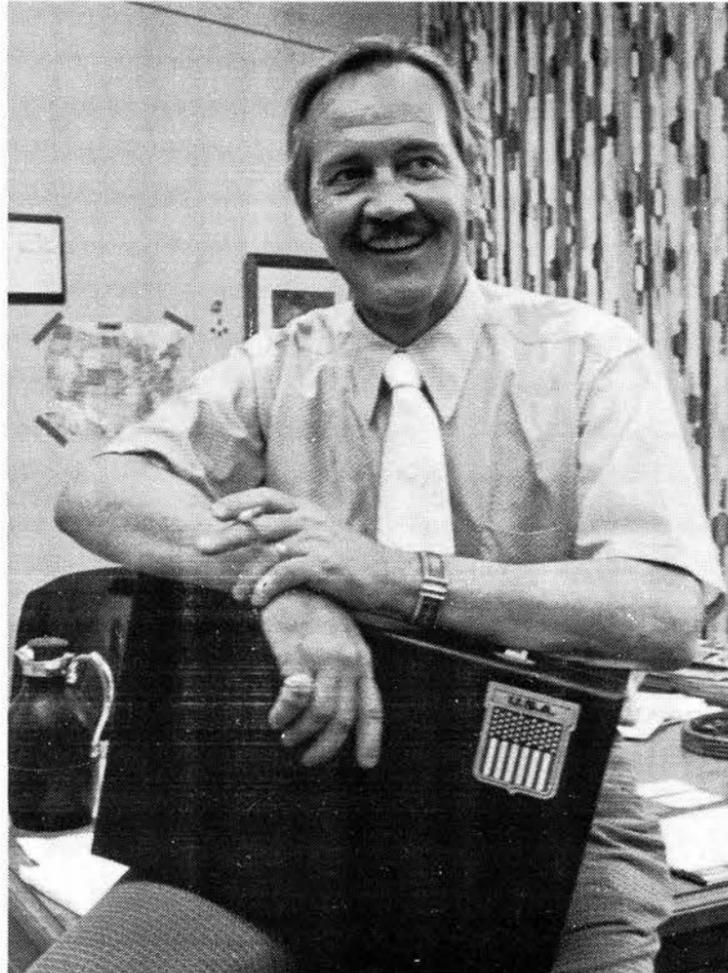
Lurl Ostrander — 8232

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Alex Ruff — 7414

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Dave Tarbox — 3200

25



Nena Brannan — 3151

20



Roy Allison — 1832

15



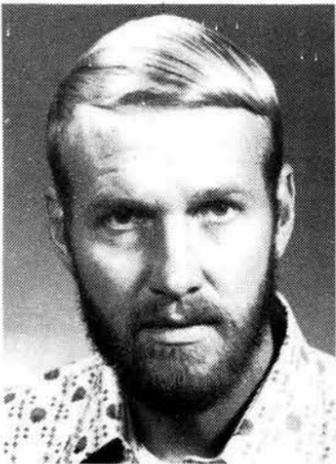
Jose Guzman — 5642

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George Donaldson — 1432

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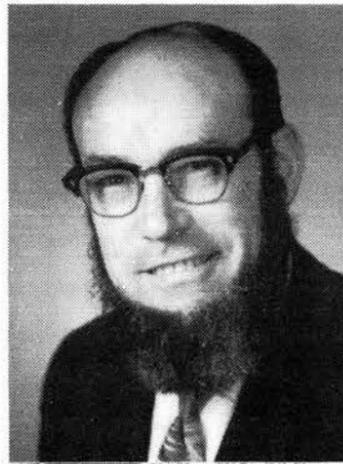
Louis Cropp — 1325

10



Roberta Cole — 8231

15



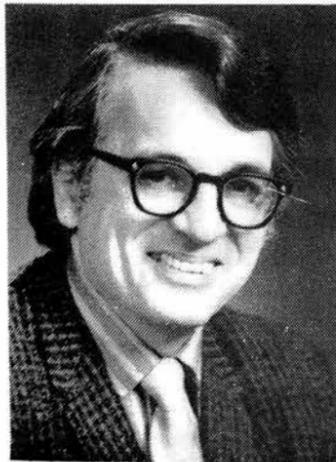
James Gruver — 8431

15



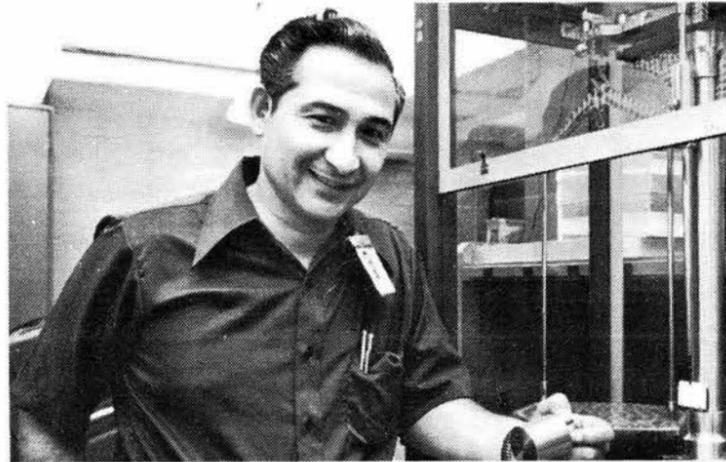
Clarence Lane — 1832

20



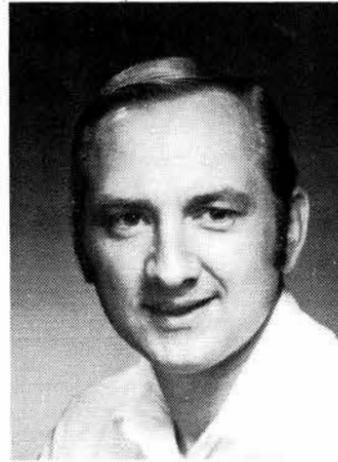
John Brengle — 8182

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Eugene Chavez — 9343

20



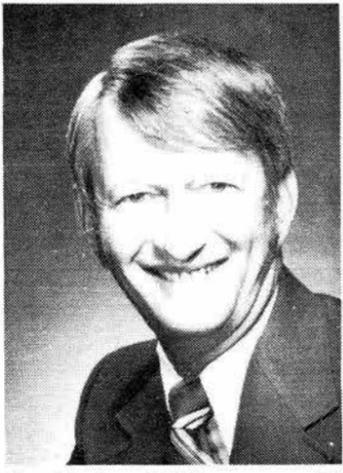
Tom Sullivan — 9115

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John Matsko — 5334

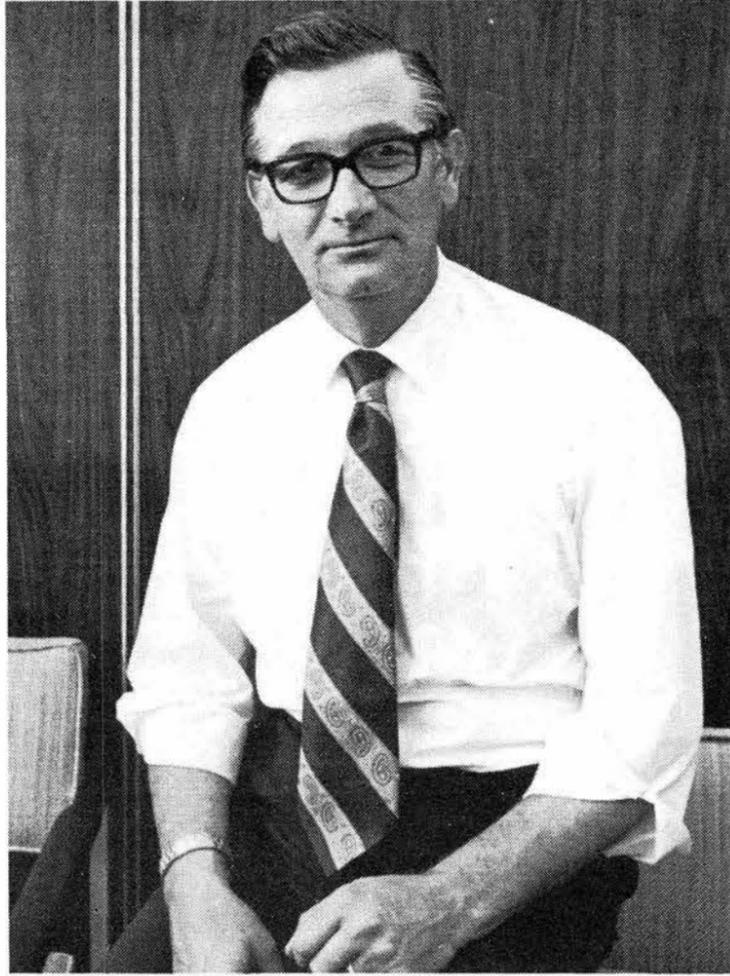
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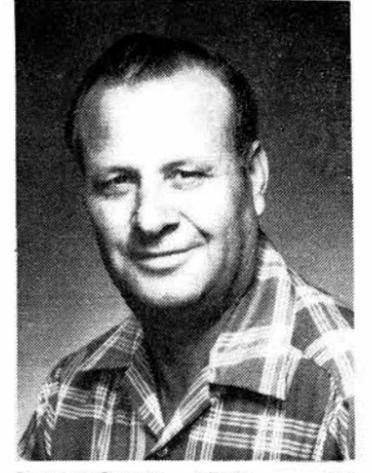
Rex Steele — 1914 10



Deluvina Montoya — 7631 20



Bill Huntsman — 3512 15



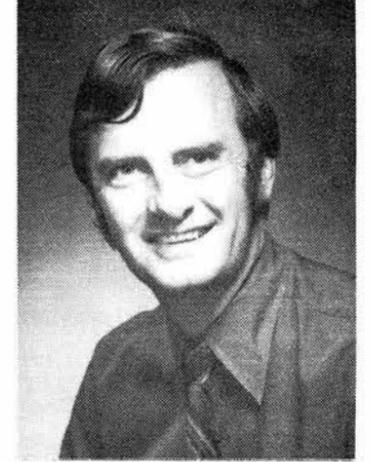
Robert Garcia — 4512 10



John Ledman — 5535 10



Milo Navratil — 9471 15



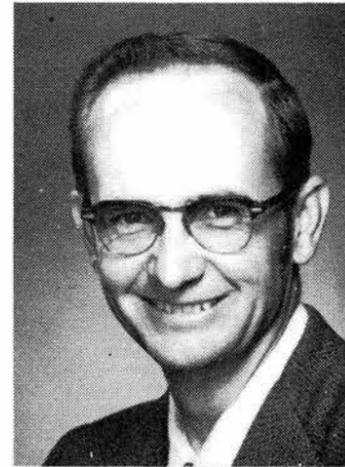
Edward Hart — 1314 15



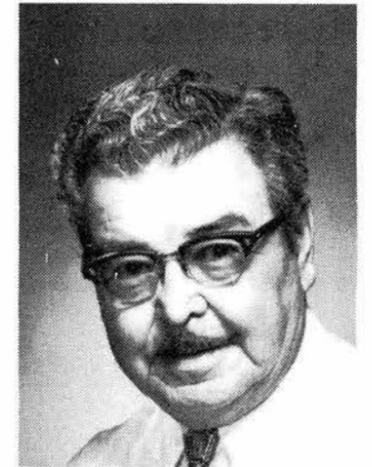
Everett Gieseke — 1522 20



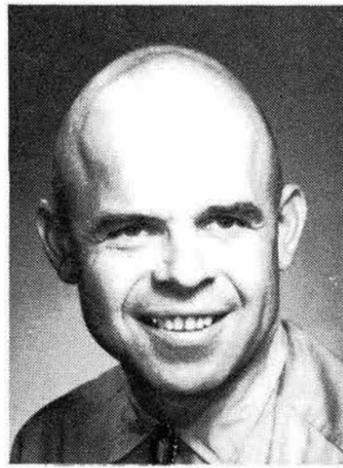
Mary England — 4331 10



William Sundt — 1642 25



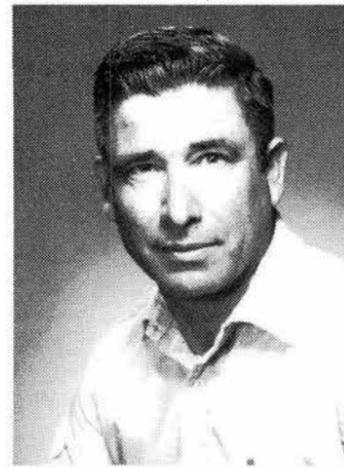
Euligio Sanchez — 4623 20



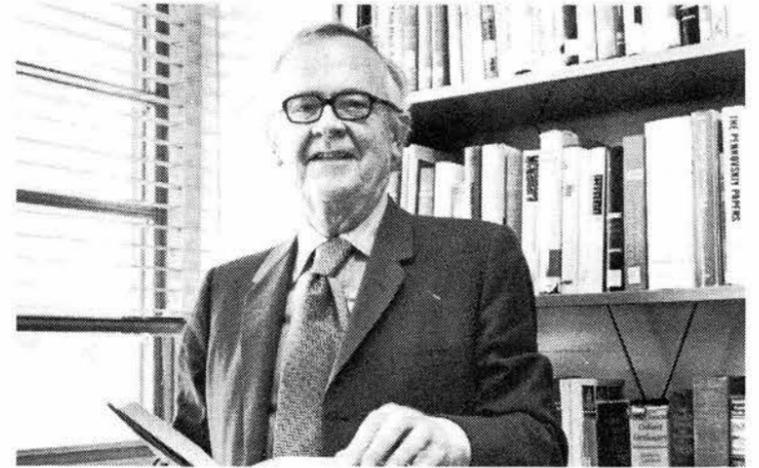
John Dresser — 9133 15



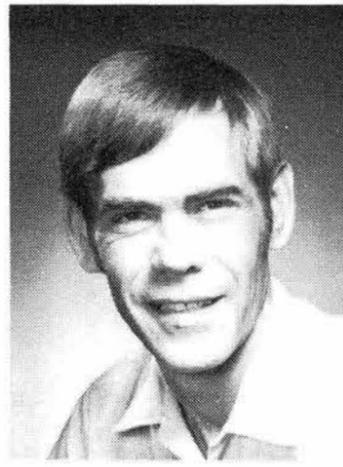
Hugh Bivens — 1415 15



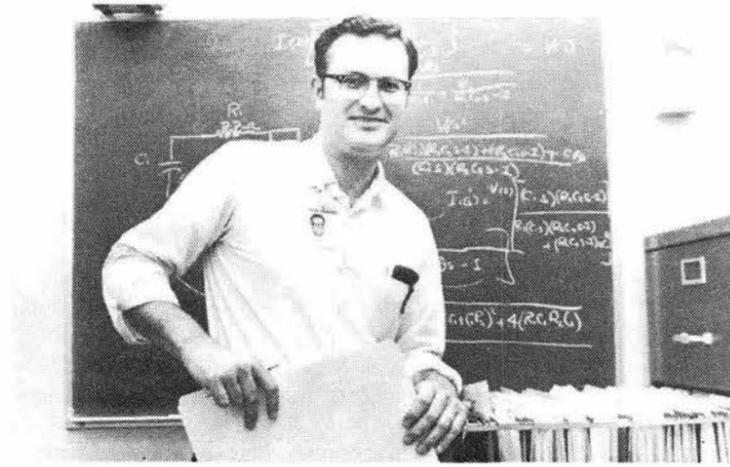
Basilio Villegas — 4514 10



Howard Stump — 100 20



William Bierly — 9333 15



Bob Simpson — 1312 10

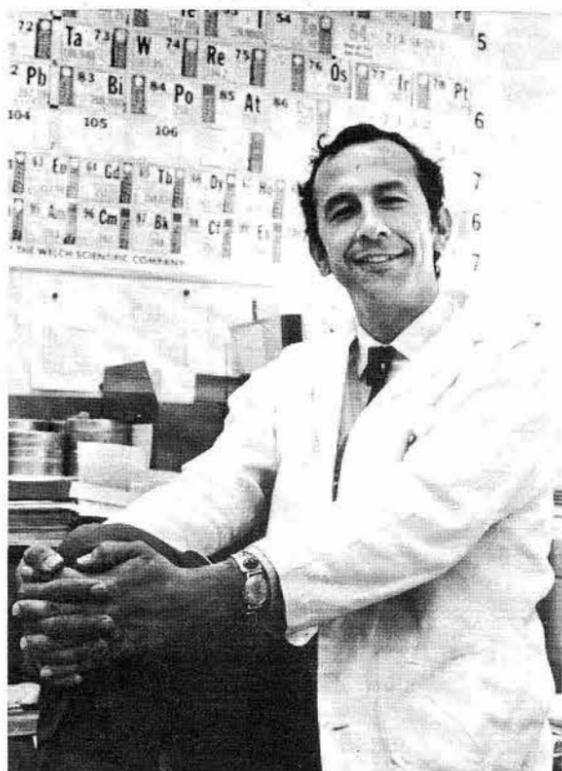


Edward Vavro — 5627 15



Gertrude Byrne — 3231 25

Speakers



Gil Cano

Labs Scientist Named To National Board

Gil Cano, a physicist in Laser Plasma Physics Division 5213, has been named by Elliot Richardson, Secretary of Health, Education, and Welfare to serve on the Board of Advisors of the Fogarty International Center of the National Institutes of Health. Gil's term runs for four years. The 15 members of the Board are selected from among authorities in the fields of higher education, medicine and science, and the general public.

Gil came to Sandia shortly after receiving his doctorate in early '64. Previously he had served for four years in the Air Force as a meteorologist. A native New Mexican, Gil completed his undergraduate and graduate work at New Mexico State.

Authors

H.H. Mabie (former Sandian) and C.B. Rogers (9424), "Transverse Vibrations of Double-Tapered Cantilevered Beams," Vol. 51, No. 5, part 2, JOURNAL OF ACOUSTICAL SOCIETY OF AMERICA.

P.S. Peercy (5132) and G.A. Samara (5130), "Pressure Dependence of Acoustic-Mode-Soft-Optic-Mode Interactions in Ferroelectric BaTiO₃," Vol. 6, No. 7, PHYSICAL REVIEW B.

H.J. Stein (5112), "Optical and Electrical Characteristics of MgO·Al₂O₃ Spinel and Silicon-on-Spinel," Vol. 15, No. 11, SOLID STATE ELECTRONICS.

H.T. Weaver (5154), "Nuclear-Resonance Investigation of a Scandium-Hydrogen Solid Solution," Vol. 6, No. 7, PHYSICAL REVIEW B.

T.V. Nordstrom (5531), "Flow-Stress Recovery of Nickel-Aluminum Alloys," Vol. 7, No. 9, JOURNAL OF MATERIALS SCIENCE.

E.L. Patterson, J.B. Gerardo and A.W. Johnson (all 5243), "Intense-Electron-Beam Excitation of the 3771 Å - N₂ Laser System," Vol. 21, No. 6, APPLIED PHYSICS LETTERS.

G.M. Beardsley (5151) and J.E. Schirber (5150), "Comment on the Compressibility of Cs Determined from Pressure Dependence of Fermi Surface Cross Sections," Vol. 8, Nos. 5-6, JOURNAL OF LOW TEMPERATURE PHYSICS.

F.R. Norwood (1721), "Transient Thermal Waves in the General Theory of Heat Conduction With Finite Wave Speeds," Vol. 39, No. 3, JOURNAL OF APPLIED MECHANICS.

P.E. Bolduc (5223) and E.L. Patterson (5243), "Magnetic Focusing of a Relativistic Electron Beam: Experiment," Vol. 43, No. 10, JOURNAL OF APPLIED PHYSICS.

A.B. Donaldson (1543), "Radial Conduction Effects in the Pulse Method of Measuring Thermal Diffusivity," Vol. 43, No. 10, JOURNAL OF APPLIED PHYSICS.

F.M. Roddy (1433), "A Gated Optical Comparator for Automatically Inspecting Microcircuit Patterns"; D.L. Hartley (8351) and R.A. Hill (5642), "Raman Scattering With a Highly Efficient Light Trapping Cell"; W.F. Chambers (5522), "Minicomputer Applications in Energy and Wavelength Dispersion X-Ray Analysis in an Electro Microprobe"; C.G. Murphy (9462), "Holographic Interferogram Analysis From a Single View"; K.R. Hessel (1441), "The Optical Power Spectrum Analyzer"; C.E. Land (5113), "Ferroelectric Ceramic Devices for Selectively Erasable Image Storage and Display," Fall Meeting of the Optical Society of America, Oct. 17-20, San Francisco.

R.A. Gerber and J.B. Gerardo (both 5243), "Ambipolar to Free Diffusion: The Temporal Behavior of the Electron and Ions"; A.W. Johnson and J.B. Gerardo (both 5243), "Rate of Ionization by Collisions Between Two Helium Atomic Metastables (23S)"; "Does He⁺ Contribute Significantly to the Total Electronic Recombination in a 300°K Helium Plasma Dominated by He⁺ Ions"; and "Recombination of Electrons with Diatomic Ions of the Two Isotope of Helium," 25th Annual Gaseous Electronics Conference, Oct. 17-20, London, Ontario, Canada.

R.S. Nelson (1434), "Single Contact, Multiwire Brush Connector," 5th Annual Connector Symposium, Oct. 18-19, Philadelphia, Pa.

W.L. Holley (9150), "Passive Device to Measure Frequency Content of Peak Wind Pressures," Emmanuel College, Oct. 19-20, Franklin Springs, Ga.

J.L. Irwin (1225), D.G. Sample and R.W. Mottern (both 9461), "Radiation Gaging of Carbon/Carbon Materials To Determine Material Density and Density Variation," Fall Meeting of the Ceramic/Metal Systems Division of the American Ceramic Society, Oct. 22-25, Annapolis Junction, Md.

J.P. Brainard (1413) and D. Jensen (1414), "Conduction Currents on Insulators During Pulsed High Voltage Stress"; O. Milton (5331), "Electrical Discharge Physics for a Vacuum Diode. Preflashover Phenomena," Conference on Electrical Insulation & Dielectric Phenomena, National Research Council, National Academy of Sciences, Oct. 22-25, Buck Hill Falls, Pa.

M.L. Henricks (5424), "SAVIT," 11th UAIDE Annual Meeting, Oct. 23-26, Lake Geneva, Wis.

R.R. Boade (5323), "An Assessment of Current Methods Used to Describe Pressure Generation and Stress Pulse Attenuation in Carbons and Graphites"; K.D. Smith (5323) and W.B. Gauster (5325), "LASL Graphite: II. Correlation of the Response in Electron Beam and Nevada Test Site Environments," Symposium on Special Carbon, Sandia Labs, Oct. 25-27.

W.A. Von Riesemann (1541), "Glass Fracture Studies by Computer and Experiment"; J.D. McClure (1542), "Some Applications of the Correspondence Principle in Viscoelastic Stress Analysis," Structural Division N.M. Section, American Society of Civil Engineers, Oct. 27-28, Santa Fe.

D.C. Bickel and M.G. Vigil (both 9322), "Variation in Pressure Transducer Response from Change in Shock Front Intercept Angle," Meeting of the IMOG Subgroup on Environmental Testing, E.I. DuPont, Savannah River Plant, Oct. 11-12, Aiken, S.C.

P.J. Roache (5643), "Factors in the Selection of Equation Systems for Computational Fluid Dynamics Problems," Invited Paper, Symposium on Numerical Methods in Fluid Dynamics, Oct. 19, NASA Langley; "Artificial Viscosity Effects for Compressible and Incompressible Flow Simulations," Plasma Physics Group, Naval Research Laboratory, Oct. 20, Washington, D.C.

Charles Arnold Jr. (5511), "Synthesis, Characterization and Thermal Evaluation of Poly(carboranylenerfluorophenylenes)," American Chemical Society, Rio Grande Valley Section, Oct. 28, NMSU, Las Cruces.

W. Hermann (5160) and J.W. Nunziato (5131), "General Properties of Shock Waves"; L.M. Barker and R.E. Hollenbach (both 5163), "Recent Results with the Velocity Interferometer System For Any Reflector"; A.L. Stevens and L.E. Pope (both 5133), "Dynamic Yielding and Spall in Textured Polycrystalline Beryllium"; R.L. Fox (5643), "Comparison of Theories for the Dissipation of Turbulent Energy in an Isotropic Medium"; L.M. Lee (5133), "Nonlinearity in the Shock Piezoresistance Coefficient of Manganin"; J.R. Asay and B.M. Butcher (both 5133), "Shock Wave Propagation Near Melting States in Bismuth"; F.C. Perry and O.L. Burchett (5325), "Bounds on the Thermal Dependence of the Shock Yield Strength of A Metal"; F.G. Blottner (5643), "Incompressible, Three-Dimensional Laminar Boundary Layer on an Ellipsoid at Incidence"; F.C. Perry (5325) and L.D. Buxton (5166), "Stress State and Thermal Effects in Porous Gold Heated by 70 nsec., 3 MeV Electron Pulses"; J.W. Nunziato (5131), "Propagation and Growth of Shock Waves in Inhomogeneous Fluids"; R.A. Graham (5132), "Piezoelectric Response of Impact Loaded Lithium Niobate"; L.W. Davison (5131) and A.L. Stevens (5133), "Thermomechanical Constitution of Spalling Elastic Bodies"; B.M. Butcher (5133), "Dynamic Response of Partially Compacted Porous Aluminum During Unloading"; J.W. Nunziato (5131) and H.J. Sutherland (5163), "An Acoustical Determination of Stress Relaxation Functions for Polymers"; J.W. Nunziato (5131), "Instantaneous and Equilibrium Gruneisen Parameters for Solid Polymers"; L.E. Pope and J.N. Johnson (both 5133), "Dynamic Yielding in Beryllium Single Crystals"; J.W. Nunziato (5131) and K.W. Schuler (5163), "Thin Pulse Attenuation in Polymethyl Methacrylate"; W.S. Saric (5643), "Nonlinear Stability of Liquid Film Adjacent to a Supersonic Stream," APS Meeting, Nov. 20-22, Boulder, Colo.

A.B. Donaldson (1543), "A Study of the Thermal Behavior of Explosives," Meeting at New Mexico State Univ., Nov. 21.



HOW'D you like to drop by the library and review twenty or thirty thousand of those real interesting reports (some dating back to the early fifties) for declassification? Well, that's what this group of heroes is doing in the aftermath of the Pentagon Papers flap. The executive order says, in essence, "get thee hence and declassify." Jim Marsh (3154) stands at left; rest of crew hails from classification office, AEC Germantown.

Don't Shoot The Piano Player, He's One of Us

The piano player is having more fun than the kids. He's banging out the old tunes. Hey, he's playing "Winchester Cathedral" — Vo De Oh Do! What's this, the banjo player is singing while he's holding his nose? What's the cow doing? Egad, look at the funny hats. Happy birthday, Mary Ann.

It's Pepino's Pizza Joynt on Tuesday night and the piano player is Fred Mitchell, supervisor of Billing Section 4152-1, and a ham from the looks of him.

"It's entertainment, man," he says. "The little kids dig this stuff. Mom and Pop still remember 'Bill Bailey Won't You Please Come Home' and 'Twelfth Street Rag' and 'Ja Da' and stuff like that. 'Stuff' is not the name of a song."

Fred plays a pseudo-Dixieland, boys-in-the-back-room, rickey-tik kind of piano. It carries over the sound of the big room where everybody is chomping pizza and drinking beer. The kids hang around the bandstand



THE PIANO PLAYER is Fred Mitchell (4152-1) with purple cow.

pulling the ears of the mechanical purple cow. There's a little blonde doll doing the old soft shoe.

"It's my recreation," Fred says. "I have a ball. Used to play with jazz groups back in

Akron and Cleveland. Joined the Navy in '44, didn't touch a piano for years. Nowadays, it's the best way in the world to entertain my seven grandkids. What do you want to hear, man? Name your tune." • dg

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.
 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

- '71 GIBSON SG w/hardcase, \$275; Kent 12-string elec. acoustic, \$60. Malloy, 266-6420.
- MOTORCYCLE TRAILER, 2 bike, can be modified for 3 or more, tool boxes, gas can racks, \$100. Martin, 299-6768.
- TWIN BEDS, metal frames, box springs, mattress, head boards, drapes and lamp shade to match head board, \$65. Perryman, 247-8485.
- NEW RATTAN couch, chair and coffee table from Yonemotos, burnished gold cushions, paid \$360, sell for \$250. Sandy, 299-0120.
- FIREPLACE UTENSILS, stand, plus 4 pieces. Vigil, 296-3590.
- NATIONAL GEOGRAPHIC collection back 1927, fairly complete, make offer. Schulze, 898-2880.
- 2 STEEL GATES, chain link, 4' high, 9' long, \$55; kitchen dinette table and 5 chairs, \$15. MacGibbon, 256-3107.
- 36" SCREEN DOOR; mosaic coffee table; Hot Wheels and accessories; roller skates. Rosborough, 298-3645.
- WHITE BATHROOM SINK, \$8; medicine cabinet, \$2; student clarinet, case, and music stand, \$60; single roll-a-way cot, \$10. Schuster, 255-5970.
- HOTPOINT elec. 2 oven range, \$50; Dishmaster, \$25; range hood, no vent required, \$25. Cox, 299-0480.
- '66 ALASKAN 8' camper, self contained w/butane bottle, extra side boxes for wide box, raises and lowers, \$875. Smythe, 272 Valley High SW., 877-5829.

- DINETTE SET ext. table, 6 chairs. \$50; 3 pc. living room suite, \$195; TV, B&W, port., 19", w/stand, \$30. Officer, 298-3318.
- PUPPIES, Lhasa Apso, AKC reg., championship background, have shots, \$100 ea. White, 299-6411.
- PICKUP SEAT, bench type, overall width approx. 55", \$10. Plummer, 296-0806.
- PLAY PEN, Cosco nylon net, \$15; feeding table, \$15; GE heat and serve dish, \$5; stroller, \$15; vaporizer, \$2; 6 bottles, \$1. Stevens, 296-6326.
- MOTOROLA 2 way radio, 100w, low band, transistorized receiver; Bell Shorty model motorcycle helmet, 7/8, best offer on each. Bennett, 298-1142.
- GAS TANK, 20-gal., off new '72 1/2 ton Chevy carryall truck, complete w/mounting hardware, sender unit, etc., \$35. Harrison, 296-3045.
- SINGER ZIG ZAG in cabinet, 2 yrs. old. Gray, 265-1883.
- ELEC. GUITAR, Epiphone Casino model w/case and extras, \$200. Esterly, 256-9251.
- CATAMARAN, Hobie 14, race equipped w/trailer, \$995. Kelly, 268-1751.
- SKIS 215 cm, Hart Javelin SL, \$40; car top ski rack, \$10; Mexican 3 panel room divider screen, \$55. Scheer, 265-1983.
- 8MM MOVIE CAMERA, zoom, auto. exposure, wind-up type, \$15 w/2 new rolls film. Hansche, 296-1387.
- SCHWINN orange crate, 5-spd., shocks, drum brake, \$50; 450X Sears Equatorial refracting telescope, 2 1/2" objective, 3 eyepieces, \$50. Dumas, 268-3403.
- SAVAGE .32 cal. auto. pistol, \$65; Winchester .22 rifle, model 62-A, \$85. Smitha, 266-9977.
- SEARS utility trailer w/cover and spare tire, weathered but not used, \$95. Zanetti, 344-0166.
- GUITARS: Ventura Bruno model classical, \$75; Del Ray elec. w/Fender deluxe amp, \$125. Johnson, 299-4383.

- '70 MOBILE HOME, 12x65, 2 br., golf course lot, adult section, patio cover, skirted, landscaped. Parsons, 898-4721.
- CHILDS sidewalk bike, w/larger bike braking action. Hart, 266-6811.
- ELECTRONIC ORGAN, twin keyboard, w/48 lessons on record, several student music booklets, \$175. Laursen, 266-3190.
- TAPE RECORDER, \$5; transistor radio, \$2.50; binoculars \$5; view master, \$2; walkie-talkie, \$5; skate board, \$1; drapes, 2 pr., 116"w, 58"l and 120"w, 34"l, \$8. Chavez, 256-1087.
- 21" B&W Hotpoint console model TV, dark walnut cabinet, \$25. Nelson, 255-8910.
- PORT. TYPEWRITER, Royal w/carrying case, \$15; rabbits, 5 mos. old, for pets or breeding only, \$1.50 ea. Bassett, 898-1840.
- STEREO record player, Ward's, blond cabinet, \$20; elec. trains, Am. Flyer, 2 sets w/transformers, track, town, extra houses, crossings, etc., \$45. Mead, 299-2396.
- '71 SHERWOOD MANOR mobile home, 2-br., 1 1/4 bath, unfurnished, adult section 4 Hills. Goebel, 255-9877.
- PHILCO 4-spd. stereo record player, auto. changer, 2 detachable speakers, \$30. Owens, 255-9257.
- 25" GE B&W TV, stylish wood cabinet, remote control; 18" Zenith port. B&W TV, w/wood & metal stand. Make offer. Jewett, 298-4913.
- SKI BOOTS, w/tree, Rieker, 4-buckle, used twice, size 11M, \$50. Clark, 298-4913.
- COUCH, reclining chair, lamp, girl's bicycle. Savitt, 268-0158.
- RIFLE 308 Savage, Model 99, \$100; dbl.-barrel J.C. Higgins 12 gauge, \$60. Chaves, 242-8637 or 255-6155.

FOR SALE TRANSPORTATION

- '70 OPEL GT, AT, radio, disc brakes, 30,000 miles. Schmierer, 299-2352.

FOR SALE REAL ESTATE

- 1/2 ACRE lots in new subdivision 1/2 mile east of Peralta, approved for mobile homes or permanent dwellings, low

- '70 VW Squareback, under book price. Shunny, 265-1620.
- '68 FORD Country Sedan, AT, PS, radio, factory air, lt. blue, 4 door wagon. Brion, 298-1761.
- '66 MUSTANG fastback, PB, 4-spd. 289, Positraction. Calvelage, 298-1560.
- '72 HONDA CB, 1300 miles. Bowen, 266-3780 after 6.
- '66 HONDA CB77, 305cc, recent overhaul, new ignition-battery, fork lock, helmet w/full face shield, \$350. Herndon, 268-8269.
- SEARS blue 3-spd. girl's bike, 26" tires, \$35. Weart, 298-0614.
- '67 SPORT FURY convert., AC, AT, PS, bucket seats, 383 cu. in. engine, \$1045. Ray, 298-0408.
- '71 MOTOGUZZI, 3700 miles, fairing, turn signals, \$1200. Deverman, 296-8317.
- '55 CHEV. PICKUP, new paint inside and out, new interior — rolled and pleated, shag carpet; wood tailgate, chrome rims, w/w, R&H, 3 spd. w/Hurst shifter, 6 cyl., \$650 firm. Poole, 298-6025.
- '58 VAUXHALL, 4-cyl., \$85. Maes, 298-2294.
- '67 MERCURY wagon, all power, factory air, 390 CID engine, lots of extras. Gay, 869-2781.
- '69 510 DATSUN sedan, dark green, AC, new carpet and upholstery, Michelin tires, chrome wheels. Fletcher, 298-2142.
- '68 CHEV. st. wagon, AC. Johnson, 296-5957.
- '66 OPEL Kadett 2-dr., 4-spd. Peercy, 296-6850.
- '69 EL CAMINO. 350 engine PS, AC, R&H custom cab, \$1975. Davis, 294-0139.
- GIRL'S 5-spd. bike, 26" Schwinn, \$55. Olson, 299-3615.
- '71, 175 YAMAHA Enduro, \$400. Johnson, 265-2608.
- '71 KAWASAKI 175, new back tire. Walters, 296-5803.

down and low monthly payments, \$3250 ea. Shuman, 868-2618.

FOR RENT

FURNISHED 2 bdr. house, dbl. garage, utilities paid, no pets, 229 Gen. Somervall NE; small furnished 1 bedroom house, single person, no pets, utilities paid, \$80/mo., available Dec. 1, 202 1/2 San Pablo SE. Dodson, 255-0265.

WANTED

CHILDRENS swing set, any condition. Latta, 299-9380.
 TO RENT: snowmobile for approximate period Dec. 7-18, 1972; excellent care assured. Causey, 299-0089.
 TURKEY, goose, duck or guinea eggs. Allen, 296-6985.
 BLUE COVERED, white spiral fastener report by Swain on Maintenance Diagrams, loaned to someone ages ago. Swain, ext. 3675.
 INBOARD/OUTBOARD tri-hull boat, open bow, 16-18', 2-4 yrs. old; water skis, jr. and adult; ski belts; snow skis & boots for lady, 5'3", size 8B. Chandler, 296-3323.

WORK WANTED

QUALIFIED HIGH SCHOOL SENIOR giving beginning piano lessons. \$1.50 per half hour. Walter, 296-7062.
 GIRL 14 years old wants babysitting jobs, North Valley. Harley, 898-0594.

LOST & FOUND

LOST — Black ski mitten, 2 keys on metal holder. LOST AND FOUND, tel. 264-2757, Bldg. 832.
 FOUND — Key, hearing aid batteries, charm for bracelet, steel measuring tape, metal tip for bolo tie. LOST AND FOUND, tel. 264-2757, Bldg. 832.
 FOUND — Small gold-brown female terrier cross, no collar, Area III of Sandia Labs (Bldg. 6584). Call Bobbi, 264-8008.

No Leftovers Tonight

HERE IT IS the day after Thanksgiving and who can stand the thought of leftover turkey? So wheel home right after work, grab mama and the kids and get in line for the Club's special fried shrimp buffet. Adults pay \$2.25, kids \$2. In the meantime Happy Hour bar prices (cheap) will be in effect from 5 until 10 p.m. Wildman Bob Banks and the Trio will be on the bandstand and Denny Gallegos will be in the main lounge.

* * * *

SOUL SESSION TOMORROW will see a group called Curtain wired into the bandstand from 8:30 to 12:30. Happy Hour prices will be in effect all evening and super sandwiches will be available. Admission is free to members, guests pay \$1.

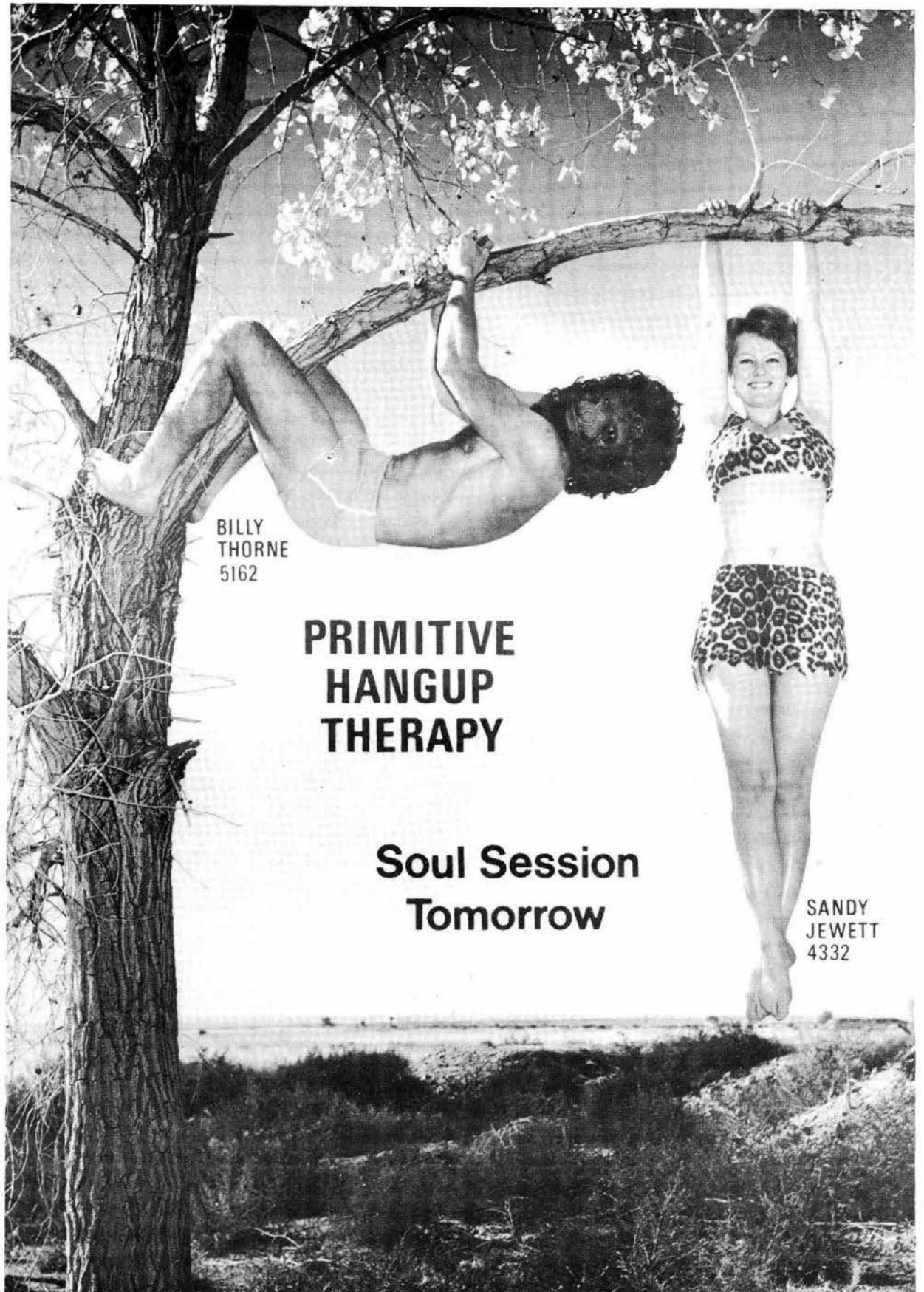
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NEXT FRIDAY, Dec. 1, is called a "Super Happy Hour" on the Club calendar and the thing that makes it different is steak and lobster newburg on the buffet menu. The Four Keys will play for dancing while Yolanda Adent entertains in the main lounge. Door prizes will be given away during the evening.

LAB NEWS
PAGE TWELVE
NOVEMBER 24, 1972



REMOVE THE ICE AND SNOW BEFORE YOU GO..



BILLY THORNE
5162

PRIMITIVE HANGUP THERAPY

Soul Session Tomorrow

SANDY JEWETT
4332

COMING EVENTS for which you should maybe mark your calendar for now include the Kid's Christmas party with Santa Claus and the works scheduled for 10 a.m. Saturday, Dec. 23, and the Club's traditional New Year's blast set, naturally, for New Year's Eve, Sunday, Dec. 31.

* * * *

"TROUBLE," Bud Wheeler (3251), Club travel director, says, "Our Rio trip is in trouble. So far we've only had some 85 people sign up for the trip and we need a minimum of 160 to make the package price feasible."

So Bud has extended the deadline to Dec. 1 for signing up for the trip. "If we don't get the people we need by then, we will have to cancel," he says.

The trip is set for Feb. 18-25 with accommodations at the luxurious Nacional Hotel on Ipenema beach. The package includes breakfast and dinner at the hotel each day plus a city sightseeing tour and a special tour to Carcovado. The package price is \$502. A \$100 deposit is required by Dec. 1.

Sanado Women Schedule Christmas Ball Dec. 9

The Coronado Club will be transformed inside and out into a Winter Wonderland for the Sanado Woman's Club Christmas Ball, Dec. 9.

Festivities will begin with cocktails at 6:30 p.m. A roast beef dinner with all the trimmings, topped by hot cherry pie, will be served at 7:30.

Sol Chavez with The Duke City Brass will play for dancing from 8:30 until midnight.

Tickets are \$8.00 a couple, \$4.00 for singles. Formal dress is optional.

Reservations should be made by Dec. 7 with Mrs. George Horne, 7216 Carriage Rd., NE.

Congratulations

Mr. and Mrs. Dennis Mottern (5533), a son, Clayton Wood, Nov. 3.