

## A Great Deal Can Be Accomplished

A six-page statement on fair employment practices for the Labs has been issued by John Hornbeck. The statement will be the basis of Labs policy in the increasingly active area of equal employment opportunity. Overall objective is "... to formulate an understandable, consistent policy at Sandia to guide a system of practices with respect to treatment of people — their hiring, promotion, raises, their everyday life within the institution."

These are the principal aims of the policy:

— to recognize the dignity of the individual and to enhance his self-esteem

— to prevent and eliminate discrimination

— to offer to any individual, minority or majority, who has been denied equal opportunity a special opportunity, in order that the individual can compete on an equal footing.

To carry out this newly articulated policy, President Hornbeck has also announced the establishment of Operation Opportunity, a program to identify areas relating to fair employment in need of action. The Operation Opportunity Planning Committee, which will develop and implement the program, has been appointed and consists of Dave Tarbox (3200), Chairman; Bob DeVore (7620), Ken Touryan (5640), Bob Gaeddert (8210), Bob Garcia (3230), and Mary Quigley (3133).

These are representative of areas of concern to the Committee:

—Identification of those people in Sandia who have lacked opportunities and a study of

how increased opportunities can be offered to them for personal and work-related advancement.

—Review of standards and practices within Sandia for upgrading and promotion and the recommendation of desirable changes in order to afford full opportunity for the talents that exist or can be developed in our people.

—Examination of ways to permit greater lateral movement of people, since such moves can lead to their increased personal satisfaction and efficiency.

Some steps will be taken immediately:

—The development of an awareness within the Labs of fair employment practices, chiefly through employee conferences at the division level. Material for these conferences is being prepared by Personnel Departments 3230 and 8210.

—The One-Year-On-Campus (OYOC) Program will be dedicated as a mechanism for bringing on roll able individuals who have lacked opportunity. Plans are to enroll several people in this program in the next school year.

President Hornbeck concludes his announcement of Operation Opportunity with these words:

"Perhaps this is enough to indicate that we have made a start, that we can see at least in part where we are going and that there is a very large task remaining to be done. I am optimistic that with all of Sandia pulling together a great deal can be accomplished."

## EVP Will Return To Western



Bob Kraay, Labs Executive Vice President, will be returning to Western Electric Sept. 1 to become General Manager of the Northern Illinois Works. The plant is concerned with the development, introduction, and manufacture of electronic switching systems.

Mr. Kraay began his Western Electric career as a product engineer at the Hawthorne Works in 1946. Awarded a Sloan Fellowship by MIT in 1956, he returned to the company a year later with assignments in field service, labor relations and manufacturing. In 1964 he was named Manager of the Reading Plant and subsequently General Manager-Central Region and General Manager of the Kansas City Works.

Since coming here in 1971, Mr. Kraay has been active in the community, holding memberships in Albuquerque's Industrial Foundation and on the advisory council of UNM's School of Business.

# LAB NEWS

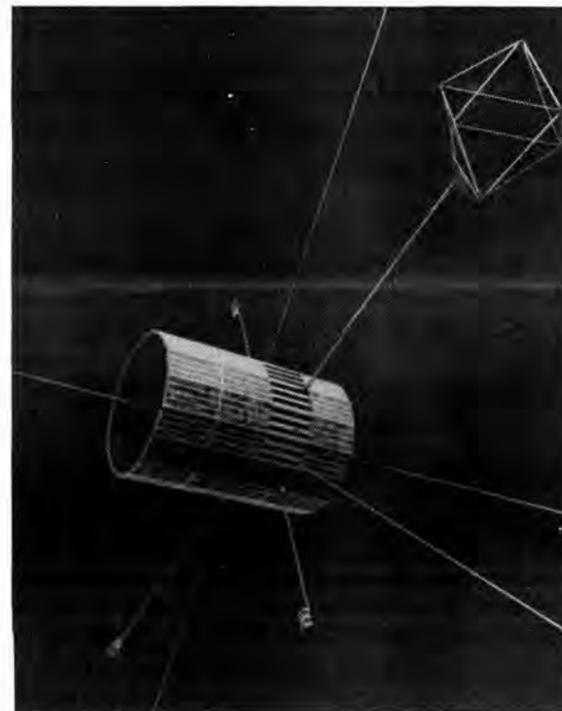
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JULY 21, 1972

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



**SIGN WAGE AGREEMENTS** — Sandia Laboratories, Metal Trades Council and Office Workers reached accord last week and signed supplemental agreements covering wages for the coming year. Increases averaged 5½ percent. Signing the agreements are (l to r) Merle Alexander (7154), Metal Trades Council president; Ernie Peterson, Labor Relations Department 3220; and Maxine Stephenson (7633), president, Office and Professional Employees International Union, Local 251.



**ARTIST'S CONCEPT** of the IMP-1 spacecraft in orbit. Launched 16 months ago, the spacecraft carries 12 scientific experiments. One of these, designed by LASL and containing Sandia logic and power modules, is leading to better understanding of plasma physics.

## Sandia Work on IMP Spacecraft Helps Solar Wind Study

A 635-lb. satellite with spinning spider-like legs has been swinging around earth in a long cigar-shaped orbit since March 12, 1971. A NASA project, the spacecraft is called IMP-1 (for Interplanetary Monitoring Platform). It is the first of a planned series of second generation spacecraft designed to extend knowledge of solar-lunar-terrestrial relationships.

On board are 12 scientific experiments which measure energetic particles, plasmas,

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# Afterthoughts

Once Upon A Corp.--A few years back, we dropped the Corp. and adopted the Labs. Translation: we are no longer identified as Sandia Corporation but as Sandia Laboratories. (And "Laboratories" is a collective noun that is followed by the singular form of the verb--"Sandia Laboratories is where we work.") But the Corp. dies hard and you still see "Sandia Corporation" in all sorts of random places--road signs, the backs of coveralls, on forms, etc. So Ken Smith, 3100, is heading up a low key campaign to ferret out and eradicate vestigial references to our former label. Now this campaign may not exactly engage your passion, but you can help by making note of instances of continued usage of the old label and reporting them to Ken (or Bill Jamieson in Livermore)--sort of like the current TIP (Turn In A Pusher) campaign. Only no reward, just a feeling of tremendous rectitude.

\* \* \*

News Story Of The Week--Most of you are thinking this is going to be one more item to add to the saturation coverage of the Democratic Convention. But interesting, I guess, as the convention was, it wasn't for me the real story of the week. In its story of the naming of Miss Carlsbad as Miss New Mexico for 1972, the Journal goes on to say "Her talent routine was a vaudeville tap dance routine to the tune, 'It's A Grand Old Flag,' which ended with her performing 1½ minutes of tap dancing upside-down on an especially-built platform, to thunderous applause." Just contemplate that for a while and see if you aren't as much moved by this account as I was and am.

\* \* \*

A Little Convention(al) Wisdom--"Whenever I find myself on the side of the majority, I find it is time to pause . . . and reflect."--  
Mark Twain. \*js

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## IMP Spacecraft

magnetic and electric fields, and low frequency radio emissions in interplanetary space.

One of the experiments, designed by Los Alamos Scientific Laboratory, measures electron and proton fields in space in order to complete descriptions of the particle populations in the solar wind, magnetosheath and magnetotail. Hervey Hawk and Paul Beck of Satellite Systems Division 9214 designed the logic systems and power supplies for the experiment and guided the hardware through Sandia's shops for fabrication, installation and testing. The experiment has functioned as planned 100 percent of the time since launch -- some 16 months in the environment of outer space.

Sam Bame, LASL scientific director of the experiment, reports that data from the plasma experiment has led to better understanding of basic questions in plasma physics; this may find application in thermonuclear research for controlled fusion. Particle flow found in space cannot be duplicated in the laboratory. One phenomenon revealed by the data is that at times the solar wind contains intermingling streams of particles traveling at different speeds.

The IMP spacecraft's orbit, with an apogee of 128,030 miles and a perigee of 152 miles, permits the vehicle to explore the magnetosheath (where the solar wind from the sun interacts with the earth's magnetic field) and the magnetotail (the elongation of the earth's magnetic field caused by solar wind flow).

Work is about complete on a second IMP spacecraft scheduled for launch in the fall. Here again, Sandia is providing the logics and power supplies for the LASL experiment plus fabrication and ground testing equipment. In the spring of 1974 a third IMP spacecraft will be launched. The LASL-Sandia experiment will remain essentially unchanged for both spacecraft.

The project is an outgrowth of work performed by Sandia and LASL for the successful Vela program -- detection of nuclear bursts in space. \*dg

## Events Calendar

**July 21-23** — N.M. Arts and Crafts Fair, State Fairgrounds. (Free parking through San Pedro and Louisiana entrances.)

**July 21-23, 27-30** — "In The Matter of J. Robert Oppenheimer," Corrales Adobe Theater, 8:30 p.m. For reservations, 898-3323.

**July 21, 29** — "Don Giovanni," Santa Fe Opera, 9 p.m.

**July 22** — NM Mt. Club, Manzano Peak via Colorado Canyon, Western Skies, 7 a.m.

**July 22, 28** — "La Grande-Duchesse de Gerolstein," Santa Fe Opera, 9 p.m.

**July 23, 30** — Potts Puppets, Old Town Studio, 2 p.m., For reservations, 242-4602.

**July 24** — Lecture Under The Stars — Dr. J.J. Brody, curator of Maxwell Museum of Anthropology, UNM, "Contemporary Indian Arts and Crafts," North Mall, 8 p.m.

**July 27** — Lecture Under The Stars — Dr. N. Scott Momaday, 1969 Pulitzer Prize winner, "An American Indian Oral Tradition: Legend and Lore," North Mall, 8 p.m.

**July 30** — NM Mt. Club, Mt. Taylor, Johnson Gym, 7:30 a.m.

**Aug. 2-5** — "Richard III," Keller Hall, UNM Fine Arts Center. For reservations, 277-4402.

### Sympathy

To Curt Mueller (7425) for the death of his father in Greeley, Colo., July 15.

### Congratulations

Mr. and Mrs. Jay Newquist (1411), twin boys, Michael and Jeffrey, July 12.

Mr. and Mrs. George Paul (4513), a son, Michael, July 5.

### Credit Union Statements

As part of its normal audit procedure, the Supervisory Committee of the Sandia Laboratory Credit Union recently mailed statements to members with account numbers from 7000 to 7999 and 11,000 to 11,999. If your account number is in this series and you have not received your statement, please notify R.C. Butler (4364).

## LAB NEWS

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### SANDIA LABORATORIES

An Equal Opportunity Employer

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&

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bruce hawkinson writes

as does norma taylor while

bill lasker takes/makes pictures

&

in livermore lorena schneider does all



JIM BAREMORE to supervisor of the Electronic Timers and Protective Systems Division 1344, effective July 16.

Jim first joined the Labs in 1963 as a member of Sandia's Technical Development Program. During his early years at Sandia Jim worked with automatic programming and recording equipment and, since 1970, he has been involved in the development of airborne computers.

He earned his BS at the University of Missouri-Rolla, his MS at UNM, and PhD — all in EE — at the U. of Missouri-Rolla. He served in the US Army from 1968-70 as a Captain and completed one year's duty in Viet Nam.

Jim's leisure-time hobby — each weekend — is flying model airplanes. He is secretary of the Albuquerque Radio Control Club.

Jim and his wife Donna have two children — four-year-old Mike and one-year-old Nancy. They live at 9424 Gutierrez NE.

## Bulletin Boards Don't Carry Many Bulletins Anymore

One of the better WW II cartoons, a Mauldin I think, shows a soldier resolutely going through all the stuff on the company bulletin board and finally coming to the absolute bottom-most layer, which consisted of a notice something like this: "All Units — There will be a crossing of the Delaware tonight at 2300 hours. Signed, G. Washington, Commanding."



LOOK, I'll put an ad on the bulletin board and we'll get rid of your damned pet. . .

Now Sandia hasn't been around quite as long as the U.S. Army, but some of our boards carry material old enough to verge on the quaint. How come? Who's in charge? I hesitate to volunteer this information, but the LAB NEWS office is nominally in charge, with emphasis on the "nominally." We have

some 40 boards around the Labs, and they are designated "unofficial" and "official." On the latter appear things that one law or another stipulates must be posted, and these generally run to posters and proclamations whose strident tone and stuffy content place them high on the list of important but never-read documents.

But it is the unofficial boards that offer the rich and occasionally charming melange: ads that seek a good home for a kitten that is invariably lovable; that offer "crochet panchos (sic) for sale"; that solicit "an old-fashioned ice box"; that extol used cars whose condition, curiously, is never less than good or at worst may only bear faded paint; or that offer mysterious machines — "2 Lyman No. 55 powder measures." One ad says "Son's car — he is overseas," and we have here a nice distinction — that boy isn't gallivanting around Europe with all those long-haired freaks, smoking pot and worse, but rather is probably in the military and may even be carrying his country's burden in Viet Nam, because that's what "overseas" connotes.

The other category of stuff on the unofficial boards consists of Advocacy for Worthy Causes: attend the Gophers Lodge gala spaghetti dinner so that the Spelling Bee finalists can be sent to the nationals; anyone interested in forming a chapter of the Gum Wrapper Appreciation Society call ext. 2468; join the March For/Against (take one) Legalization of Winking; and the Coronado Club lunch menu.

People find out that LAB NEWS has something to do with the boards and call us to report something offensive to their sensibilities, usually a poster, "Come To The Big Democratic/Republican (take one) Rally Tonight!"; or "Reverend \_\_\_\_\_ will

deliver his inspirational message at the \_\_\_\_\_ Church . . ." Political and religious notices and commercial ads ("Worms From Al's Worm Farm Are Best") are not supposed to appear on the boards. But they do and we (the LAB NEWS types) take them down when we see them but we can't monitor all 40 boards and you are hereby given your official purger's license to remove such material from the boards in your vicinity. If there's any question, give me a call on ext. 1053, or if you wish to post a Worthy Cause poster run it past me.

Oh yes. When you do decide to part with that loveable kitten, please date your ad so that it can be taken down (preferably by you) after five working days. We purge the board next to our office several times a week and ads without dates get very short shrift. •js

### Death

Jay Wardlow of Exploratory Systems Division I 1211 died July 9 as a result of an automobile accident. He was 57.

He had worked at Sandia Laboratories since November 1954.

Survivors include his widow, a daughter and a son.



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### Campus/Industry Technology Exchange

## Charles Arning Teaches at Technical-Vocational Institute.

Charles Arning, a design draftsman in Division 7614, recently completed a three-month stint as an instructor at Albuquerque's Technical-Vocational Institute. He taught part time at T-VI for one tri-mester.

He exchanged jobs with Russ Brown, who came to Sandia to learn the latest in industrial drafting techniques, including a review of Sandia's positional tolerancing methods. George Elliott of Employment Division 3251 arranged the exchange.

"It was beneficial both ways," Charles says, "After attending night classes for nine years to earn a degree to teach, I finally felt like a teacher. And you know that you really have to bone up when you're staying just one day ahead of today's really sharp students." He taught a class in manufacturing processes at T-VI and was a team teacher in three other courses.

Charlie finished Oklahoma State's Technical Institute with a certificate in drafting technology in 1954 and joined Sandia in 1958. In 1960 he enrolled at UNM under Sandia's educational aids plan and earned a degree in industrial arts in 1969. Currently he is teaching an evening class in drafting two

nights a week at T-VI.

As for Russ Brown, he is enthusiastic about his experience at Sandia. He has already introduced students to the layout of integrated hybrid circuits and other areas of electromechanical drafting not previously taught. These changes are a direct result of his work at Sandia.

The exchange is part of a continuing effort at Sandia to further the exchange of

technology between campus and industry. Sandia hires a number of high school teachers during the summer, cooperates with technical institutes by providing students interested in a teaching career in this area with summer employment, and cooperates with UNM and NMIMT in joint staff appointments — people who alternate teaching with work at Sandia. In addition, Sandians have been granted leaves of absence to teach at colleges or universities. •dg



JOB SWITCH — Russ Brown, coordinator of T-VI's drafting department, recently spent three months at Sandia while Charles Arning (7614), right, taught his classes at the technical school.

# Vista NEW MEXICO

## When They Turned Rio Grande Water Into Wine

"Albuquerque's better."

"No, Livermore's better — we've got our own wines. You Albuquerque types have to import them."

And there we Sandians Albuquerque lose the argument every time. What we should have done is to get here sooner. A hundred years ago or so, the Valley was a thriving wine-producing area. "No climate in the world," declared W.W.H. Davis in 1857, "is better adapted to the vine."

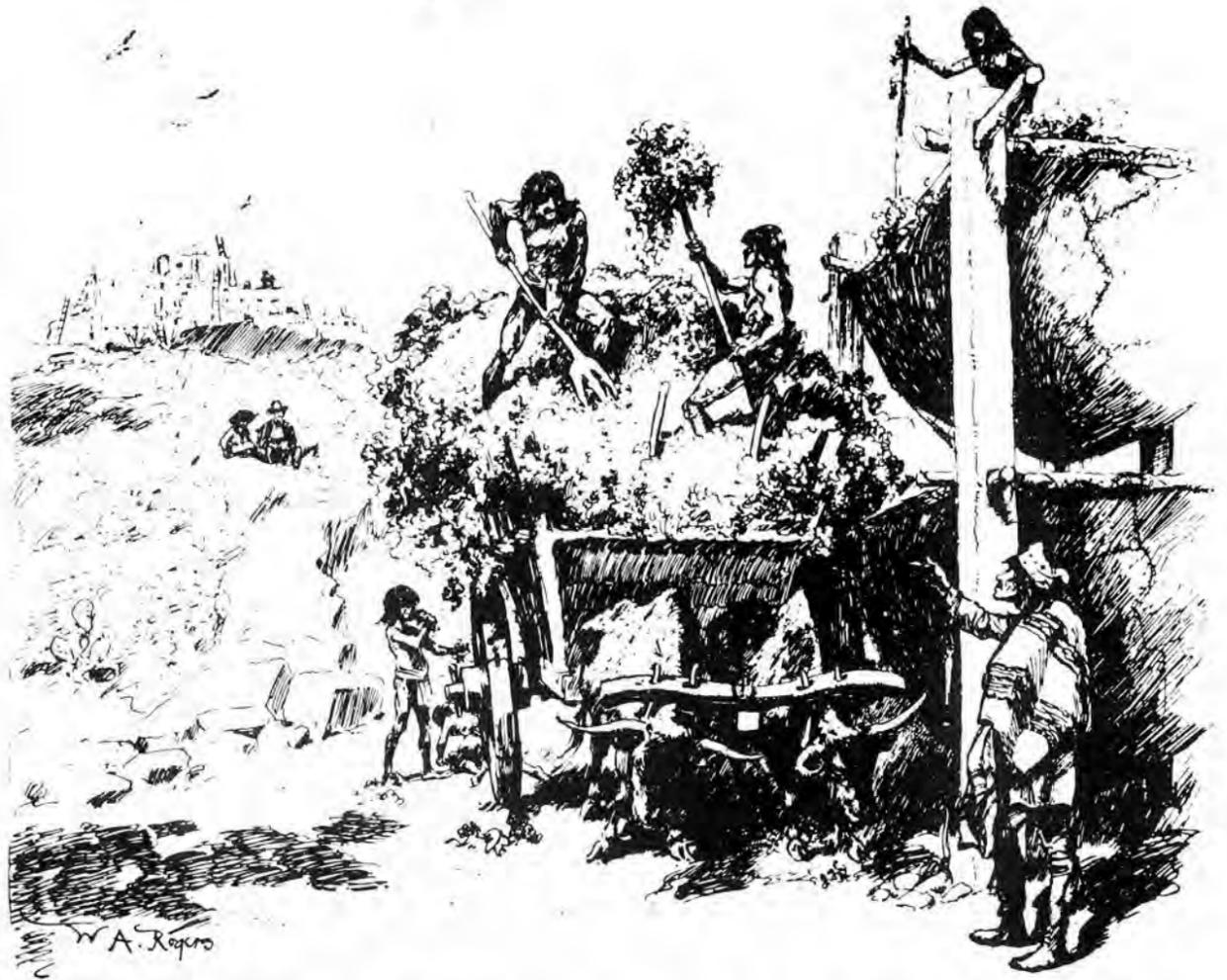
From Bernalillo to El Paso, the rich bottomland of the river — not the hillsides as in Italy — produced many tons of grapes each year. Exact figures aren't available, but Davis mentions production of 200,000 gallons per year from the El Paso valley alone.

There is evidence of grape-growing in the area as far back as the early 1600's (*Great River: The Rio Grande*). The Franciscan fathers received supplies from Spain by wagon train from Mexico every three years. (The trip itself took the better part of a year.) It thus made sense to import grapevine cuttings and to produce their own sacramental wines. They found that two kinds of grapes, a muscatel and a common, would flourish in their portion of the New World.

Later the more secular types developed a type of grape brandy. By the mid-nineteenth century, it became known as "pass whiskey" because much of it came from El Paso. At \$2 a gallon, even the Missouri Volunteers could afford it. It was potent enough that Magoffin and Ruxton (two early observers) noted querulously that in 1846 "crowds of drunken volunteers filled the streets, brawling and boasting, but never fighting." (The critical differentiation between brawling and fighting is not defined.)

It was also in 1846 that a Lt. J.J. Abert, part of Kearney's entourage, wrote of Bernalillo: "This place exhibits signs of wealth; the houses were larger than any we had yet seen; along the road side were beautiful vineyards, surrounded by high walls of abohes (sic); we rode up to one of them, and looking over, saw some pretty 'doncellas' plucking the fruit. They had round flat looking baskets, placed on their heads; these were piled with thick-clustered bunches of the purple grape, from beneath which the bright black eyes of the 'doncellas' were sparkling." Abert's troops "could not pass by such a beautiful vineyard," or perhaps it was the "maidens with merry faces" they couldn't resist. If so, they were disappointed — a male relative with a gruff voice handled the sale of some grapes.

Davis took a more horticultural interest in the fields. "The mode of cultivating the grape is different from that pursued in the United States . . . The vine is not trailed on frames, as is usually the case elsewhere, but is kept trimmed close to the ground. In the spring of the year, the branches which have grown out the past year are cut off close to the parent stock, which is rarely more than four feet high. The vines are thus trimmed annually. They are set out from the cuttings, which are laid down in narrow trenches four feet apart,



TRAMPLING OUT THE VINTAGE is the responsibility of the Indian in the upper right. Two others are forking the grapes into the ox-hide vat. (Sketch from Harper's Young People, Dec. 30, 1890, reprinted in New Mexico in the 19th Century by Andrew K. Gregg.)

and one end is allowed to protrude through the earth about six inches. They begin to bear the third year after they are planted. In the fall of the year, and before frost sets in, the main stock is covered with earth, as a protection against the cold weather of winter, but which is removed as soon as the spring opens, and preparatory to trimming."

Winemaking techniques were primitive but they worked. Davis watched the process long enough to provide a more complete description: "The grapes are picked from the vines and carried to the vats, where the juice is pressed out of them. The vats are made of full-hide while green. The top is covered with the same material, perforated with small holes, upon which the grapes are thrown as they are brought from the vineyard, and trod into a pulp by the feet of the peones, the juice running into the vat below. The pulp that remains is made into excellent vinegar. The vats are then covered with plank, the cracks being smeared well with mud to keep out the air; and the juice is allowed to remain thus sixty or seventy days, when it has become wine, and is drawn off into casks, and put away for sale or use."

Travelers such as Abert and Davis felt that New Mexico wine was of such quality that it ought to be exported into the United States. But evidently there were few suitable containers — "a want of bottles," says Davis — and, prior to the railroad, no reasonable access to US markets.

Even after the rail link with the East was completed, wine-making never became a staple industry. But vineyards were common well into this century, and the wine produced from them was highly regarded by Rio Grande valley residents.

A glimpse of the more recent past comes from Mrs. Joseph Tondre of Los Lunas. The Tondre family began their vine-growing, wine-making business after the Civil War when the original Joseph Tondre (great-grandfather of Mrs. Tondre's late husband) arrived here from France. The business continued until Prohibition, with the Tondres producing over 10,000 gallons a year from their 30,000 vines. Some of their wine was



A SMALL WINE-PRESS AND SEVERAL CASKS were recently donated to the Museum of Albuquerque by Mrs. Joseph Tondre of Los Lunas. Eventually they will be the focal point of an exhibition on the New Mexico wine industry.

sold to thirsty New Mexicans who had a standing order for a barrel or two every year.

But one of Mrs. Tondre's more colorful memories is the outfitting of three wagons with barrels of their latest vintage and sending them off around the state to offer sample sips to prospective customers.

Another memory is of Indians jogging at sun-up from Isleta to the vineyards, trampling grapes all day, and jogging back home, purple-footed and 50 cents richer, at sundown.

No one seems to be certain why the extensive vineyards are no more. It was certainly neither lack of bottles nor transportation. Some blame Prohibition, and perhaps this was a factor in the demise of NM wineries, though those in New York and California survived. Others suggest that the valley has undergone a climate change which grapes find less salubrious. Or it may be that less water is available now. Or simply that other crops bring more cash with less effort.

Whatever the reason, New Mexico is the lesser for it. •bh

## Take Note

Tom Mickey (7154) will give an illustrated talk on western wood carving July 29, 2 p.m. at the Ernie Pyle Library. Tom will speak to a group enrolled in the Albuquerque Public Libraries children's summer program. Children and adults are welcome.

\* \* \* \*

Edward Clark (5622) was recently awarded the professional degree of aerospace engineer by the University of Missouri-Rolla. This is a type of honorary degree bestowed by the University to selected alumni for work in their career fields following graduation.

Ed earned a BS in ME from the school in 1955, and a Masters in aero-engineering from Cornell. He has been at the Labs since 1966.

\* \* \* \*

Four and five year old children of Sandia employees are eligible for kindergarten at either Kirtland East or Kirtland West this school year. Registration is at the school on Kirtland West (Bldg T231) from 9- 2:30 on July 25 - 26. Call Kindergarten Director Olga Borden at 247-2607 if you need more information.

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### Safety Hazards

## They'll Trip You Up Everytime

"I tripped on the garden hose"; "I stumbled while going up the steps"; "The rug slipped when I started to get out of the chair"; "I fell off of a ladder"; "I was running to answer the phone."

These are reasons given for falls suffered by Sandians in recent months. All occurred off the job and all resulted in injury.

A couple of accidents stand out.

Gerald Laursen (9123) was picnicking with a group of friends at Battleship Rock in the Jemez Mountains. He strolled away and recognized a kind of a path up the rock face and remembered that he had climbed it a couple of times years ago. "I thought I was in pretty good physical condition; I'm a jogger and I ride a bicycle to work every day — so I started climbing." He got almost to the top and doesn't know exactly what happened then. "Either the footholds have eroded away or my age is showing," he says. At any rate he slipped and fell about 15 feet. He suffered strains, bruises, skin burns, a bruised spleen and liver, and a knee strain. "It was bad enough," Gerry says, "but it could have been so much worse. I learned though — I'll not climb again without ropes or some sort of back-up. It's foolish to take unnecessary chances."

Myrtle Bee (M.B.) Reynolds (9420) spent a Saturday cleaning her apartment. She worked hard and long getting everything done. In the evening, relaxed and comfortable in a long djellaba she remembered that she hadn't washed the inside of a living room window. So she climbed up on the couch,

### She shot-the-works

## Wanda Hubbard Is State Champ

Wanda Hubbard (5160) is the 1972 State Ladies Trap Shooting champion. She won the honor at the 24th annual New Mexico State Trap Shoot, held June 23-25 at the Albuquerque Trap Club. Competitors (140 men and women) from seven states participated in various events. Wanda hit 183 of 200 targets to win the coveted title. "It's what we all aim for," she says.

She took up trap shooting about six years ago because of her husband's interest in the sport. "It's fun and is really a very safe sport — you don't even load your gun until you're ready to shoot," she says.

Wanda uses a 12 gauge Browning single barrel trapgun. She, like most shooters, cleans and cares for her gun and loads her own shells. The trap field consists of five shooting stations located behind a trap house. A squad of five takes turns shooting and then moves on to the next station. Shouldering the gun, the shooter calls for the clay target which is ejected from the trap at an unknown angle. Shooting at a range of about 35 yards, the shooter aims and fires. If the target is powdered or a piece chipped off it is considered a dead bird, but just dusting the target is a loss.

Wanda has her own shooting gallery — a collection of 45 to 50 trophies, and the new one is in the spotlight.



Wanda Hubbard

### Speakers Abroad

W.P. Bishop (9112), "Halostyrene Thin-Film Detectors for High (Megarad) Doses," and J.M. McKenzie (1933), "Semiconductor Devices As Neutron Effect Dosimeters," Sixth Dosimetry Workshop at RISO, Denmark, June 12-14.

J.M. McKenzie (1933), "14 MeV Neutron Equivalents of a Reactor Neutron Spectrum," Atomic Weapons Research Establishment, June 24, Aldermaston, England.

H.J. Stein (5112), "Neutron Displacement Damage in Heavily Doped GaAs," and "New Absorption Bands in Ion-Bombarded Ge"; F.L. Vook (5110), "Radiation Damage During Ion Implantation," International Conference on Defects in Semiconductors, University of Reading, England, July 19-21.

### Success Story, Continued

## Operation Identification Foils Burglars

Ron Detry (5422) called the LAB NEWS last week to report a success story. Seems he read the item in our paper about borrowing the engraving machine from the Base Security Police and marking valuable items in the home with the individual's social security number. So that day he borrowed the engraver and marked his valuables.

On July 9, just a couple of weeks later, Ron's home was burglarized. Here's the success part: none of the marked items was taken. Not the TV, cameras, projectors, radio, stereo components, typewriter, power tools, bicycles or sewing machine.

The thieves took a stereo speaker and a pickup head with a good cartridge, an inexpensive watch, about \$5 in cash, a pillowcase, a goatskin winebag and a small leather bag which contained marbles. The marbles were strewn all over the floor. Total loss — about \$90.

"It could have been so much worse," Ron says. "Man, am I glad I used the engraver."

Operation Identification is continuing. Borrow the metal engraver from the Kirtland East Security Police. The office is located across the street from the Base tennis courts near the Base gym.

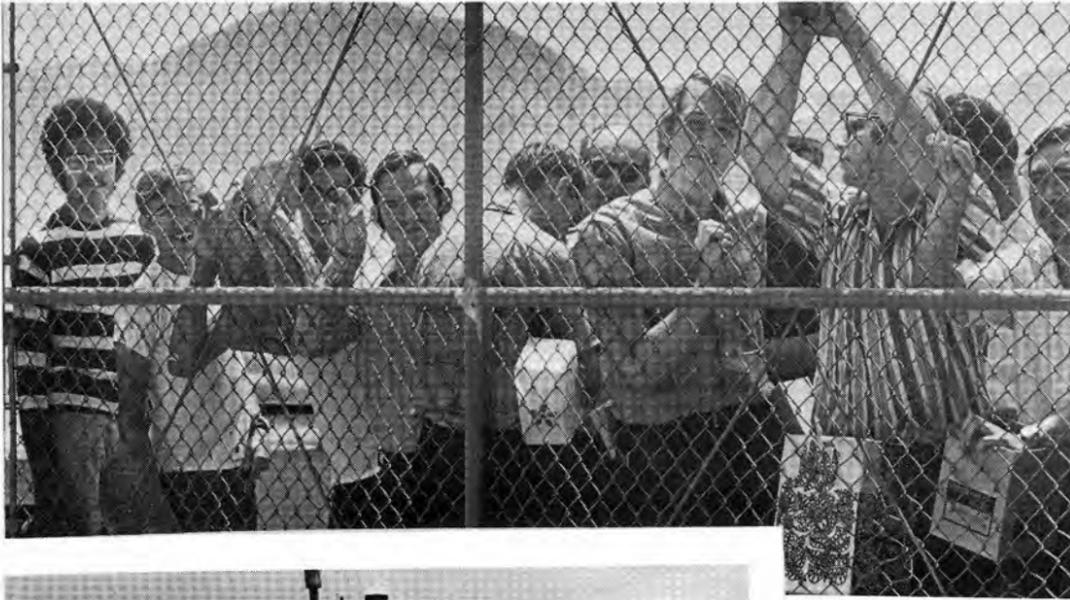
cleaning paraphernalia in hand. The Beagle hound, Sue, was helping. Somehow Sue and M.B.'s feet became tangled in the long robe. That combined with the unstable couch surface caused cleaning material, Sue, and M.B. to fall to the floor. Sue is well and happy. M.B. is recovering at home, broken ankle and leg in a cast. For recreation, she is learning patience. "It was grotesque," M.B. says, "and the window is not cleaned."

Is there a message? Well, you can figure it out. . . . nt



Well, guess I'll do a little work around the house. . .

# The Noble Salvage . . .



## Dick Prairie Returns to Sandia

"Sandia still looks great," Dick Prairie said last week as he settled into his old office in Bldg. 836. Supervisor of Statistics and Computing Division 1643, Dick has been on leave of absence for 11 months teaching at the University of Sao Paulo, Brazil, under the Fulbright program.

In relating his experiences in Brazil, Dick's attitude leaps rapidly from tremendous enthusiasm to thoughtful concern. "Great," he says one minute talking about the people. And then, "Brazilian education is formal — perhaps too formal."

Sao Paulo, a metropolis of eight million people, was both "a fantastic place to live" and "a crowded, polluted city."



DICK PRAIRIE (1643) in Rio de Janeiro with Sugar Loaf mountain in background.

Dick taught graduate level statistics at the University, chiefly to other teachers of statistics. "They were great students," Dick says, "but came to my class exhausted. They averaged about 45 hours of teaching a week." In addition to teaching, Dick did consulting work with Brazilian educators and government officials.

"It's a booming country," he says, "new construction everywhere. There's a 20 percent per year inflation, and everything is expensive. The universities could provide the government with people knowledgeable in statistics who could make valuable contributions in guiding economic growth. Unfortunately, there is very little cooperation this way. The departments within the University rarely communicate with people in other departments, much less government."

Dick is enthusiastic about the people of Brazil — friendly and helpful, particularly the young people. "Many times, teenagers would give us directions, help with purchases, translate, carry luggage — all without asking."

Dick taught classes in English, learned to understand Portuguese. His wife became fluent in the language and his three children, who attended an American school, learned the language very well.

Most enjoyable parts of the stay in Brazil were the many sightseeing trips the family took — to Rio for the carnival, to Brazilia in the interior, to the great (larger than Niagara) waterfalls at Foz Do Iguacu, and a jungle canoe trip on the Amazon River. •dg



GORDON BOETTCHER (1312) displays a "family" of his Sprytron devices. They perform switching functions in capacitor discharge circuits.

## Gordon Boettcher Sprytron Device Awarded Patent

A device invented by Gordon Boettcher of Electronic Firing Set and Switches Development Division 1312 has been awarded a patent, assigned to the AEC.

The invention is a cold cathode vacuum discharge tube, called a Sprytron, which performs a switching function in capacitor discharge circuits. Its function at Sandia is to discharge and switch energy from a capacitor into exploding bridge wire detonators and provide radiation hardness prior to command switching.

The Sprytron is the second device invented by Gordon to receive a patent. Earlier he had invented an electrochemical coulometer.

He has been at Sandia, engaged in component development, since 1953. He joined the Labs after earning a BS in electrical engineering at the University of Wisconsin.

## Promotions

- Winnifred H. Andrick (1820) to Secretary
- John J. Aragon (7131) to Technician (Electronic Fabrication)
- Barbara J. Blackwell (8217) to Key punch Operator
- Tony Chavez (5411) to Computer Facilities Operator
- Vincent Cordova (7121) to Assembler (Power Sources)
- Laudente Gallegos (5411) to Computer Facilities Clerk
- Antonio Garcia (4515) to Cleaner (Equipment)
- Robert C. Garcia (4512) to Service Mechanic
- Traber Gatewood (4512) to Service Mechanic
- Ronald L. Hatcher (7122) to Technician (Experimental Electroplating)
- Salomon Hidalgo (4512) to Service Mechanic
- Tony D. Jajola (7121) to Assembler (Power Sources)
- James J. Landavazo (7131) to Technician (Electronic Fabrication)
- Bill B. Lavinsky (8421) to Model and Instrument Maker
- Estrella M. Lopez (8217) to Secretarial Trainee
- F. Edward Martinez (7122) to Technician (Experimental Electroplating)
- Betty J. Osborne (1810) to Secretary
- Orlando Sanchez (4512) to Service Mechanic
- Arthur A. Sena (7121) to Assembler (Power Sources)
- Jose M.F. Sena (7122) to Staff Assistant Technical
- Samuel Sena (5411) to Computer Facilities Operator
- Prescilla M. Torres (3141) to Library Clerk
- Patricia A. Ximenes (7631) to Typist
- Shirley Y. Young (8217) to Secretarial Trainee



JIM WALSTON (3155) is both artist and cyclist, and he stands beside poster he designed for placement around Tech Area. Sandia Bicycle Ass'n. reports sale of more than a hundred of the "Bicycle Map of Albuquerque" and continuing expansion of membership, including a number of new members from Base military people.



# LIVERMORE NEWS

VOL. 24, NO. 15

LIVERMORE LABORATORIES

JULY 21, 1972

## First Livermore Area Settler — Jose Amador, Rancho San Ramon

*This is the third in a series of articles by Herbert Hagemann, an eighth-generation Californian, on the early history of the Livermore/Amador Valley. 1972 marks the bi-centennial year commemorating the discovery and exploration of the Valley.*

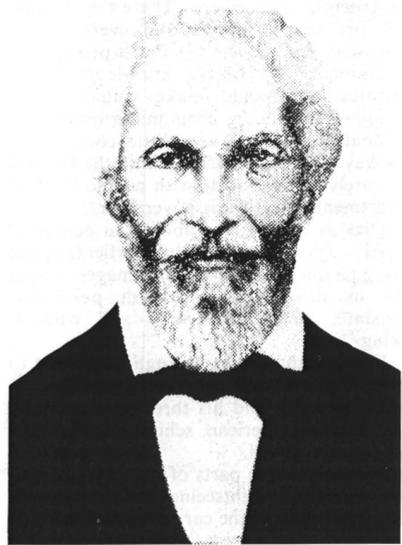
Just 145 years ago, the first Spanish settler, Jose Maria Amador, arrived in what is now the Livermore/Amador Valley. Born at the Presidio of San Francisco in 1794, his father was Pedro Amador, the old Spanish soldier who came to California with Portola in 1769.

Jose Amador also became a soldier, serving the Spanish Crown in the San Francisco Company and the Mexican government for some 17 years, three of them in the Escalante in the Sonoma Mission. He took part in the Sacramento Valley expedition of Luis Arguello in 1821 and went with Moraga to Fort Ross and Bodega. In 1827, at the age of 33, he was discharged from military service and immediately became major-domo for Mission San Jose. That same year, he received permission from the Mission priests to form a settlement at San Ramon, known today as Dublin.

One of his first projects was to build an adobe which he named "Rancho San Ramon." With native help Amador then set up a manufacturing establishment, making blankets, harnesses, saddles, soap, wagons, and other items needed by the white settlers along the California coast. He also controlled about 16,000 acres of land where he grazed his own herds of cattle and sheep. These supplied materials and his manufacturing enterprise became the first in what is now Alameda County.

No title was granted to Amador for the 16,000 acres until 1834 when Mission San Jose received secularization orders. At that time, Amador filed an application with the government at Monterey for the land plus a small parcel in the "Valley" to include Alamillo Springs, the water supply for his manufacturing activities. Permission was given by letter written by Father Gonzales, the last Mission priest before secularization. The old grants were for the most part marked by natural landmarks. Just west of Dublin can be seen a long hill with a knob at its southern end. This was the western boundary of Rancho San Ramon and the hill was named "Pita Navaja" because of its resemblance to a jack knife.

The two-story adobe which Amador built was situated at the northwest corner of what is now Dublin Boulevard and San Ramon Road. During the earthquake of 1868, it was badly damaged and was later replaced with a new building by James Dougherty, the owner at that time. Earlier, about 1835, Amador assisted by Robert Livermore, had constructed another adobe for himself. When Livermore moved to Rancho Las Picitas, Amador then helped him in building the adobe that was to be the Livermore home for many years.



JOSE MARIA AMADOR, first white settler in the Livermore/Amador Valley.

During the gold rush, Amador, with a following of Indians, mined for gold in the county which was afterward named for him. Financial problems developed and he sold portions of his estate to settlers from the East. Jeremiah Fallon and Michael Murray, natives of Ireland, bought sections south of today's Highway 580 before 1850. Later, around 1852, Amador sold the bulk of his remaining property to James Dougherty, whose family held it until the recent development of Dublin and San Ramon.

### Congratulations

Ken Helmstadter (8177) and Joan Metz, married in Livermore, June 10.

Virginia Mohr (8433) and Max Kane, married in Livermore, July 1.

Claire Morris (8422) and Calvin Allen, married in Oakland, July 1.

### Sympathy

To Cathy Banks (8213) for the death of her father in Blackfoot, Idaho, July 1.

To Joan Maffey (8261) for the death of her husband in Livermore, July 3.

To Clayton Mavis (8155) for the death of his son in Livermore, July 5.

To Ken Shriver (8168) for the death of his mother-in-law in Wayne, Nebr., June 23.

To Jim Smith (8236) for the death of his father-in-law in London, Ontario, Canada, June 28.

To Hank (8182) and Mary Witek (8340) for the death of his father in Chicago, June 25.

## Inside Russia with Sandian Stan Greenberg

"There are a great many faces in the Soviet Union — more nationalities and a larger diversity of people than I expected," says Stan Greenberg (8334), back from a vacation which included 18 days in the U.S.S.R. Escorted by guides from Intourist, the official Soviet travel agency, he and two other Americans visited seven cities: Moscow in European Russia; Novosibirsk, Irkutsk and Bratsk in Siberia; and Alma Ata, Tashkent and Samarkand in southern Asia.

In these cities Stan was impressed with the Soviet standard of living. "They lack some amenities like sacks for groceries, food packaging, individual reading lights on planes, and so on but these are not really important things.

"They certainly love chewing gum, though. In customs, even the passport official asked me for gum, after checking to see that his boss wasn't looking. I gave him some, and he winked as I passed through the gate.

"Many old houses still are in use, some quite attractive, but I understand they lack facilities. I noted that apartment windows are small, presumably because of the cold weather. With his average income of \$150 a month, the Russian pays only a few rubles for rent, nothing for medical and has no direct taxes nor insurance premiums — so his income goes mostly toward food and clothing, which are as costly there as here. Not many have cars but public transportation is good.

"The story that Intourist guides show you only what they want you to see is partially true," Stan claims. "They do show you what they want you to see — not the slums. But we had free time too and we wandered into slum areas, usually with a camera. There are limitations on photography, however.

"The Russians I talked with were patriotic and proud of their life-style in most cases. If you wanted to discuss politics, you certainly could, although they were nervous about discussions of this type in an Intourist hotel dining room. I made arrangements to have breakfast with a couple of students one morning, and they insisted on a meeting place other than the hotel."

Stan says he found state control per-

vasive. "Not only is the newspaper owned and controlled by the state, but so are television, radio, movie theatres, and billboards. Posters and monuments to Lenin are everywhere. Buildings carry signs saying 'Long Live Lenin,' or 'Long Live Socialism,' or 'Labor.' I was unable to locate a *New York Times*. And you need a permit to get into a library or a school. In Irkutsk, I tried to visit a foreign language institute because I thought I could talk more readily with the students, but I wasn't allowed in because I didn't have a permit or a guide.

"The Soviet people believe they went into Czechoslovakia because Prague was threatened by western counter-revolutionists. I stated that we had heard differently. Few question what the newspaper says, but I did meet one man, walking alone on a dirt road outside Alma Ata, who asked whether the United States is as bad as the Soviet press makes it out to be. When I said 'no' he commented, 'I didn't think so.'

"Even though there is a lot of anti-American propaganda, the people were very anxious to see President Nixon. Many times when I'd say I was an American tourist, they would answer 'Nixon, Nixon.' He was to arrive in Moscow the evening I left for home. I noticed they had closed down all sight-seeing, including the Kremlin and Red Square, and the city seemed to be much cleaner than when I first arrived.

"The Soviet people are very curious about Americans. They are as friendly as we are, although the language barrier can be a problem. The 100 words of Russian I can speak were invaluable, but at times, ironically, the words I knew in Russian, they knew in English. Generally, the Soviets know English a lot better than we know Russian."

About Russian life, Stan concludes, "If you keep in line you can have a fairly happy life — good job, comfortable income, adequate apartment, and retirement at 60 or 65. But if you object to something political or step out of line, you can be in serious trouble.

"Religion is dying out. I visited two synagogues — one in Alma Ata, the other in Tashkent — both were run-down and miserable looking. Each had about 200 members,



VISITING SANDIA/LIVERMORE recently to discuss the general development of superconductive coaxial cable technology was Dr. Tsuneo Nakahara, Deputy Manager of Communications Division for Sumitomo Electric Industries in Japan (left). He met with Dennis Rathburn (8137), center, and former Sandian Hartley Jensen (now a UC/Davis faculty member), coauthors of a technical paper on nuclear test instrumentation with miniature superconductive cables, which appeared previously in IEEE's magazine, SPECTRUM.



THIS IS SIBERIA? Stan Greenberg (8334) and Intourist guide, Luci, at the scientific center of Siberia — Academic City, near Novosibirsk, where some two thousand of forty thousand people are scientists and engineers, which no doubt accounts for Luci's bemused expression.

all quite old. The Jews I spoke to knew no English and may have been intimidated by the guide, but they appeared content. Several from their congregations had gone to Israel."

Stan traveled in the taiga in Siberia, the forest region to the south of the tundra. "The area was pretty — overgrown with birches, the Soviet national tree. The government encourages citizens to move to Siberia and hopes to change its image from that of a vast wasteland to a region 'floating on gas and oil.' I noted, however, that the Russians seem to have a thing about Asians. They won't even admit that Siberia is part of Asia and the Mongolians I saw were in the bottom brackets economically.

"Overall, a fascinating and worthwhile trip," Stan concludes, "but if you plan to go, bone up a little on your Russian." •ls

## Ron Young Awarded PhD Degree



Ron Young has returned to Sandia's Analytical Mechanics Division 8352, after receiving his PhD degree in mechanical engineering from the University of California at Berkeley under Sandia's Doctoral Study Program. His thesis was "Local Error Bounds in Boundry Value Problems Using Finite Element Discretization."

Joining Sandia/Livermore in 1968, Ron worked primarily in structural analysis and finite element program development. Before that he was with General Motors Corporation as a mechanical engineer in material dynamics.

Ron received both his BS and MS degrees in mechanical engineering from the University of California at Berkeley, in 1966 and 1967 respectively.

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OPPENHEIMER, under the gun, is played by Fred McCaffrey. Adobe Theatre production, shown here in rehearsal, starts this weekend. Play deals with hearings following which the scientist's security clearance was lifted.

## Sandians Receive Degrees

Degrees were recently awarded to a number of Labs people. Some were earned under Sandia's educational programs, while others were gained by people on educational leaves of absence. We hope the following list is complete, but if you've been overlooked, please call the LAB NEWS office.

### *Educational Aids Program*

Joseph Ruggles (5414), BBA, UNM; Richard Swanigan (7434), BBA, U of A; Robert Balthaser (7434), BS, mathematics, UNM; James Kobs (1315), BS, EE, UNM; Robert Rieden (1312), BS, EE, UNM; William Andrezejewski (5521), BS, chemistry, U of A; Margarito Martinez (9342), BS, mathematics, U of A; David Davis (5421), BS, EE, UNM; George Kominiak (5332), BUS, U of A; Tom Conlon (7122), MBA, UNM; Chuck Prohaska (3154), MBA, UNM; Charles Carson (1214), MA, mathematics, UNM; Doug McGovern (1213), MS, EE, UNM; Frank Ezell (1935), PhD, EE, UNM; Richard Johnson (7616), BS, mathematics, U of A; and Phil Apodaca (5313), BS, chemistry, U of A.

### *Computer Science Development Program*

Don Doak (1544), MS, ME, UNM; and Susan Davenport (1722), MS, mathematics, UNM.

### *One Year On Campus Program*

George Laguna (1335), MS, physics, U of Illinois; and Agustin Ochoa (1932), MS, EE, Stanford U.

### *Doctoral Study Program*

James Moreno (5643), PhD, aero-engineering, Case Western Reserve U; Steven Benzley (1541), PhD, EE, U of Calif. at Davis; Jimmie Smith (1543), PhD, ME, U of Texas; Richard Davis (5421), PhD, computer science, Washington State U; and Dennis Hayes (5166), PhD, physics, Washington State U.

### *Educational Leave of Absence*

Frank Gerstle (5314), PhD, ME, Duke U; and John Colp (5627), PhD, civil engineering, Texas A&M U.

## In The Matter of J. Robert Oppenheimer

"Political opinion, no matter how radical or how freely expressed, does not disqualify a scientist from a high career in science; it does not impugn his integrity nor his honor. We have seen in other countries criteria of political orthodoxy applied to ruin scientists, and to put an end to their work. This has brought with it the attrition of science. It has been part of the destruction of freedom of inquiry, and of political freedom itself."

The words are Oppenheimer's, the time the early fifties. The eminent scientist was about to have his security clearance lifted. At Sandia at that time, no self-respecting Labs physicist (and quite a few others) failed to have an Oppenheimer photo on his office wall, nor failed to venture harsh criticism of the system that accorded treatment bordering on disgrace to this Olympian figure. For many in the scientific community, Oppenheimer became a genuine, certified martyr, and the final bizarre twist came in

1963 when President Johnson presented Oppenheimer with the Enrico Fermi prize "... for services rendered on the atomic energy program in crucial years."

This is the stuff of drama, and a German playwright, Heinar Kipphardt, has taken the three thousand pages of the Oppenheimer proceedings and produced a shortened version, "... a version which lends itself to being staged and which does not distort the truth" (from the play's introduction).

"In The Matter of J. Robert Oppenheimer" is the Adobe Theatre's present production, and the cast includes two Sandians, Dick Johnson (7616), playing Thomas Morgan, a member of the Personnel Security Board, and Bill Carstens (3150), playing Isador Rabi, physicist, friend of Oppenheimer, and a witness in the proceedings. The play runs for this and the next two weekends, Thursdays through Sundays; call 898-3323 for reservations. •js

### Not A Disease

## A Simple Solution to the Flexural Modulus Problem

Some materials bend easily, some don't; some break easily, some don't. That's as much as most of us need to know. But an experimenter working with materials often has to quantify the inherent "bendability" of various materials. Specifically he must be able to determine a material's flexural modulus, or tangent modulus of elasticity.

Until Nick DeLollis and Judson Gregory (both 5332) came along, flexural moduli were measured with special machines costing as much as \$20,000. When extremely high accuracy is needed, these machines are still used. But for fast, reliable information to guide an experimenter's daily laboratory work, the Sandians have devised a simple, inexpensive (under \$500) tool which works very well and doesn't need a power source.

The new device also offers versatility

because its small size permits installation in temperature chambers or other environmental testing equipment. It's basically a rigid metal frame that holds deflection and force gauges in a specified geometrical relationship with the test item. Although it measures only 12 by 10 inches by 3 1/2 inches deep, specimen bars one-half inch square and 4 or 8 inches long can be tested.

Flexural modulus is determined by applying force on the specimen until displacement is noted and a value then assigned. This procedure generates raw data in terms of pounds per inch of displacement. The actual modulus of elasticity in bending may then be determined by use of a simple formula.

Check with Nick or Judson if you have use for their device. •bh

## Noon Hour Movies

Every Wednesday, for about 30 minutes, Bill Stamm (4543) and John Crye (4541) drop their roles as plant engineers and become movie moguls. For the past year the two have been showing free movies during the lunch hour. "We began with some Forest Service movies," Bill says. "People attending seemed to like the idea so we obtained a catalog of free movies." The films are 30-minute, color/sound and are shown each Wednesday at 12:20 p.m. in Bldg. 887, Rm. 121. Travel films in this schedule were produced by TWA:

July 26	Switzerland
Aug. 2	Ireland
Aug. 9	Greece
Aug. 16	Art of the West
Aug. 23	Germany
Aug. 30	France
Sept. 6	Israel
Sept. 13	Portugal
Sept. 20	Spain
Sept. 27	Egypt
Oct. 4	India

# How's The Wife and Kids?

"Hey Joe. Finally got through to you. How's every little thing?"

"That's good. What's the weather like there?"

"Sorry to hear that. Boy, it's great here. If it's still nice this weekend, we'll head for the lake. Did I tell you about my new boat?"

"Oh did I? Well, how's the wife and kids?"

"That's good. Mine too. Well, down to business. You know the specs I sent you last week? Well, we've got a problem."

"No it's not that. Hey, hold on a minute. I'll get my copy and try to explain it. Be right back." (Time passes.)

"Here it is. Now, here's the problem. . ."



DO WHAT YOU LIKE on weekends. But don't use FTS to talk about it. . .

risen — from 82 cents per call in FY69 to \$1.16 per call in FY73. In other words, increased volume does not lead to lower cost per each as it does with, say, corn flakes. Why not?

We'll tell you but you may not like it. Remember our friendly Sandian above? He's the cause — in two ways. First, he's spending a lot of time chatting with an old friend — the weather, the family, the weekend plans. And second, he's failed to get it all together (in terms of the materials, notes, and so on that he needs for his discussion) before he makes the call.

So he's taking a lot of extra time on the line. True, FTS rates are measured by number of calls, not by minutes. But he's tying up a line and someone else can't use it. So the someone else complains. And GSA adds

another line. And the costs rise simply because we're now demanding more equipment.

Now, Sandia Livermore is another case. The number of Livermore calls has been decreasing, probably because more of their outside contacts are in the Bay area. But maybe it's because they observe a few simple rules —

1. Gather what you'll need for the call before placing it.
  2. Write the number down and dial it carefully (one Albuquerque Sandian ended up talking to Gov. Reagan's office in Sacramento instead of to Livermore).
  3. Don't put calls on "hold." This ties up a trunk line and we have only a limited number.
  4. Read up on the FTS system. The AEC FTS Directory isn't very exciting — impressive number of characters but lousy plot — but it contains some helpful information such as the busy hours in each time zone — see the back page. If your department secretary doesn't have one, call Jim Porter's shop, Division 5415, ask for Eva Silva on 264-7943.
  5. And call Eva if you need to know the phone number for an agency other than AEC.
  6. If you've got a poor connection, don't break it. Use another phone to call 114 and have them check it out.
  7. Don't spend too much time visiting. Admittedly some informality is good — people around the country need to know that Sandians are real people. But minimize it.
  8. Finally, FTS if used properly is usually the cheapest form of communication. A 250-word letter costs \$3 to \$6 after all the labor costs are included. And the budget people can tell you all about the high cost of travel.
- So the moral is: use FTS but use it the way porcupines make love — very carefully. •bh

## Arts and Crafts Fair Opens Today

# A Belt By Janet Is A Good Thing

Two hundred exhibitors are displaying their wares today, tomorrow and Sunday at the State Fairgrounds in the 1972 New Mex-

ico Arts and Crafts Fair.

One of the exhibitors is Janet Jenkins (3155), a graphic designer in Sandia's



JANET JENKINS has several more belt buckles — all original designs — on display at the Arts and Crafts Fair this weekend.

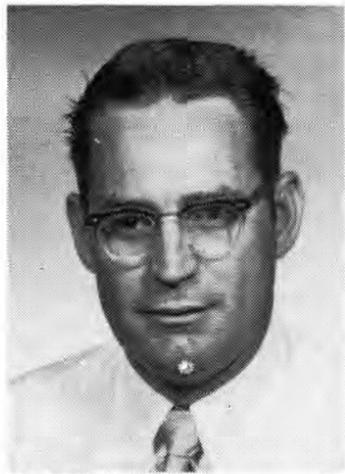
Technical Art Division. Janet and Dorothy Lorentzen, a local jeweler, are jointly displaying "precious metal - buckle-belt units." All of Janet's buckles are cast silver and each original design is stamped and documented and produced in limited editions. The handmade leather belts have been individually dyed and selected to complement the buckles.

Janet uses a combination of techniques for her castings — wax molds for lost wax casting, direct carving of a design into tufa (a porous rock) for tufa casting, and fabricated molds for sand casting. Each buckle represents a pretty exacting procedure: designing the buckle, fabricating or cutting the mold, melting and pouring the silver, filing the rough casting, setting stones such as turquoise on the designs, soldering the findings to the buckles, and final finishing.

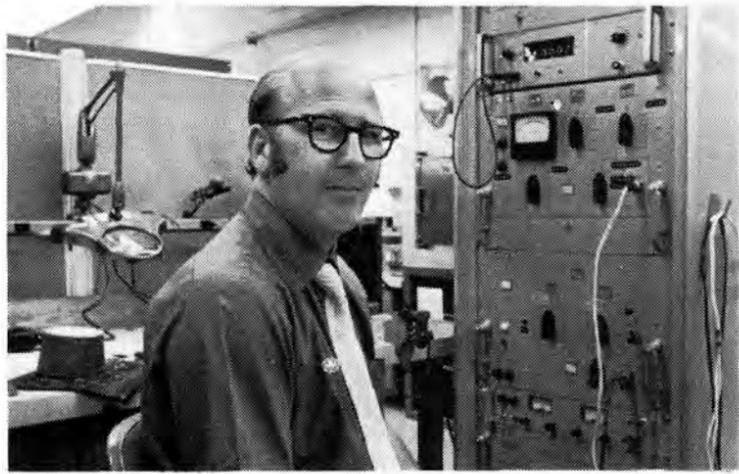
"The line is unique," Janet says, "different from Indian jewelry. I've developed many linear designs in which a polished line of solid silver is set in contrast with the oxidized, sand-textured background."

Stop by this weekend at booth Nos. 163 and 164 and see for yourself what a talented craftsman (craftsperson? craftsman?) she is.

•nt



David Holt - 9214 10

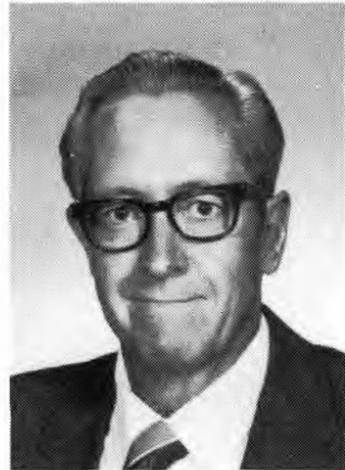


Stan Love - 7423 10

# MILEPOSTS

## LAB NEWS

July 1972



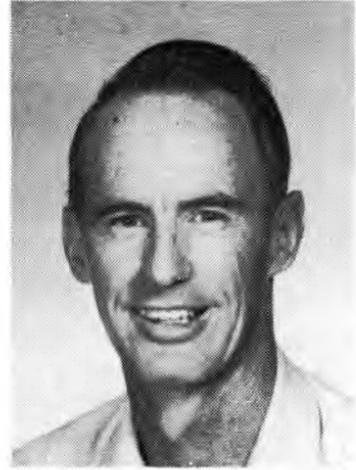
John Anderson - 4151 20



Ruben Trujillo - 4613 10



Dick Schwoebel - 5330 10



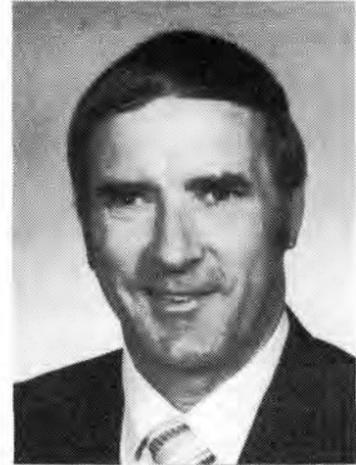
James May - 9223 15



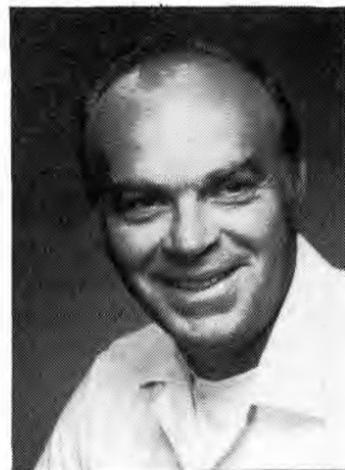
Jack Kidd - 5428 15



Gertrude Piraino - 4374 10



Albert Tucker - 9341 20



Emil Kadlec - 1211 20



Joe Angel - 3520 - 20



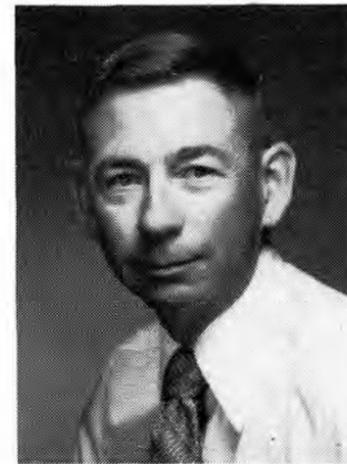
David Miller - 5325 20



Bill Entwisle - 8254 15



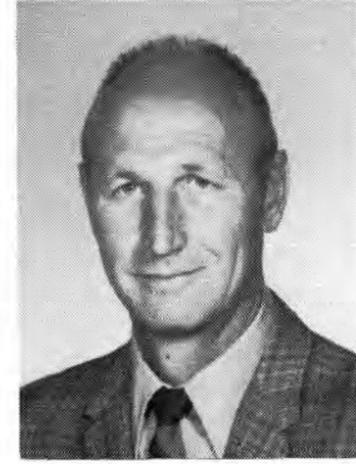
Mary Milatzo - 8431 15



E. E. Alexanderson - 1225 15



Jim Lovell - 9131 15



Ken McClelland - 1313 15



Chuck Smith - 7423 20



Glen Goodloe - 3512 15



Tom Rathke - 9344 10



Jim Gallagher - 5623 20



Ralph Wenzelbauer - 4613 10



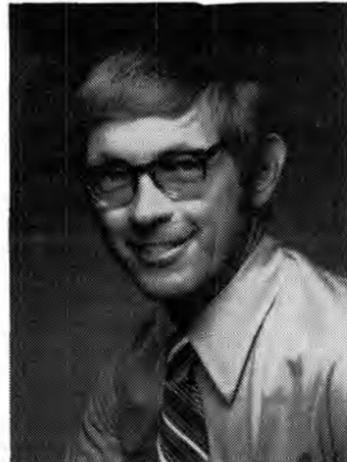
William Brown - 9235 15



Dixie Gochner - 3148 10



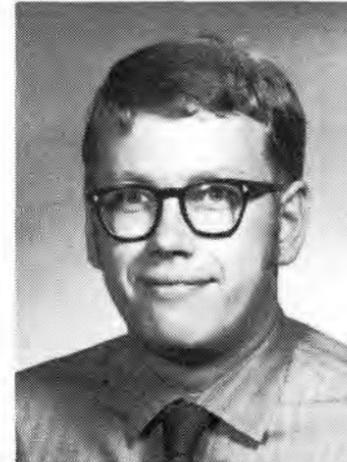
Don Sayers - 9222 15



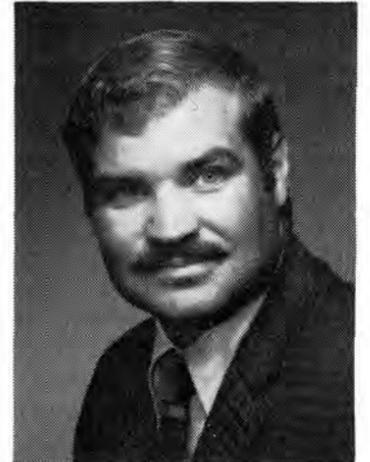
Austin Arthur - 9126 15



Max Gonzales - 4515 15



Palmer Nelson - 9124 10



Elmer Leslie - 1214 10



Dorothy Mohart - 3134 20



John Duncan - 1934 10



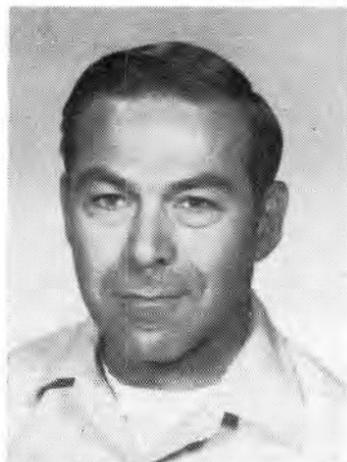
Lee Stull - 1322 15



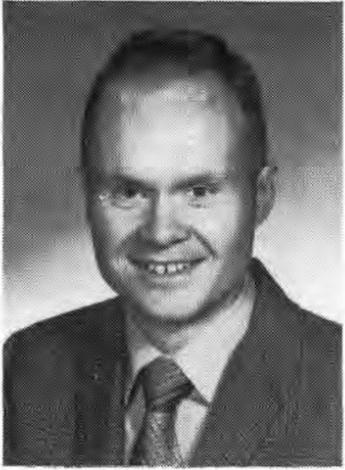
Dale Breeding - 9123 10



Harold Spahr - 5625 15



James Scheibner - 9235 15



Mike Kittredge — 9481 10



Fred York — 1343 15



John Talbutt — 9131 15



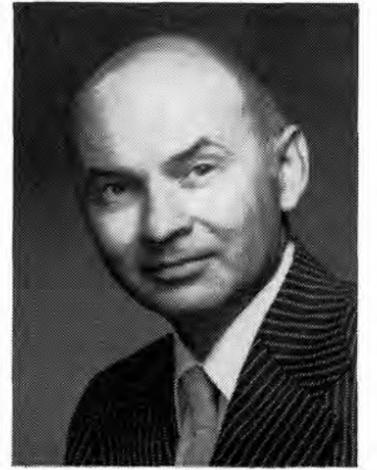
Norman Elliott — 7451 20



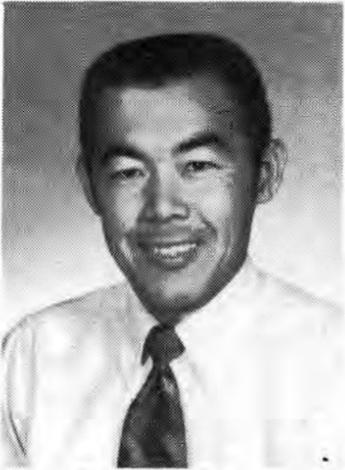
Zern Phillips — 7613 15



James McCreight — 1912 15



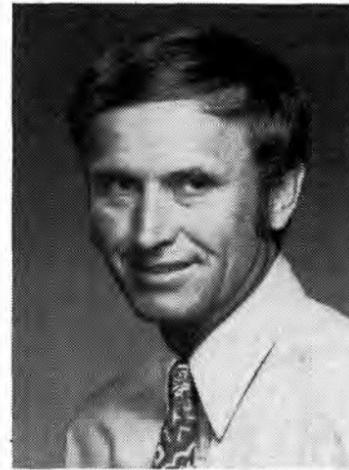
Bob Sylvester — 7123 20



Kazuo Oishi — 9482 10



Barbara Potts — 7631 10



Earl Simonson — 4122 20



Charles Greenwood — 9214 10



Charles Winter — 1710 20



James Ridinger — 7421 15



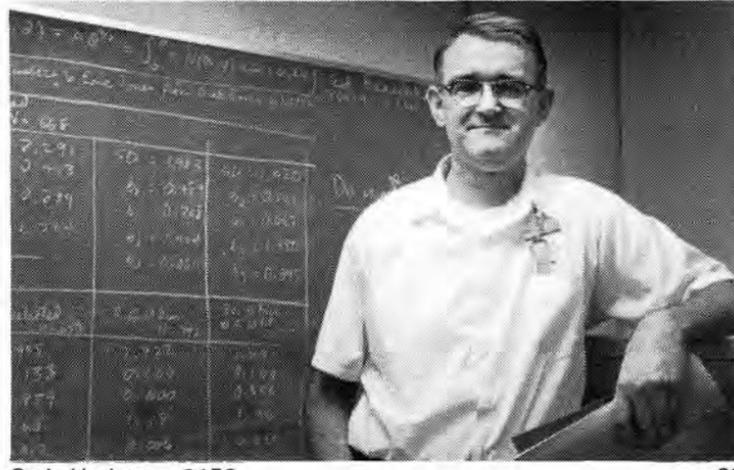
Don Wagner — 8212 15



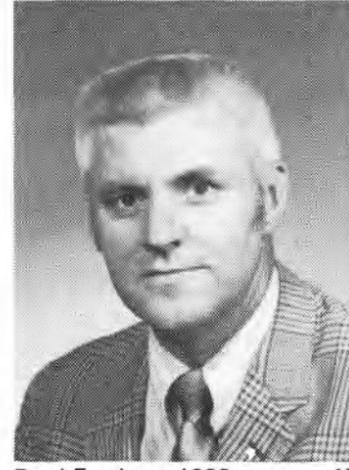
Charles Salazar — 7144 15



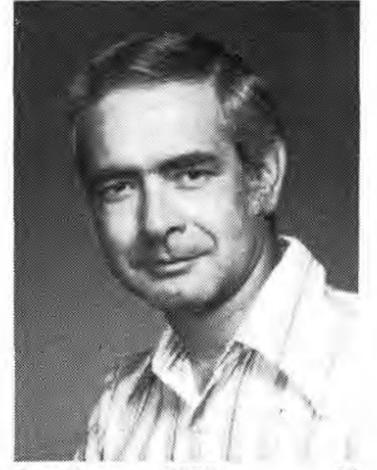
Alton Shaut — 9474 10



Craig Hudson — 9150 20



Doyl Frasier — 1223 15



Jose Suazo — 5623 15

**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**

ASSORTED 64 & 65 Falcon parts: radiators, rear axles, door parts. Herndon, 268-8269.

16" WHEELS and 6:50 x 16 tubes to match, 2 each; fit pre-1967 1/2 ton Ford pickup. Causey, 299-0089.

1972 JET 8' cabover camper, 20 gal. water supply, 4-burner stove w/oven, 4 corner jacks, new porta-potty. Cheek, 268-1805 or 268-5074.

BOYS' BACK PACK; Size 10 1/2 golf shoes; kitchen dinette table and chairs; 2-pane wood frame window. Nelson, 255-2364.

WORK BENCH: heavy duty, 2' x 4' top of 3 x 6's, \$10; enclosed car-top carrier, \$10; HO gauge train equipment. Deverman, 296-8317.

CABLE, portable electric power, 4 conductor plus ground, #4 AWG, 80 feet. Risse, 299-5002.

PORTABLE PHONO, automatic record changer, \$20. Binder, 299-2937.

ROYAL ELECTRESS typewriter, 5 years old, standard-elite type. Vleck, 298-5397.

COMB. HI-FI AM-FM radio, walnut, \$75 or best offer; Eureka vacuum cleaner, \$25; portable room humidifier, \$10. Ter Maat, 299-9151.

2 SNOW TIRES on 14" GM rims, \$10; new G70/14 SS wide oval, 4 ply tires, \$10. Berg, 266-2058.

CAR COVER, cotton drill. Fits Mustang, possibly others. Cost \$30, sell for \$12. Caskey, 294-3218.

HANDCARVED SPANISH dining set with highback crushed velvet chairs, 6' table; 6' triple dresser (Drexel) with mirror and headboard; stereo components; skis and boots. Murphy, 296-4089.

3 TIRES, size 7:00 x 14, \$5 each or all for \$12; evaporative car cooler, \$5. Dodd, 299-6330.

PENTAX SPOTMATIC camera with electronic flash. Bierly, 296-6430.

1970 HONDA 350SL, \$600. Kirchmeier, 344-5783 after 5.

STING-RAY type boy's bicycle, banana seat. \$29 or make offer. Hudson, 296-3484.

DRYER, Westinghouse stack pack type, 220 volt, \$40. Two pieces of new foam rubber, 72" x 48" x 5", \$8 each. McCoach, 298-5960.

MIN. SCHNAUZER puppies, 9 weeks old, international champion bloodlines, 2 females, \$125 each. Thomé, 255-2170.

BEGINNER'S GUITAR; Silvertone portable record player with 2 speakers and stand; 110 lb. set of weights, Sears; pool table w/4 cues. Rhoden, 298-2326 after 5.

NMMI UNIFORMS for 5'10" boy; automatic washer, \$15; auto

AC, \$20; dune buggy. Stixrud, 298-0478.

1970 CRESTLINER, 17' 120IQ, tri-hull, full cover, sleeper seats, trailer with surge brakes, extras, used 25 hours, \$3495. Kenna, 298-6059.

3 SPEED BOYS BICYCLE, Wildcat model, \$25; Fedders refrigerated air conditioner, 110v, 7500 BTU/hr, \$50. Luikens, 256-0437.

WALNUT HANGING LAMP. Hanson, 298-2120.

JUNGLE GYM, galv. steel, 7' high, 5' square, \$11; Eldon slot racing set, diode cars, complete, \$12. Trump, 299-5162.

TRAILER HITCH, E-Z lift heavy duty with torsion bars, \$50. Chavez, 299-8194.

SWIMMING POOL, Doughboy, 18' dia. by 4' high, pump, filter, ladder and misc. accessories. \$125. Emig, 294-3707.

PALOMINO SADDLE HORSE, six years old, gentle, good horse for children. 10159 Edith NE. Ortega, 898-4518.

69 VESPA MOTORSCOOTER, \$125 or best offer, Palmer, 298-6671 after 4:30 weekdays.

CHAIRS, matched skirted overstuffed, high tapered back; need cleaning; very suitable for slip covers or re-upholstering, \$30 each, \$50 the pair. Devor, 255-4890.

2 GERMAN ANTIQUE mantle clocks, \$45 each, \$80 the pair. Flowers, 282-3458.

ROOM DIVIDER, painted, with bookshelves, 60" wide, \$25. Lenander, 256-0777.

PHILCO 220 volt refrigerated air conditioner, 16,000 BTU, \$90; Electro-voice 8" speaker enclosure, \$25. Miller, 298-3534.

BICYCLE, 20", 3-speed, \$25; minibike, \$100. Hart, 299-8832.

ENGLISH SADDLE, \$49. Illing, 867-2837 after 7.

1971 HONDA SL100, \$275; new Chevy mags and wide ovals with VW adaptors. Roeschke, 282-3234.

DELUXE STROLLER with sunshade; Bell & Howell slide projector, remote, trays; Underwood office elec. typewriter; microphone w/stand; wood & vinyl chairs Miller, 344-7725.

TIRES & RIMS, boat trailer, 3 each 5:70/5:00 - 8; much VW suspension and brake stuff. McGovern, 296-6813.

CAMP GEAR: folding table, catalytic heater, portable toilet, 2-burner Coleman stove. North, 265-2769.

BBQ GRILL, \$4; b/w Zenith TV with stand, \$25; Honda 450 CB, 1970; shooters ear muffs, \$6. Lewis, 296-7896.

SCOTT AMPLIFIER & Garrard changer with 8" speaker in 24" high x 14" wide x 12" deep cabinet, \$40 or best offer or trade for good portable TV. Perea, 255-6902.

PHONOGRAPH, monaural, \$20; couch, \$150; end tables, lamps, king-size bedspread, birdcage & stand, misc. furniture; ladies hairdryer, razor, make-up mirror, Chandler, 296-3323.

YOUTH BED, oak, Simmons, mattress, two fitted sheets, \$20; swing-up camper door, needs center glass, \$10. Bassett, 898-1840.

TENT TRAILER, Wards, sleeps four, canvas tarp, spare, \$250;

2-burner Coleman stove; Sears ice chest. Moss, 298-2643.

SWING SET, \$10. Lochtefeld, 296-1326.

1971 GENERAL MOBILE HOME, 2 bedrm, furnished, washer, dryer, shag rug throughout. Romero, 298-7808 after 6.

BICYCLE, boys 20" Stingray, \$15. Wilde, 344-6079.

PATIO SALE: furniture, tools, misc. household goods. Sat., July 22, 8 to 4. 544 Mulberry SE. Mullin, 842-9520.

ELECTRIC DRYER, Kenmore soft heat, white, \$85. Winter, 298-1208.

UPHOLSTERED CHAIRS, ottoman, and sofa; rollaway bed; console w/14" TV, radio, and record player. Stoeber, 256-2439.

FRIGIKING auto air conditioner, \$50. Brooks, 344-5855.

WING BACK CHAIRS, country French with peacan legs, turquoise blue, \$40 each. Keeling, 255-4539.

MOBILE HOME, 8' x 40' 2 bedrm, new forced air gas furnace, fully furnished, new carpet, shower/tub, on \$40/month space near base, \$1600. Barton, 296-1079.

2 SLIDING ALUMINUM WINDOWS, 2' x 6' and 3' x 5', best offer. Seward, 268-7116.

POWER MOWER, 18" Stearns reel type, 2 hp w/catcher, \$85. Garcia, 298-8460.

MIN. POODLE PUPPIES, registered, chocolate. Turner, 344-7082.

LARGE SOFA, foam cushions, tan, beige, & gray; Encyclopedia Americana, 40 volumes; folding outside clothesline, 20 lines, 120 total feet, galv. steel; Hoover convertible upright vacuum cleaner. Browning, 299-6384.

SPEAKERS, 8" woofer, 3" tweeter, walnut enclosed, \$75. Hollowwa, 255-6938.

ELECTRIC STOVE, Frigidaire, \$50. Doherty, 265-0146.

NIKON F - Photomic T 35mm SLR camera w/leather case, through-the-lens meter, \$300. Smith, 298-9092.

GAS RANGE, 30" wide, w/griddle. Piraino, 255-5126.

HODAKAS: 1968 Ace 100, \$285; 1971 Super Rat, \$350; both for \$635. Lassiter, 255-0532.

TENT, 11' x 11" w/outside frame; 3-burner stove; poles, ropes, & stakes for 12' x 12' sunshade. Wolfe, 299-2458.

**FOR SALE  
 REAL ESTATE**

5 BEDRM MOSSMAN, 2 1/2 baths, 2700 sq. ft., den, dining rm, lg. rec. rm. 6505 Natalie NE. Moore, 299-3758.

3 BEDRM HOME near Juan Tabo and Indian School Rd.; arrange own financing, \$17,500. Miller, 299-4350.

3 BDRM HOME, by owner; Old Town area; AC, den; hardwood floors, carpeting; landscaped, 1/3 acre, \$25,000. Hey, 243-7137.

4 BEDRM HOUSE, approx. 2000 sq. ft., less than 10 yrs. old, about \$35,000, by owner. Lauger, 296-3197.

3 BEDRM HOUSE, den, 1 & 3/4 bath, garage, patio, A/C, range, carpet, drapes, dishwasher; refinance PHA/conv. \$22,100. Gunckel, 299-3543.

4 BEDRM HOUSE, den, 2 1/2 baths, formal dining rm; 2400 sq. ft.; 3720 Camino Capistrano NE, \$39,500. Fimple, 296-2925.

4 BEDRM HOUSE, den, fp, Holiday Park, \$30,000. Weber, Box 5024, KAFB East, Albq. 87115.

LARGE 3 BEDRM HOUSE, den & 2-car garage near Juan Tabo & Menaul; built-ins, carpet, etc. 5 1/4% loan. Also adjoining rear lot zoned R3. Davis, 298-7898.

**FOR SALE  
 CARS & TRUCKS**

'55 BUICK, sell or trade for a camping tent. Achen, 256-2116.

'64 4-dr. Valiant, one owner, \$325. Constant, 296-1431.

'64 PONTIAC Grand Prix, auto., PS, PB, AC, \$495 or best offer. Spencer, 268-6168 after 5:30.

'60 STUDEBAKER Hawk, semi-classic w/chrome wire wheels, new upholstery, \$650 or best offer. Frye, 255-8364.

'68 CHEVELLE 6-cyl. station wagon, std. shift, AC; '66 Olds. Dyn. 88, AC, hydramatic. West, 255-5855.

FORD 8N tractor, recently completely re-conditioned, \$750. Beeson, 255-3249.

'70 OPEL GT, yellow, AT, 22,000 miles, \$2495. Schmierer, 299-2352.

DUNE BUGGY, chrome wheels, roll bar & exhausts, wide tires, radio, rear seat, bash plate, fibre glass body, \$1550. Kaiser, 296-5215.

'62 FORD Falcon station wagon, \$250. Hart, 256-2811.

'59 CHEVROLET Parkwood station wagon, 4-dr., AC, luggage rack, \$350. Marrs, 299-3865.

'63 FORD Fairlane V8, 4-dr., \$350 or best offer. Edenburn, 265-5184.

'68 CAMARO 6-cyl., 3-spd. Prevender, 299-5253.

'69 PONTIAC LeMans, fully equipped w/many extras, make offer. Daniels, 256-0288.

'67 PLYMOUTH station wagon, PS, PB, AT, AC, V8, \$825. McAvoy, 869-2223.

'69 CHEVELLE SS 396-400 HP, engine & drive train 4500 mi. - balanced & blue printed. Thatcher, 299-0332 after 5:30.

'69 VW, 4-spd., R&H, 23,000 miles. Burns, 268-1306.

'58 PLYMOUTH, 4-dr. sedan, 82,000 miles, \$150. Davis, 256-1740.

'67 CHEV. pickup, 4-wd., V8, 1/2-ton, 4-spd. radials. Kmatz, 298-0281.

'61 AUSTIN HEALY Sprite, new tires, \$500 firm. Koetter, 282-5460.

'70 VW camper van, complete unit w/sink, bed, refrig., pop top, AM-FM radio, etc., Miller, 265-2374 after 6:30.

'66 JEEP Wagoneer, V8, complete overhaul, AT, PS, PB, \$1795. Wolf, 298-7343.

'59 FORD wagon, \$100. Baldwin, 256-3797.

'54 CHEV. 6-cyl., AT, purple, make offer. Neel, 299-9309.

'52 CHEVROLET VAN, 4-spd., \$100. Hoagland, 282-3825, no calls before July 24.

'65 MUSTANG, AC, Pwr. Disc., AT. Wright, 298-1789.

'70 OPEL GT, 21,000 miles, 4-spd., radio, \$1995. Weatherbee, 869-2849.

'65 FORD GALAXIE, 4-dr., PS, PB, AC, Auto trans., extra wheels, \$550. Wilson, 268-3633.

**WANTED**

TO GIVE AWAY German Shepherd (cross?) puppy, female, 4 mos. old, very affectionate. Kobs, 298-9133.

SMALL or apt. size refrigerator, reasonable. Rhoden, 298-2326 after 5.

TRADE: child's X-15 w/varoom sound & girls 24" Schwinn or X-15 & girl's 20" Huffy w/banana seat for 5 or 10 speed. Jones, 299-9480.

PING PONG table, fold up. Drummond, 299-8606.

PARTNERS to share 1971 Catalina 22 sailboat. Frye, 255-8364.

REPAIR of antique GE Monitor top refrigerator or reasonable offer to purchase as is, quit running recently. Deverman, 296-8317.

CABIN TENT, 8' x 10' or 9' x 12', good condition. Campbell, 255-9659.

BACK PACKING FRAME for 11-yr.-old boy. Jellison, 296-9155.

BACK PACK & frame, lg. size, good quality & condition. Fugazzi, 299-1279.

HOUSE TRAILER, 10 or 12 wide, does not have to be in best condition or furnished. Bauhs, 282-3497.

DEER RIFLE, with or without scope. Bouton, 898-3562.

FREE or inexpensive kiln materials, firebrick, shelves, etc. for Sandia Park potters. Hawkinson, 282-5239.

WANTED TO RENT: responsible family needs unfurnished home from Aug. through June, excellent Albu. references, prefer NE area. Evans, 298-1048.

**WORK WANTED**

MARY, qualified Sandia senior, giving beginning piano lessons, \$1 per half hour, references. Walter, 296-7062.

JOHN, qualified teenager, giving beginning tennis lessons, \$1 per half-hour. Walter, 296-7062.

**LOST AND FOUND**

LOST — 2 car keys in case around Bldg. 880, 4 keys in brown case, sunglasses w/steel frames, ladies sunglasses w/lg. tortoise frames, Ford car key, trifocal safety glasses w/gray frames in tan/brown case, man's wristwatch — Rollex Oyster w/brown leather band, 2 keys in brown case for Volvo, 3 colors of gold w/2 grape leaves emblem ladies ring made in Black Hills SD, book — "201 Spanish Verbs," ANB check book — "Bowen Account." LOST AND FOUND, tel. 264-2757, Bldg. 832.

FOUND — 3 luggage keys in S/L Fed. Credit Union container & 28¢ in change, man's straw hat w/small brim — left in Bldg. 869, life-time Shaffer pen, black w/gold point, found at entrance to Tech Lab. (804). LOST AND FOUND, tel. 264-2757, Bldg. 832.

# Vaudeville Tomorrow: Soul Session July 29

HAPPY HOURS for the next couple of weeks offer something for everyone. Families are enjoying the late evenings on the patio as the kids use the twin pools until 10 p.m. The north end crew digs the special prices (cheap) from 5 to 10 p.m. Younger ones with energy like dancing from 7 to 10 p.m. in the ballroom. And Yolanda and piano entertain in the main lounge until midnight.

Tonight the Prisoners will be loose on the bandstand while the Club's kitchen staff wheels out its famous chuckwagon roast beef buffet. Frank Chewiwie will make the happy music on Friday, July 28. The buffet will be a seafood spread. On Friday, Aug. 4, Rio Grande style Mexican food will be the buffet feature while the Saints hold the bandstand.

\* \* \* \*

TOMORROW NIGHT is Vaudeville night at the Club with an act that broke up the troops back at the Roaring 20s party. The Whistlers will do it again. If you missed them earlier, catch it this time. The Whistlers are something else. In addition, a modern folk singing duo called Carl and Jerry will entertain. The movie will be "The Three Lives of Thomasina" by Walt Disney. Happy Hour prices and super sandwiches will be available starting at 6 p.m. Admission is free to members and families.

\* \* \* \*

SOUL SESSION on Saturday, July 29, will feature a new group called Cody making the big rock sounds. Other than that, the successful Soul Session formula remains unchanged — Happy Hour prices from 8:30 to 12:30; free admission, guests pay \$1, and super sandwiches are available.

\* \* \* \*

WITH BOWLING SEASON right around the corner, the Coronado Club mixed league will get organized at a party Monday, July 24, starting at 7:30 p.m. Refreshments will be served. The league will bowl at 6:30 p.m. on Wednesday nights this season. Old members and new members are welcome. Call John Willems (1525), president, ext. 1525, or Jim Courtin (7415), secretary, ext. 5340, for more details.

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## Recreation Notes

### FUN & GAMES

Volleyballers . . . like the man says, we've got good news and a speck of the bad.

First the good. After mailing out some 300 questionnaires Herman Romero (5531) reports that 75 people signed up for summer volleyball league play. So Herman went ahead with schedules, teams, the whole bit — really quite a bit of work.

Ready? The Base Gym will be closed for the duration of the summer after working hours. Which makes volleyball play a little tough.

Well, there's always horseshoes.



SOUL SESSION Serenade, played by Billy Thorne (5162) to Karen Rogers (3256) is one way to tell the troops about the Club's Soul Session scheduled Saturday, July 29.

CORONADO SKI CLUB, also looking forward to next season, will hold a swim party and show movies on Tuesday, Aug. 1, starting right after work at the twin pools. The snack bar will be open for sandwiches; the club will provide other refreshments. Movies will be shown at 8 p.m. in the ballroom. All skiers and would-be skiers are invited.

\* \* \* \*

TRAVEL NEWS — Bud Wheeler (3251), Club travel director, announces a number of new trips for coming months. First is to Hawaii Sept. 8-15. The package includes transportation and seven nights at the Pacific Beach Hotel in Honolulu. Price: \$340 for double occupancy; \$388 for single; \$316 for triple; and for children under 12 years of age, \$190. A \$50 deposit at the Club office is required right away.

Mazatlan, ever popular resort city on the Mexican Pacific coast, is the destination Oct. 16-23. The package includes all transportation, deluxe rooms at the Playa Mazatlan resort hotel, and breakfast and dinner each day. Cost is estimated at \$210 for double occupancy.

A chartered bus trip to El Paso is set Oct. 21-23 to take in the Lobo-UTEP football game and to spend a couple of nights in Juarez. (Oct. 23 is Veterans Day.) Estimated cost is \$55.

Rio de Janeiro, Brazil, is scheduled Jan. 25-Feb. 1, 1973. The trip will include rooms at a deluxe beach hotel, two meals each day, and sightseeing tour of Rio and Corcovado. Price will be \$499 based on double occupancy. (Regular air fare to Brazil is about \$810.)

Bud urges anyone interested in any of these trips to call the Club office right away (265-6791). The Mazatlan trip and the El Paso junket depend on the interest shown. Plans cannot proceed until he has some idea of the number of people interested.

In the meantime, people on the Spain/Portugal trip waiting list are urged to call the Club office to check on their status.



CORONADO SKI CLUB members will make a splash Tuesday, Aug. 1, at a swim party and movie session at the twin pools. Rose Griffin (4623) urges all skiers and potential skiers to attend.