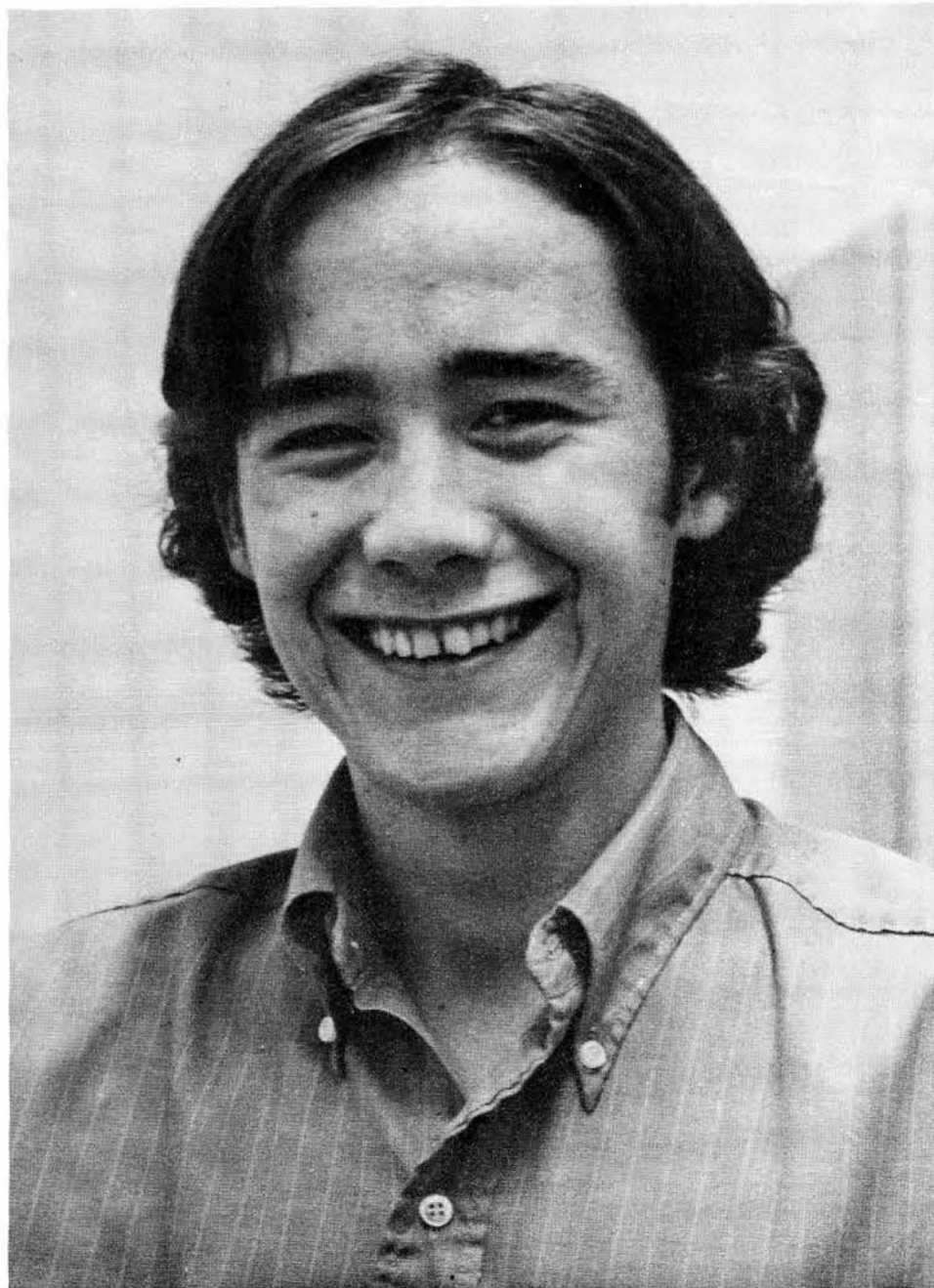
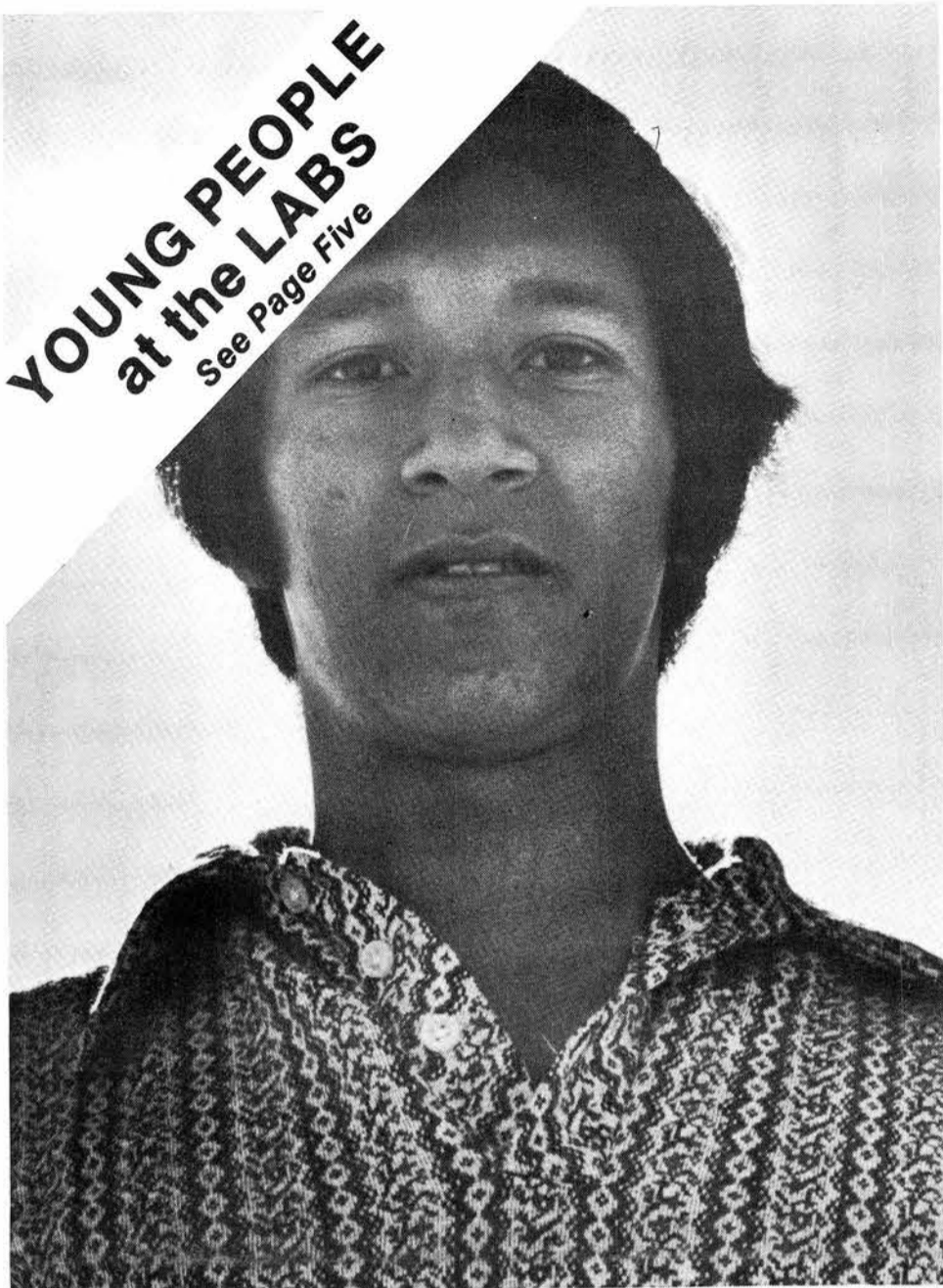




**YOUNG PEOPLE
at the LABS**
See Page Five



Afterthoughts

Junior, What Big Eyes You Have--There's a restaurant on East Central that's a little curious. Or something. One sign says "Families Welcome." Another, some distance from the first, says "Topless Waitresses." Now the question is, did the management make a deliberate and conscious decision to have two signs, separated and about equal, out of some sense of delicacy? Because, after all, it stands to reason that one big sign is going to be cheaper than a couple of medium size ones. And if delicacy was the determinant, then we have here a truly extraordinary refinement of perception of the public temper. In any event, the content of the twin signs suggests some interesting scenarios within the restaurant as Dad, Mom, Dick and Jane order the blue plate special.

* * *

The New and Seductive Army--Any veteran will agree that the most forgettable prose ever written appeared in that series which the military called Tech Manuals, TM's for short. "To replace actuator spring, part no. 543879 (WD19420M), on rifle, M1A1, serials 84563 through 97142, release trigger guard after first clearing reciprocating butt." Well no more. By chance I've come across a slim volume called "The M16A1 Rifle, Operation and Preventive Maintenance." Recently published and in cartoon format, it features a young lady, blouse severely strained, who admonishes on the flyleaf: "Comes a firefight--your M16A1 rifle's your dearest next o'skin--bar none!" Under the first major heading "How To Strip Your Baby," this steamy passage: "You want to know her inside out, every contour and curve, every need and whim, what makes her tick." Later on, same young lady: "For you M16A1 Zapsters!! Here are some numbah one PM suggestions to keep you Go-Go!" Beautiful. It's probably just a matter of time before this approach is adopted elsewhere. I've always thought our research reports came off, well, a little stiff...

Inspired Typo Of The Week--From a Journal article on the forthcoming bond issue referendum: "... \$350,000 of this (money) is to be set aside to match state and federal funds in bringing the city's sewage treatment plant to higher standards of affluent treatment." Hmm, bet the sludge lobby is solidly behind this...

* * *

Kant On Diplomacy By Arms--"We cannot divide ourselves between right and expedience. Policy must bow the knee before morality."
*js

Events Calendar

- Aug. 2 — Old Pecos Bull Dance, Jemez Pueblo.
- Aug. 3-6, 10-13 — "Wait Until Dark," Old Town Studio, 8 p.m., 242-4602.
- Aug. 4 — Summer Corn Dance — Annual

- Fiesta, some 500 dancers, singers, Santo Domingo Pueblo.
- Aug. 4 — "Madame Butterfly," Aug. 5, 11, 16 — "Pelleas et Melisande," Aug. 9, 12 — "Salome," Aug. 17 — "Melusine," Aug. 18 — "Don Giovanni," Aug. 19 — "La Grande - Duchess de Germalstein," Santa Fe Opera, 9 p.m.
- Aug. 4-6 — "In the Matter of J. Robert Oppenheimer," Corrales Adobe Theater, 8:30 p.m., 898-3323.
- Aug. 10 — Summer Corn Dance and Feast of St. Lawrence, Picuris, Laguna and Acoma Pueblos.
- Aug. 10-13 — Inter-Tribal Ceremonial, Gallup (brochures available in Lab News Office).
- Aug. 12-13, 17-20 — "The World of Carl Sandburg," Corrales Adobe Theater, 8:30 p.m., 898-3323.
- Aug. 15 — Harvest & social dances, Zia, Laguna, Mesita.

LAB NEWS

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SANDIA LABORATORIES

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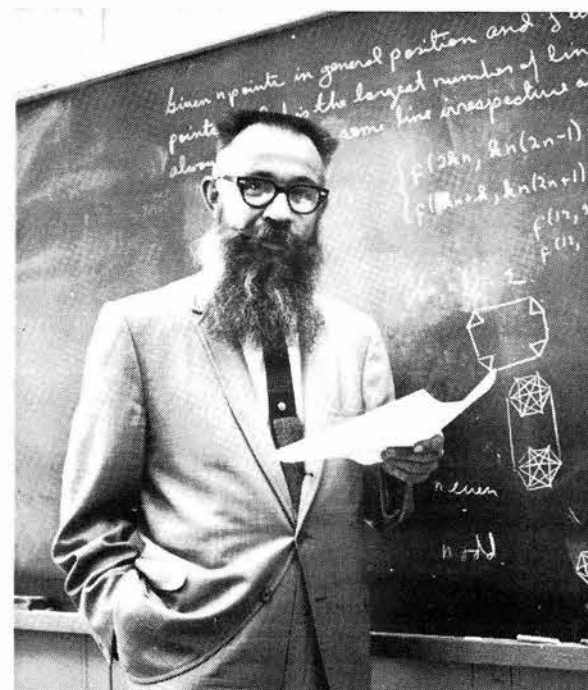
bruce hawkinson writes
as does norma taylor while
bill lasker takes/makes pictures
&

in livermore lorena schneider does all

Variable Annuity Unit Value

August	1.757
July	1.792
Average 1971	1.628

Supervisory Appointment



GUS SIMMONS to manager, Mathematics and Computer Science Department 1720, effective Aug. 1.

Gus's association with Sandia began 18 years ago when he was first employed, after Air Force service, as a graded technician. The following year he terminated to complete his education — a BS in math from Highlands University, and an MS in physics from the University of Oklahoma. Returning in 1958, he worked for two years with the data reduction organization. He again left Sandia to head the plasma physics experimental group at McDonnell Aircraft. He came back to the Labs in 1960 as one of the original members of the 100 organization staff.

In 1964 Gus was promoted to supervisor of Nuclear Safety Division, a group which later was split into two groups with Gus heading the Command and Control Technology division. Later, he was selected to be in the first group of Doctoral Study Program candidates and received his PhD in mathematics from UNM. Gus again left Sandia in 1970 to become Director of Research for Rolamite, Inc. In August of last year he returned as supervisor of Applied Mathematics Division.

Gus is a member of the American Mathematical Society, IEEE, and the Mathematical Association of America. As a member of the Governor's Technical Facilities Committee, he worked with a subcommittee which explored usage of the Meson facility at LASL.

Gus's hobbies include mountain climbing — he has climbed in Mexico, Nepal and Austria — magic tricks — he is a card-carrying member of the International Brotherhood of Magicians — and Origami — Japanese paper folding. "My magician's tricks and paper folding are an international passport," Gus says. "It's almost better than knowing the language in a foreign country when it comes to establishing friendly contact."

Gus and his wife Diana live in Cedar Crest. Their daughter Karen is a junior at UNM.

PAGE TWO
LAB NEWS
AUGUST 4, 1972



AC Transit Features Fun Summer '72

A series of day-long, Bay Area excursions — called Fun Summer '72 — is being offered by AC Transit System, allowing you to go exploring while sitting back, relaxing and letting a professional driver lead the way.

Air conditioned tour buses operate every day except Monday, through Sept. 10. The buses leave from Jack London Square in Oakland at 10 a.m. and return in late afternoon, except as indicated below.

Hostesses from the Convention and Tourism Department of the Oakland Chamber of Commerce word-sketch points of interest. Lunch facilities are available on most trips, or bring your own lunch.

East Bay Tour (Oakland, Alameda, Piedmont, Berkeley): Every Wednesday, Thursday, and Sunday, 1-4 p.m.

John Muir House at Martinez and Historical Benicia: Aug. 8 and 22, Sept. 5.

Sausalito and the Three Bridges: Aug. 15 and 29.

Tilden Regional Park (East Bay Regional Park District guide): Aug. 11 and 25, Sept. 8.

Special Berkeley Tour: Aug. 18, Sept. 1, 9:30 a.m. to 2:30 p.m.

Saturday Excursions of the Week:

Sonoma Mission, Buena Vista Winery, Aug. 19;

Japanese Cultural and Trade Center, Aug. 12 and Sept. 2;

Los Gatos Wine and Cultural Festival, Aug. 26; and

Champagne and Southern Alameda County, Sept. 9.

Cost of tours varies from \$1 to \$4.50 for adults and from 50 cents to \$2 for children. Additional information (including brochure) and reservations are available at Oakland Chamber of Commerce booth in Jack London Square, or by calling AC Transit Information: Oakland/San Francisco, 654-7878; Hayward, 582-3035.

All day parking is available behind Goodman's Hall, 10 Jack London Square, or alongside TV Station KTVU, facing the water.

Death



E.C. "Bud" Wittbort of General Maintenance Section 8257-2 died in Livermore July 12 after a lengthy illness. He was 53.

Bud had worked as an electrician at Sandia/Livermore for over 11 years.

Survivors include his widow, a son, a daughter, a brother, and his father.

Authors

Ron Musket (8313), "Direct Comparison of Auger Electron Spectroscopy with Appearance Potential Spectroscopy," *JOURNAL OF VACUUM SCIENCE AND TECHNOLOGY*, Vol. 9, p. 603.

Ron Musket and Steve Taatjes (both 8313), "Compact Appearance Potential Spectrometer," *JOURNAL OF VACUUM SCIENCE AND TECHNOLOGY*, Vol. 9, p. 1041.

Jim Swisher (8313) and A. Fox (BTL), "Superior Hook-Up Wires for Miniaturized Solderless Wrapped Connections," *JOURNAL OF THE INSTITUTE OF METALS*, Vol. 100, p. 30-32.

LIVERMORE NEWS

VOL. 24, NO. 16

LIVERMORE LABORATORIES

AUGUST 4, 1972



DIGITAL CONTROL SYSTEM OPERATIONS are discussed by Dennis Nelson, left, and Clyde Taylor, while Hank Andreski prepares a specimen for testing, in Sandia/Livermore's Environmental Test Laboratory, Division 8413.

Digital Computer Provides Control In Random Vibration Testing

Along with rockets and the space age came the need for random vibration testing. Concurrently, problems and solutions related to the control of this type of testing developed. Now, new computer methods are being applied to random vibration testing control.

At Sandia/Livermore, a control system conceived by Dennis Nelson of Environmental Test Division 8413 utilizes a "mini" digital computer and a Fast Fourier Transform processor to monitor and control the acceleration of a test item when mounted on a shaker. The system was built to Sandia specifications by Time/Data, Inc., of Palo Alto, Calif.

Random vibration, as opposed to sinusoidal vibration at a single frequency, contains energy at many frequencies, simultaneously. It is the function of the control system to provide the appropriate amount of energy in particular frequency intervals so as to cause the resulting vibration to have the desired power spectrum.

In the past, electronic filters were used to analyze and modify the vibration. In the digital system, the filters have been replaced by an analysis technique — called the Discrete

Fourier Transform. The technique has long been used in data reduction procedures, but the capability of applying it to vibration control, where real-time analysis is required, is new.

Dennis feels the digital concept has revolutionized the random vibration area. "Much finer resolution is now possible," he says. "With the former analog control system, we would place 80 filters in a fixed-frequency range. The digital system can analyze and control up to 512 frequency intervals in a wide variety of specified frequency ranges.

"This capability," he continues, "coupled with the greater dynamic range afforded by the digital system, allows us to evaluate structural resonances much more accurately."

Other features of the new system include simplified set-up procedures, immediate retrieval of test results for documentation, and the inherent stability of digital circuitry.

But overall, Dennis notes, one of the most significant advantages offered by the digital approach is that testing philosophy is not limited by a wired-in control policy. "Since only software is involved, the versatility of such a system is limited only by the imagination of the user." •ls

Take Note

The first annual Seniors Golf Tournament, sponsored by the Sandia Employees Golf Club, was played at Livermore's Las Positas course recently. In the first flight — for senior employees (over 50 years of age) — Bob Neighbors (8412) shot a low net score of 71 to win a first place special trophy and Mike Lettrich (8264) finished second with a low net of 72. Jim Barham (8130), winner of the second flight — for regular members — took

the first place overall trophy with a low net of 64 and Gordon Kibby (8421) came in second with 70 overall. Bill Ormond (8217) won the "fewest putts" contest, and Bob Neighbors also received the "longest drive" award.

Congratulations

Mr. and Mrs. Mike Baskes (8312), a son, David Alan, July 14.

Letters to the Editor

(LAB NEWS doesn't ordinarily carry letters from readers, one reason being we don't get many. We got a couple after our last issue though of more than routine interest — thoughtful statements about matters that affect all of us.)

Editor, Lab News

Re: Lab News Article "Fair Employment and Operation Opportunity: A Great Deal Can Be Accomplished"

I don't believe in discrimination either — any kind of discrimination.

When a National Merit Scholarship Finalist isn't even considered for a scholarship because "your Daddy makes too much money" — *that's* discrimination.

When a 3.9 average Phi Beta Kappa is

refused a graduate assistantship because "you are not a member of a minority" — *that's* discrimination.

When my kids can't be considered for employment because I work here at a good paying job — *that's* discrimination.

If we are going to accomplish more than just trade one kind of discrimination for another, we must, like justice, be blind. Blind to all the connotations of surname, color, parentage, and Daddy's check book. We must forget about "percentages" of minority group employees at specific job levels and promote the best available. If there are disadvantaged persons, we must give them a hand, but not at the expense of someone else.

If we are not careful, the next generation of "disadvantaged" will be the children of today's "advantaged."

/s/ Bill Busby-4116

* * * *

Editor, Lab News

Dear Editor:

I originally heralded your liberalism when the Lab News decided to include men in the traditional back page cheesecake.

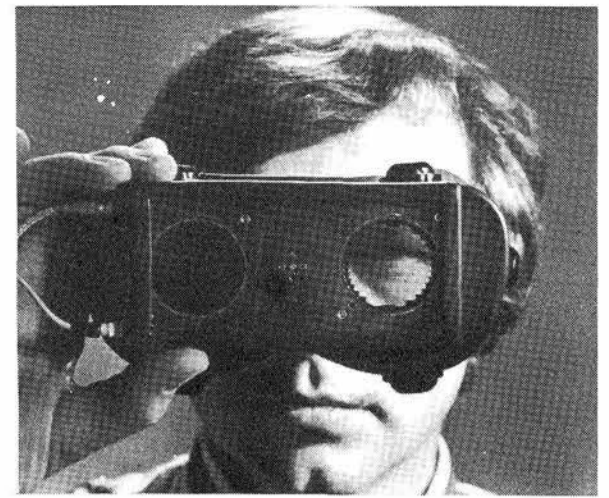
However, since the advent of this "new sign of the times" I have been sorely disappointed. With the possible exception of your first twosome cheesecake, all subsequent additions have remained hopelessly steeped in male chauvinism. The female is laid out and offered for sale as prime subject of the pictures. The men are in the background hidden by musical instruments & otherwise diminished.

If you won't eliminate this sexist practice altogether, then give us women an equal chance to check out the male gams, make guesses about their vital statistics, and offer off-color remarks about their assets & habits.

If you can't give us what we want after years of using us & denying us everything, then step aside and let us pick & pose the subjects.

Sincerely

/s/ Ms. Jacqui Binford



NEW flashblindness goggles utilize "PLZT" electro-optic ceramic sandwiched between crossed polarizers. In this photo, one lens is "on," the other "off." Array of five photodiodes between lenses senses light intensity. An associated circuit switches the goggles off at a pre-set intensity, then on again when the light level drops.

You Won't See These Dark Glasses On Fashion Models

An "electronic blink" that responds 5000 times faster than the human eye has been devised at Sandia Laboratories for use in protective goggles worn by pilots to prevent flash blindness from nuclear explosions.

The goggles could also be used to protect welders from eye damage and might be adapted as a fast photographic shutter.

The goggle lenses contain a special electrooptic ceramic which becomes transparent when electrical voltage is applied, and darkens — within 50 millionths of a second — when the voltage is interrupted.

This "electronic blink" is rapid enough to intercept a flash of light from a nuclear detonation or a lightning flash before it reaches damaging intensity, thus preventing eye damage which the slower (one-quarter second reaction time) human blink cannot prevent.

Five tiny light-sensitive cells between the goggle lenses sense when light reaches a damaging level and switch the goggles to their off state. When a safe level is again reached, the lenses automatically clear.

This off-on switching can occur so quickly that the wearer may be unaware that his goggles have "blinked."

Advantages of the new system are that it is powered for about 200 hours by a small battery, contains no liquids or moving parts, and may be switched on and off an indefinite number of times. The power supply is slightly larger than a pack of cigarettes and the lenses are postcard-thin.

In their clear state, the lenses transmit about one-third more light than most conventional sunglasses.

Construction of the glasses is fairly simple, consisting of a thin, polished slice of the ceramic sandwiched between two polarizing filters similar to those used in Polaroid sunglasses.

The filters are "crossed" at right angles to each other so that they transmit no light. When voltage is applied to the ceramic between the filters, the light is so altered that it will pass through the filters. With voltage removed, the light is unaffected by the ceramic and cannot pass through the filters.

The new filter system was developed by C.B. McCampbell (1310), Gene Haertling, J.T. Cutchen and James Harris (all 1335), and is the subject of a U.S. patent application filed in their names by the Atomic Energy Commission. Gene is inventor of the ceramic.



TORNADOS ARE LOUSY PRUNERS. Pablo Garcia (4613) knows better than to prune a tree by severing the trunk a third of the way up. A tornado didn't. It also broke windows and pushed a pick-up into a concrete barbeque grill at Pablo's home in Tijeras Canyon.

Kirtland Speeders:

Little Brother Is Zapping You

Latest addition to the arsenal of the KAFB Security Police is a gadget resembling Buck Rogers' ray gun. It is the nemesis of speeding motorists. We know — we tried it.

Called a Speedgun, the unit houses a small, hand-held radar which, taking advantage of the doppler effect, can measure the speed of any moving object. It incorporates a digital readout screen to display and record the mph of the speeding object.

From a traffic control viewpoint, the Speedgun is an ideal tool — it can be used anywhere by one man or a team, from a fixed position or from a vehicle.

To the motorist on KAFB, the Speedgun is the definitive argument for obeying speed regulations. Lt. J.J. Anderson of the Security Police reports that accidents resulting from speeding are increasing on Base. A determined effort is being made to stop this trend.

Five of the Speedgun units will be in operation about Aug. 15.



SPEEDERS BEWARE — This new Speedgun just going into service by KAFB Security Police is a versatile radar unit which provides immediate mph clocking of speeding vehicles. Five units will be operating on Base about Aug. 15.

The Future Is Among Us This Summer

Eighty-two young men and women are working at Sandia Laboratories this summer, 63 at Albuquerque, 18 at Livermore and one at Pantex, as Youth Opportunity Trainees. The national program provides summer employment and helps make possible the students' return to school in the fall. Most have completed their first year of college and many have worked summers here before.

Age of the students ranges from 17 through 21. They are young adults undergoing rapid changes in opinions and personality as their world and experiences ex-

pand. They are not yet comfortable in a large organization. They are impatient, even a little arrogant. Some find work monotonous.

They want to perform their duties well, to learn as much as possible, and to apply this knowledge to a future still uncertain and such a long way away.

They are concerned about the war in Viet Nam (end it quickly), pollution (we've got to clean up the mess), crime and violence (our homes are not safe) and human relations (most important are honesty and integrity). In short, these are bright, concerned persons marking time until they get a chance to perform in their career fields.

* * *



JUNE JARAMILLO, typing technical manuscripts this summer in Department 5130, is a tall attractive girl from Tomé. She has completed two years at Wellesley on academic scholarship and is majoring in Latin American studies. She plans graduate study at UCLA or Georgetown University and perhaps a career in the State Department. Psychology and languages are strong interests.

June spent a miserable first year at Wellesley. The oldest of seven children, she missed her family. "People in Boston were unfriendly," she says, "very snobbish. I made few friends, and studies took most of my time. I felt that I was less prepared academically than the other students. Still, I earned Freshman Honors."

Last year was better. A job as library assistant in the biological sciences library. Volunteer work as a tutor in English for a Venezuelan family. A paper, "Tomé Intelligence Test," which demonstrated cultural bias in intelligence tests, published in a teaching manual for psychology. More activities.

A strong believer in women's inherent rights, June at 19 is becoming more confident and aware of her abilities — achieving a high grade average, coping with the Eastern thing, even typing Sandia's technical manuscripts with pages of mathematical formulas. She's eager to return to school and her "real work."

* * *



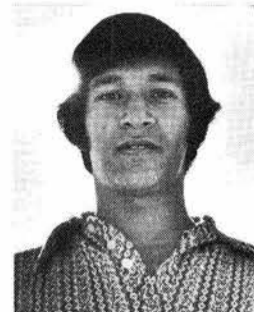
JONATHAN JOHNSON, assistant in Technology Development Division 1436, is thinking about a technical career or work in the social sciences, perhaps with a law degree. He's completed two years at Arizona State under the ROTC program.

"I like engineering," Jonathan says, "but I feel the important things are going to be happening in the social areas. I'll try to load my schedule with sociology courses next year and put off the decision for awhile. The law degree does have appeal, however, and eventually I think I'll try for one."

In the meantime, he's excited about work at Sandia. Involved in thin film technology, he has been reading textbooks on the subject after hours and is taking the Sandia course in efficient reading. "Fantastic," he says, "I've tripled my reading speed."

After the degree, Jonathan will spend four years as an officer in the Army. "They're paying the bills," he says, "and I could not go to college otherwise. Four years for four is fair."

* * *



ROBERT PEREA from Sandia Pueblo also works as a lab assistant and is in Area III with Division 9334. He helps in the test projects at the major facilities — water jet tunnel, centrifuge, rocket sled track, gun site. And he likes it.

"Sandia is big," he says, "and confusing. But the job is fun. I work with a bunch of crazy guys. Professionals, but crazy."

Bob wants to be a dentist. He's completed one year at UNM under an All-Pueblo Indian scholarship. It was a tough first semester but thanks to something called the College Enrichment Program — which provided counseling, tutoring, friendship and a place to belong — his grades came up and he feels he can make it. "I seriously considered dropping out," he says, "but that was last year when I was much younger."

Bob is a small, slender guy who runs 10 miles every once in awhile because "it feels good." He attended high school in Bernalillo where he was senior class president.

Bob's purpose in becoming a dentist is to return to the Pueblo and practice there. When talking of home, he assumes a quiet pride. "Great things are happening at Sandia Pueblo," he says. "We've got a furniture industry going and some land development. It's a good place to live. Our traditions will never disappear."

* * *



GILBERT SANCHEZ, scanning periodicals and performing information research for Systems Planning Staff 100, peers out from behind his horn rimmed glasses and tells you "this is the ideal job, ideal for now. Tremendous experience."

The 18-year-old political science major has completed one year at Ripon College in Wisconsin under an academic scholarship, a work-study program and a grant. He's interested in world affairs — he's taking Russian language courses, economics, sociology, art, just about everything. He wants to be a journalist.

Gil is also concerned about education. He's a little critical of an Albuquerque high school where he was graduated in 1971. Choosing his words carefully, he will tell you that the school does a good job heading its graduates toward the job market or trade schools. Teachers are overworked, and the 10 percent of students who do go on to college are sort of lost in the shuffle.

"What a revelation it is to attend a small college like Ripon where the student-teacher ratio is about 12 to 1. Learning under these conditions is exciting," he says, "and the professors have time to care, to know you personally. If it only were possible for Albuquerque schools to afford more teachers. I'm sure more of the kids from my area would go on to college with a little encouragement." •dg

Tuesday, Bloody Tuesday

No, this isn't a sequel to the recent film. Just an update on the fabulous success of the Labs blood donor program. Vern Henning of Employee Benefits Division 3242 reports.

"Since we started back in April, close to 1300 people have donated blood. As you know, in exchange for their once-a-year (or more) donation, the donor gets Bloodplan insurance so that if he or she or a member of the family need blood they get it for free. Donors help the community, they help themselves — great.

"These 1300 have increased the local pool of donors by nearly one half, and one immediate effect has been the reduction in cost of blood to the patient. And if you've been in the hospital lately you know there aren't many items going down in price.

"We've set aside every Tuesday morning for blood donations over here in the Personnel Building. Those who have already signed up will be routinely scheduled, but if anyone wants to join the program or even to give an extra pint, then drop by any Tuesday morning. Between donations there has to be an interlude of at least eight weeks.

"We would like even more donors. Any Sandian can sign up. But so can members of their families, relatives, friends, even neighbors. Spread the word. I've got literature about Bloodplan insurance if anyone wants it."

* * * *

If you haven't signed up yet for the blood donor program, you can by completing this coupon and returning it to Vern.

To: Vern Henning — 3242
I volunteer to be a blood donor. In return, I will be given Bloodplan insurance for myself and my family.

NAME (PRINT)	ORG.	PHONE
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Speakers

D.W. Ballard (9461), "Composite Materials — A Real Challenge for Nondestructive Testing," ASM Chapter, May 23, Los Angeles

R.E. Cuthrell and D.W. Tipping (both 5331), "Quantitative Measurements of Conductance as a Function of Load for Atomically Clean Electrical Contacts and Organic Thin Film Coated Contacts," 6th Int'l. Conf. on Electrical Contact Phenomena, June 5-9, Chicago.

R.K. Cover (1724), "SID A Fast Low-Cost Graphic Scanner"; W.D. Smith and C.E. Land (both 5113), "Ferroelectric Ceramic Light Scattering Devices for Image Storage and Display"; J.O. Harris, Jr. and J.T. Cutchen (both 1335), "Electrooptic Variable Density Optical Filter," Society for Information Display International Symposium, June 6-8, San Francisco.

D.W. Bauder (9333), "Advancements in Rocket Sled Technology," and W.H. Everhart (9482), "Telemetry System for Hypersonic Rocket Sled Test," ISTRACON, May 16, Lakehurst, N.J.

R.J. Buxton (1915), "Use of MDF For Precise Timing," American Ordnance Assoc., Conference on Linear Explosives NBS, May 24, Gaithersburg, Md.

W.W. Westman (7414), "The Larger Quality Picture," Vendor Quality Success Seminar, Mound Laboratory, June 8, Miamisburg, Ohio.

L.A. Harrah (5511), "Temperature Dependence and Mechanisms of Excimer Formation in Fluid and Glassy Solutions of Poly (2-vinyl naphthalene)," Annual Symposium on Molecular Structure and Spectroscopy, June 12-16.

O.J. Burchett (9462), "Holography," and D.W. Ballard (9461), "Infrared NDT Applications," National Symposium on Technology Transfer, Carnegie Institution, June 13-15, Washington, D.C.

E.P. EerNisse and C.B. Norris (both 5112), "Electrical Effects of Clustered Defects in Heteroepitaxial Si Films," 1972 Device Res. Conference, University of Alberta, June 21-24, Edmonton, Canada.

J.E. Houston (5332), "Chemical Effects on the Soft X-Ray Appearance Potential Spectra for Elements of the 3d Transition Series," Materials Science Seminar, WP-AFB, Ohio, and University of Wisconsin, June 23.

R.S. Blewer (1413), "Structural Investigation of Metal Films Implanted to High Dose With Inert Gas," American Vacuum Society Meeting, June 7, Dallas.

F.L. Vook (5110) and K.L. Brower (5112), "Localized Defects in Semiconductors," IBM Research Symposium, May 15-17, San Jose, Calif.

R.L. Shaum (9471), "TTR TICON System," 39th Meeting of the IRIG Telecommunications Working Gp., May 23, Ft. Walton Beach, Fla.

J.A. Panitz (5331), "Surface Flashover Spectrometry," Conf. on Electrical Insulation and Dielectric Phenomena, National Research Council, National Academy of Science, June 1, Buck Hill Falls, Pa.

K.T. Kavanagh (5165), "Orthogonal Mode Techniques for Nonlinear Analysis: A New Approach to Static Analysis and to Computer Aided Design," and "Orthogonal Modes for the Solution to Static Nonlinear Problems," Finite Element Method in Civil Engineering Conference, McGill Univ., June 1-2, Montreal, Canada.

J.W. Guthrie and R.S. Blewer (both 1413), "The Use of Scandium Metal Targets for Tuning an Ion Microprobe Mass Analyzer for Thin Film Studies"; R.T. Meyer and A.W. Lynch (both 5324), "Reevaluation of Carbon Vapor Pressures and Third Law Heats of Sublimation"; Meyer, J.M. Freese and Lynch (all 5324), "Relative Partial Pressures of Carbon Vapor Species from Laser Heated Graphite," 20th Annual Conf. on Mass Spectrometry and Allied Topics, June 4-9, Dallas.

C.A. Crepin and R. Farley (both 3144), "Technical Report Literature Update Seminar," 1972 Seminar of the Special Libraries Assoc., June 8, Boston.

C.C. Hudson (9150), "Shadow Bands," Southwest Astronomical League, June 9, Albuquerque.

B.M. Butcher (5133), "Dynamic Response of Porous Aluminum During Unloading," Lawrence Livermore Lab, June 14-15.

E.R. Julius (9334), "Firing Sequence Controller," Meeting at Sandia Labs, June 14.

D.B. Hayes (5166), "Phase Transformation Rates and Final States Achieved in Shocked Potassium Chloride," Gordon Conference, June 19, Plymouth NH.

J.W. Nunziato (5131) and K.W. Schuler (5163), "Applications of the Shock Amplitude Equations for Nonlinear Materials to Shock Pulse Attenuation Studies"; L.I. Weingarten and H.D. Fisher (both 1541), "Transient Axisymmetric Response of A Hollow Conical Frustum"; D.S. Drumheller (5163), "On the Effective Stiffness Theory"; D.S. Drumheller and H.J. Sutherland (both 5163), "A Lattice Model for Composite Materials," ASME Applied Mechanics Conference, Univ. of California, June 26-28, LaJolla.

R.E. Luna (5644), "Simulation of Atmospheric Ozone Concentration Using a Semi-Empirical Global Diffusion Model," AIAA Fluid & Plasma Dynamics Conference, June 26-28, Boston.

R.D. Moyer (7452), "Terminal Invariant Parameter Determinations From Complex Signal Ratio Measurements," Conference on Precision Electromagnetic Measurements, NBS, June 26-29, Boulder, Colo.

K.E. Lawson (5522), "Optical Spectra of High Spin Manganese (II) Salts," American Chemical Society Rocky Mt. Regional, June 30, Ft. Collins, Colo.

W.J. Camp (5151), "On the Electrical Behavior of Metallic Fluids," Physics Colloquium, June 15, Cornell Univ., Ithaca, NY; and Gordon Conference on Research at High Pressure, June 19-23, Plymouth, NH.

J.E. Schirber (5150), "Electronic Structure Transitions," Gordon Conference on Research at High Pressure, June 19-23, Plymouth, NH.

S.R. Booker (7452), "Recent Refinements and Developments in Kerr System Electrical Measurement Techniques," 1972 Conference on Precision Electromagnetic Measurements, NBS, June 26-29, Boulder, Colo.

A.L. Stevens, L.W. Davison (both 5131), and W.E. Warren (1721), "Void Growth During Spall Fracture of Aluminum Monocrystals"; W.R. Hoover and R.E. Allred (both 5314), "The Dynamic Fracture Behavior of Borsic-Al Composites," Conference on Dynamic Crack Propagation, Lehigh Univ., July 10-12, Bethlehem, Pa.

J.A. Cooper (1426), "The Lightning Arrestor-Connector — A New Concept in System Electrical Protection," 1972 International IEEE Symposium on Electromagnetic Compatibility, July 18-20, Arlington Heights, Ill.

H.P. Stephens (5322), "Determination of the Ethalphy of Liquid Refractories with a Liquid Argon Vaporization Calorimeter"; W.P. Schimmel (1222) and A.C. Wilken (1223), "A Method for Determining the Pulsed, Radiant Energy Required to Ablate a Material"; A.B. Donaldson (1543) and W.P. Schimmel (1222), "Correction for Heat Losses Associated with Spherical Cavity Radiation Calorimeter Measurements," 27th Annual Calorimetry Conference, July 19-22, Park City, Utah.

B.L. Gregory (1933), "Radiation Defects in Devices," International Conference on Defects in Semiconductors, University of Reading, July 19-21, England.

J.M. Hueter (3134), "Creativity-Choice or Chance?" National Conference, Society of American Value Engineers, June 11, Miami Beach, Fla.; "Clean Assembly Practices," Hamilton Watch Co., Lancaster, Pa., June 29, and Monsanto Research Corp., Miamisburg, Ohio, June 30.

H.J. Stein (5112), "Optical Absorption in Ion Bombarded Ge: Evidence for Divacancies," BTL, July 11, Murray Hill, N.J.

W.F. Chambers (5522), "PS-8 Probe FOCAL: A New Computer Based Microprobe Operating System," National Conf. on Electron Probe Analysis, July 17-21, San Francisco.

D. Emin and C.H. Seager (both 5134), "Small Polaron Formation in Some Chalcogenide Glasses," Gordon Conference, July 17-21, Beaver Dam, Wis.

J.G. Marsh (3154), "The Selection and Development of a Classification Manager," National Classification Management Society Seminar, July 19, Palo Alto, Calif.

R.J. Baughman and R.A. Lefever (both 5154), "Gas Flow Patterns Above a Sodium Chloride Melt"; Baughman and Lefever, "Czochralski Growth of Lanthanum Oxysulfide"; R.L. Schwoebel (5330), "Step Motion and Capillarity Theory," American Assoc. for Crystal Growth Meeting, Princeton Univ., July 30-Aug. 3.

Authors

D.H. Loescher (1435), G.E. Pike (5152) and J.A. Borders (5111), "Oxidation of Scandium," Vol. 9 No. 1, THE JOURNAL OF VACUUM SCIENCE AND TECHNOLOGY.

D.M. Mattox and G.J. Kominiak (both 5332), "Structure Modification by Ion Bombardment During Deposition," Vol. 9, No. 1, THE JOURNAL OF VACUUM SCIENCE AND TECHNOLOGY.

E.J. Shipsey (5234), "Quantum-Mechanical Hamiltonian for Chemical Reactions. II. Practical Considerations," Vol. 56, No. 8, THE JOURNAL OF CHEMICAL PHYSICS.

M.M. Widner (5231), et al, "Langmuir Sheath Thickness as Observed by Ion Acoustic Waves and A Hot Probe," Vol. 43, No. 4, JOURNAL OF APPLIED PHYSICS; Widner and T.P. Wright (5231), "Laminar Interactions of Counterstreaming Magnetized Plasmas," Vol. 28, No. 18, PHYSICAL REVIEW LETTERS.

J.P. Van Dyke (5151), "Energy Bands and the Soft X-Ray Absorption in Si," Vol. 5, No. 10, PHYSICAL REVIEW B.

C.C. Harner (9424) and R.C. Entringer (UNM), "Maximal Component-Complete Subgraphs," Vol. 12, No. 3, JOURNAL OF COMBINATORIAL THEORY.

J.G. Curro (5511), "A Cell Model for Amorphous Polymers," Vol. 56, No. 11, JOURNAL OF CHEMICAL PHYSICS.

R.A. Graham (5132), "Determination of Third- and Fourth-Order Longitudinal Elastic Constants by Shock Compression Techniques — Application to Sapphire and Fused Quartz," Vol. 51, No. 5, JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA.

B.L. Gregory (1933), "Neutron Damage Annealing in Silicon n-Channel Junction Field Effect Transistors," Vol. 19, No. 3, IEEE Transactions on NUCLEAR SCIENCE.

P.E. Harrison and B.T. Kenna (both 5525), "Qualitative Identification of Alloys by Energy-Dispersive X-Ray Spectroscopy," Vol. 19, No. 6, TALANTA.

G.L. McVay and E.H. Farnum (both 5154), "Atmosphere Effects on Na Diffusion in Glass," Vol. 55, No. 5, JOURNAL OF THE AMERICAN CERAMIC SOCIETY.

D.S. Miyoshi (9226), "A Data-Gathering System for Studying Underwater Light and Bioluminescence," Vol. 19, No. 3, IEEE Transactions on NUCLEAR SCIENCE.

L.S. Nelson, S.R. Skaggs, K. Keil (all 5324) and M. Blander (N.A. Rockwell), "Use of CO₂ Laser to Prepare Chondrule-like Spherules from Supercooled Molten Oxide and Silicate Droplets," Vol. 14, No. 3, EARTH AND PLANETARY SCIENCE LETTERS.

R.J. Thompson (1722), "Ray Theory for an Inhomogeneous Moving Medium," Vol. 51, No. 5, JOURNAL OF THE ACOUSTICAL SOCIETY OF AMERICA.

R.A. Anderson (5514) and D.M. Gensberg, "Laboratory Apparatus for High Temperature Forging Under Vacuum or Inert Atmospheres," Vol. 43, No. 6, THE REVIEW OF SCIENTIFIC INSTRUMENTS.

P.J. Chen (1721) and M.E. Gurtin (Carnegie-Mellon U.), "Thermodynamic Influences on the Growth of One-Dimensional Shock Waves in Materials With Memory," Vol. 23, No. 1, ZEITSCHRIFT FUR ANGEWANDTE MATHEMATIK UND PHYSIK.



FISCHER, SPASSKY game number one is replayed by Warren Miller (9425, left) and Burny Tietz (5421) who want to start a chess club at Sandia Labs. Players and would-be players should plan to attend the club's organizational meeting at noon, Monday the 7th, in Bldg. 632.



AN IDEA IS BORN — see it as a flash of light over Frank Crabtree's head. He's director of the Museum of Albuquerque where you can see the results — a slide and sound exhibition all about Albuquerque.

Our Town

Albuquerque — It's a Helluva Place

Ed Note: In this and future "Our Town" columns, LAB NEWS will take a look at the institutions — cultural, civic, charitable, municipal — that shape the community we call "home."

There's a new tour service in town. You see the Heights, the Base, the North and South Valleys, downtown, Old Town, the Central strip, the freeways, residential streets, business places. You see nearby scenery — volcanoes, river and mountains. And you see people of all kinds. You see lots of scenes you've seen before. And lots more you haven't. In 22 minutes.

You're right. It's not a tour by high-speed helicopter. It's all done with mirrors. Or, more precisely, with slides and music in a show at the Museum of Albuquerque called "Have You Seen Albuquerque?" It's not a travelogue — no dreamy music, no travel bureau pictures, no unctuous narrator, no "as the sun sinks slowly in the west. . ."

Instead you're bombarded with split-screen sights and stereo sounds. The effect is to give you a flavor of the city, a "here's what Albuquerque is like" feeling, a highly concentrated "essence of Albuquerque."

Once, when the idea was born, it wasn't going to be an audio-visual exhibition; it wasn't going to be at the Museum of Albuquerque; it was going to be in a Saturday Tribune. But it

evolved: Museum director Frank Crabtree, who conceived the show, and Walter McDonald, who shot most of the pictures, soon realized that capturing Albuquerque would take more than a page in a newspaper.

But it was their early concept and tentative plans that caught the interest of some city planners and a city manager, a couple of Museum trustees (including Dick Bice, 3000), some architects, and an architectural historian. Together they explored and listed the things that have shaped our community.

To represent these things in color slides was McDonald's job. Some 5000 were eventually taken, most in late 1969; 835 were judged strong enough for the show.

But a stack of slides, even outstanding ones, needs organization and direction or it comes off like a home slide show. So the exhibition expounds several themes: the natural environment, the city as urban community, the physical/metaphysical dominance of the Sandias, the past and future, and the people. The show says, "This is our city. Look at it. If you like it, fine. If you don't like it, do something about it."

There's nothing preachy about the show, but the people who put it together don't want Albuquerque — a unique place now — to become just another Hackensack or Los Angeles.

It's a fascinating and provocative exhibition. It makes the viewer aware, perhaps for the first time, how much there is to our city, how little of what he daily sees really registers.

Logistics: It's at the Museum of Albuquerque on Yale SE. The Museum is open Tuesday through Friday from 10 till 5, Saturday and Sunday from 1 till 5. Admission is 25 cents for adults, 10 cents for kids, except on Sunday when it's free. Weekday shows are every 45 minutes starting at 10:30 (1:30 Saturday and Sunday) and the last show begins at 3:45.

(Note: The show is also a technical tour de force, and several Sandians helped put it together. Bill Paulus (9426) was the electronic technical coordinator; Greg Abeyta and Al Stanley (3313) and Don Parker (3311) assisted with the technical side, Joe Laval (3163) with the production side. And a surplus 14-channel tape recorder was loaned by Sandia to control the audio, the house lights, and the seven pairs of slide projectors.)•bh

Society Elects Jim Marsh



The National Classification Management Society (NCMS) recently re-elected Jim Marsh, head of the Labs Classification Division (3154), to its Board of Directors for a three year term. The Society presented its eighth annual seminar in July at San Jose, California.

NCMS was founded in 1964 here at Sandia. The Society now numbers several hundred members who are active in local chapters throughout the country. Jim is a former president of the group.



MOLLY ELLIS (5643), president of the Sandia Women's Golf Association, on a bright but breezy day at Los Altos Golf Course.

Recreation Notes

FUN & GAMES

The Women's Sandia Laboratories Bowling League is shaping up for the '72-'73 season. The league will bowl on Thursday nights, beginning Sept. 7, at Holiday Bowl, 7515 Lomas NE. Starting time will be 6:20 p.m. If you're interested in joining the league, call Ilene Mathes (5415) or Phyllis Wilson (3151) for more details.

* * * *

Sandia Women's Golf Association will play their next tournament Aug. 12 and 19 — the Los Altos Par 3 Championship. Winners of the July tournaments were:

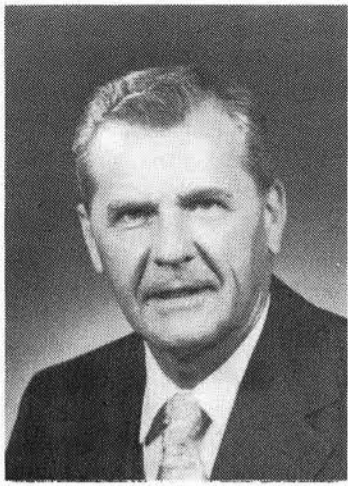
San Mateo: First Flight low gross - Rosalie Crawford (1), and runner-up was Merlinda Salas (AEC/ALO); low net - Joan Gillon (1200). Second Flight low gross - Ann Streater (9230), and runner-up was Esther Perea (1410), with Marion Jacot (3251) taking low net.

Socorro: Low Gross - Pat Anderson (9425), and runner-up was Emma Hollingsworth (3206); Clara Gearhart (3141) won the low net.

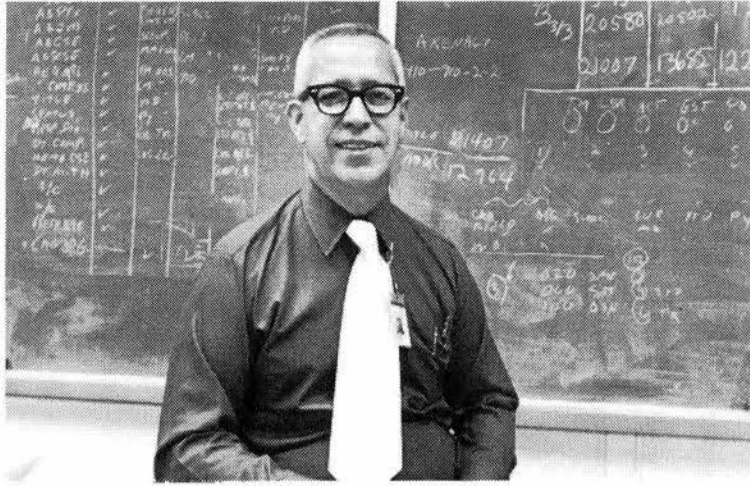
Sympathy

To Paul Stanford (4120), on the recent death of his father.

To Tess Reis (3256) on the recent deaths of her mother and father in Santa Fe.



Charles Jennings — 5332 15



Bernard Shea — 4112 20

MILEPOSTS

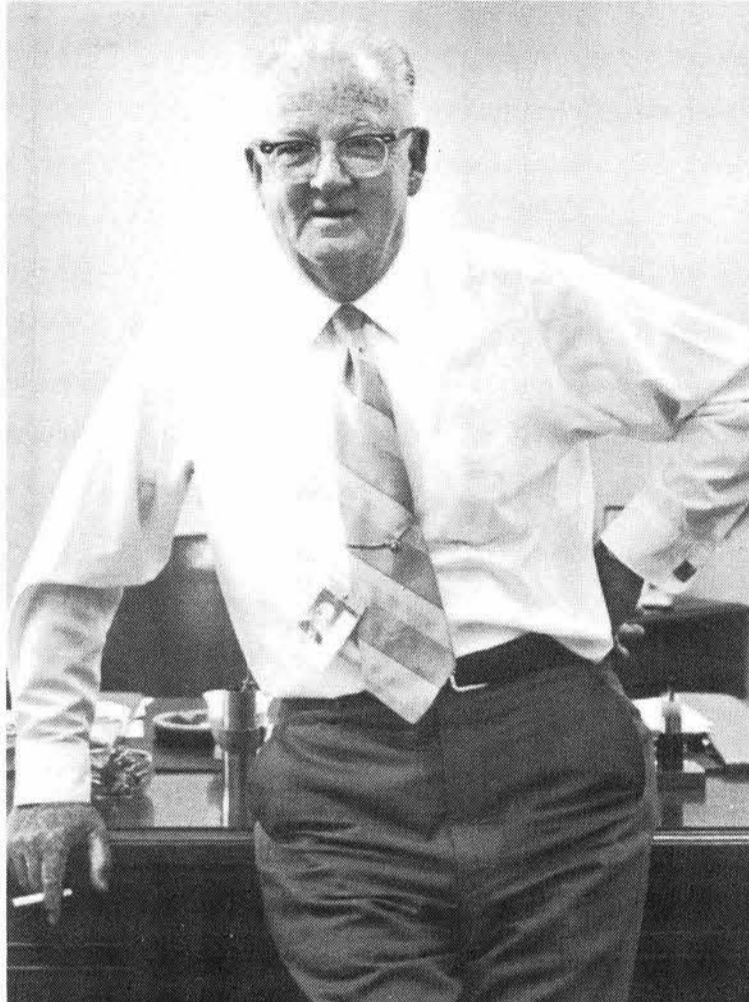
LAB NEWS August 1972



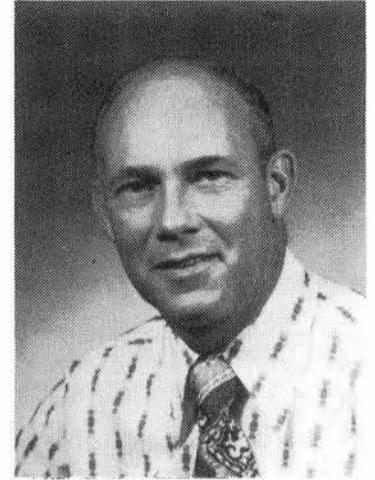
Edith Milatzo — 8260 15



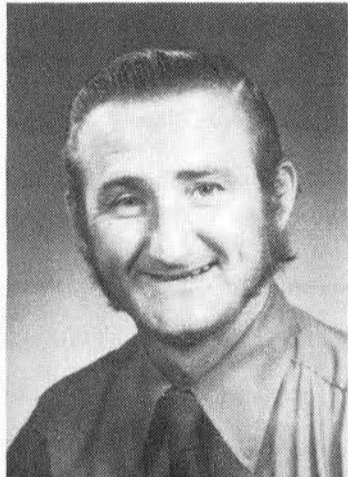
Joe Fedzuga — 7651 15



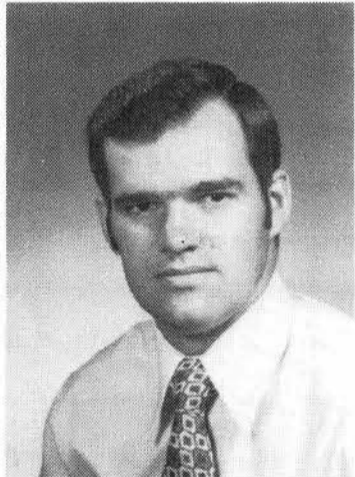
Charley Campbell — 4000 25



Dale Buchanan — 9310 15



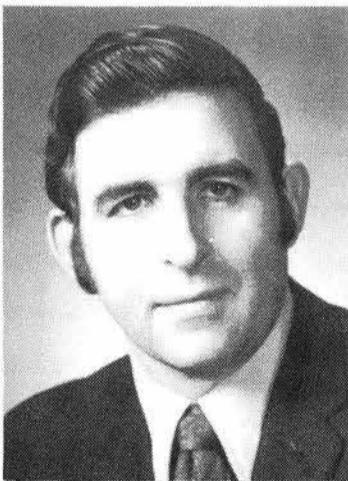
Howard Jones — 1534 15



Dale Leonard — 7614 10



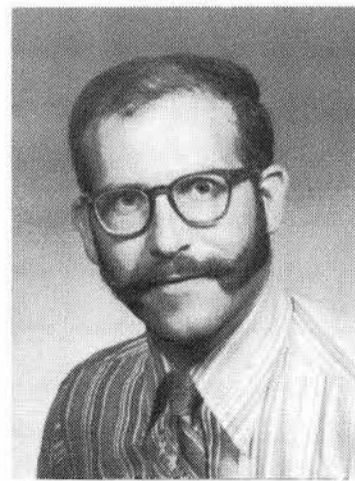
Helen Henderson — 4151 20



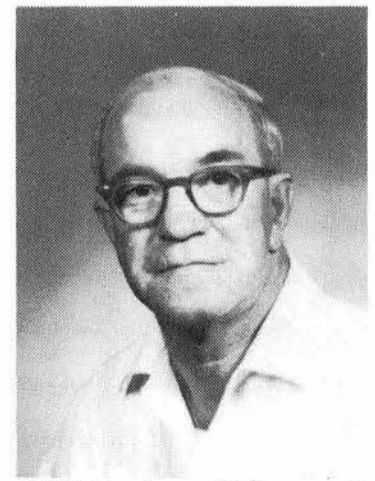
Marlin Pound — 8236 15



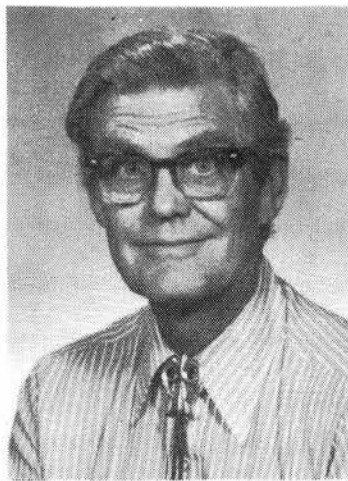
Bertha Grant — 3511 10



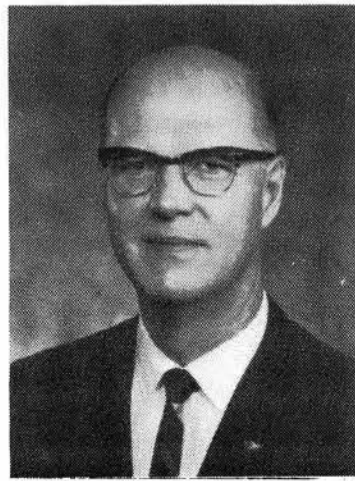
George Clark — 1314 10



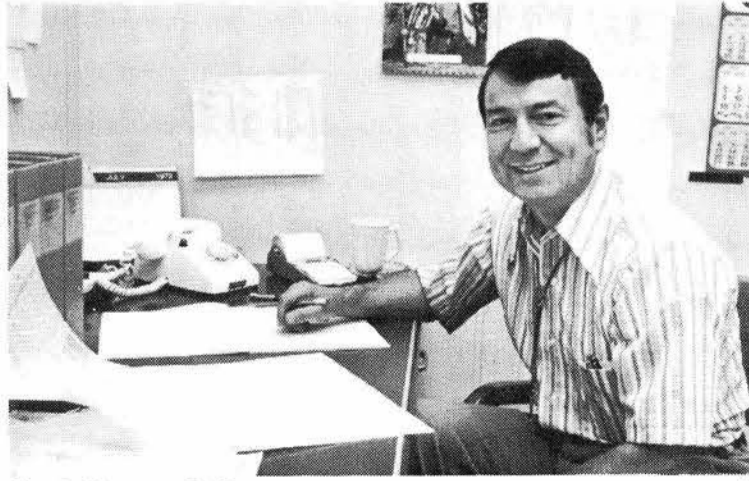
Phillip Beasley — 4613 10



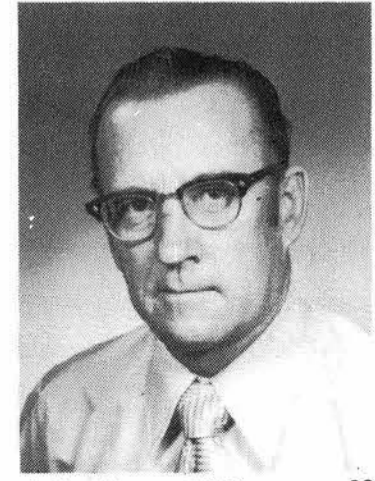
Joe Miller — 4122 20



C. W. Harrison, Jr. — 1426 15



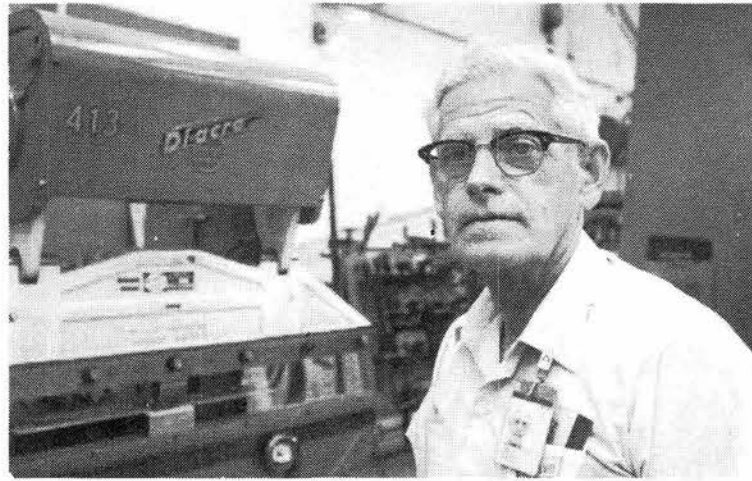
Frank Rivera — 9243 20



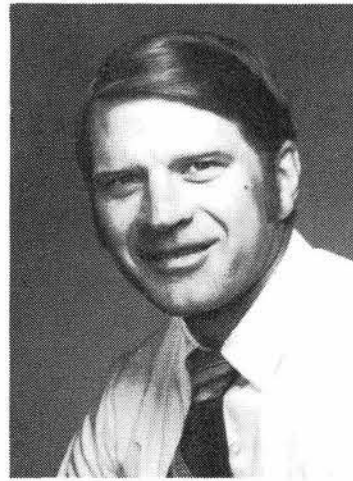
Joffre Myers — 7114 20



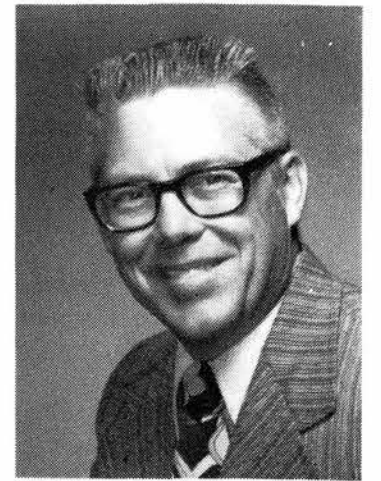
Edward Ronan — 9232 15



Ray Bishop — 7154 25



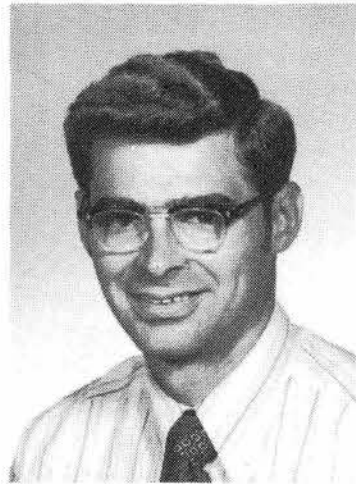
John Otts — 9332 10



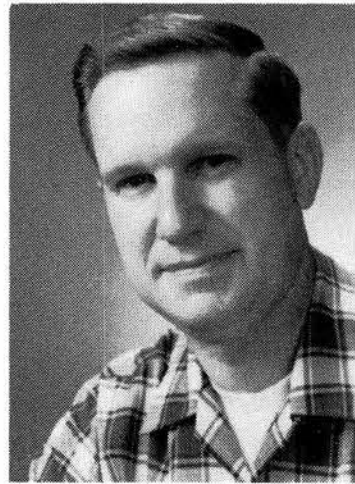
Tommy Donham — 1823 15



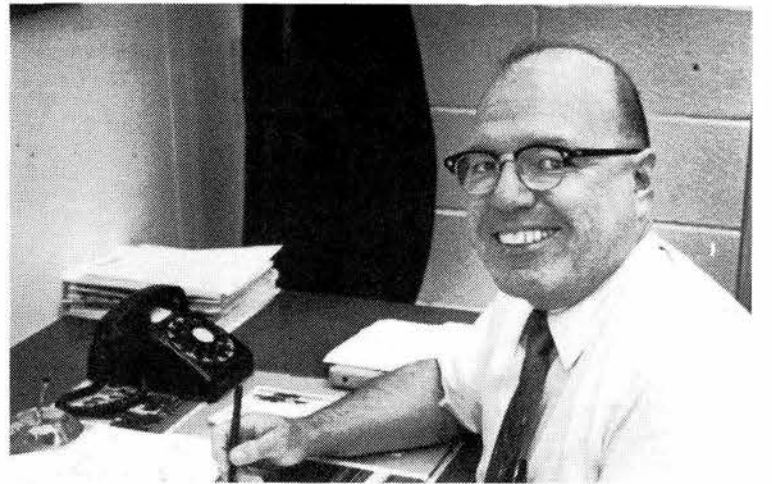
William Armstrong — 1342 15



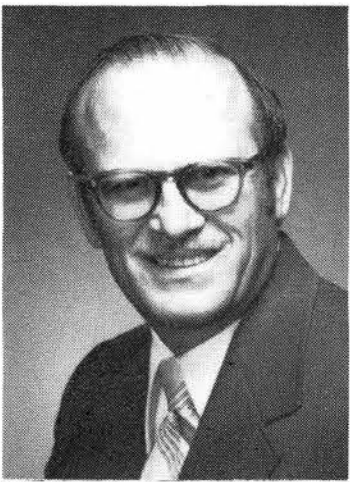
John Guth — 1821 10



Donald Amos — 1722 10



Bill Garcia — 3231 20



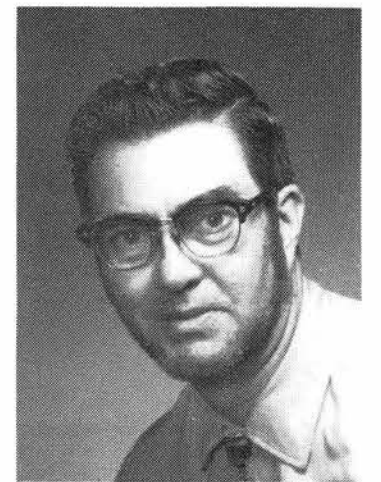
Robert Peet — 9223 20



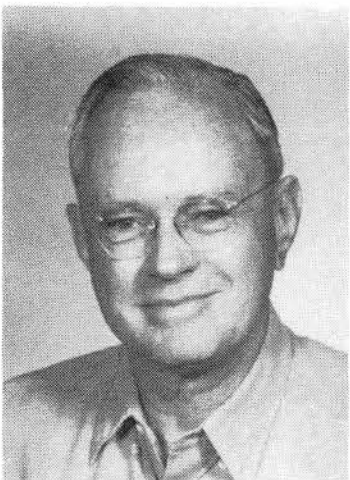
Mildred Johnson — 5415 15



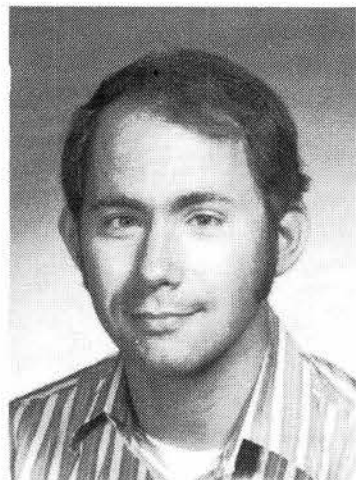
John Sundberg — 1614 20



R. E. Womelsduff — 3313 25



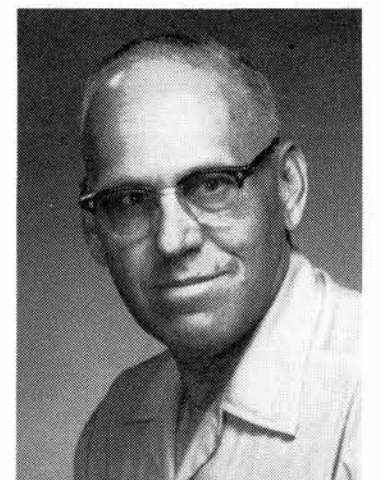
John Harner — 9463 20



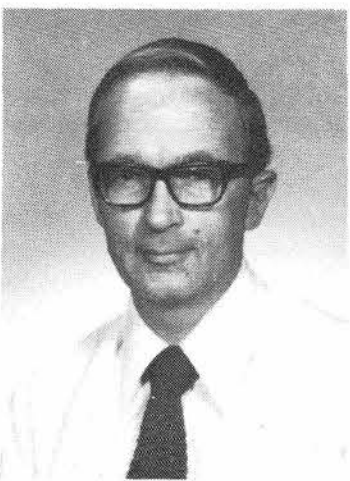
John Finger — 9484 10



C. M. Clendenin — 5411 20



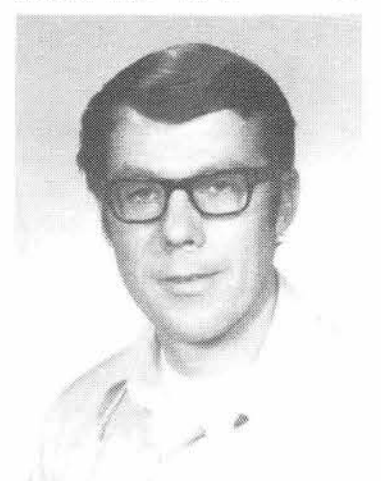
Robert Tant — 7142 20



Ron Fugazzi — 4143 10



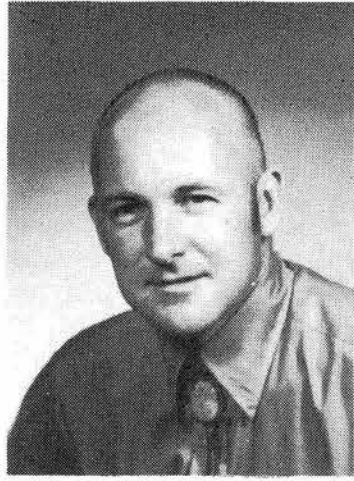
Charles Lee — 1641 15



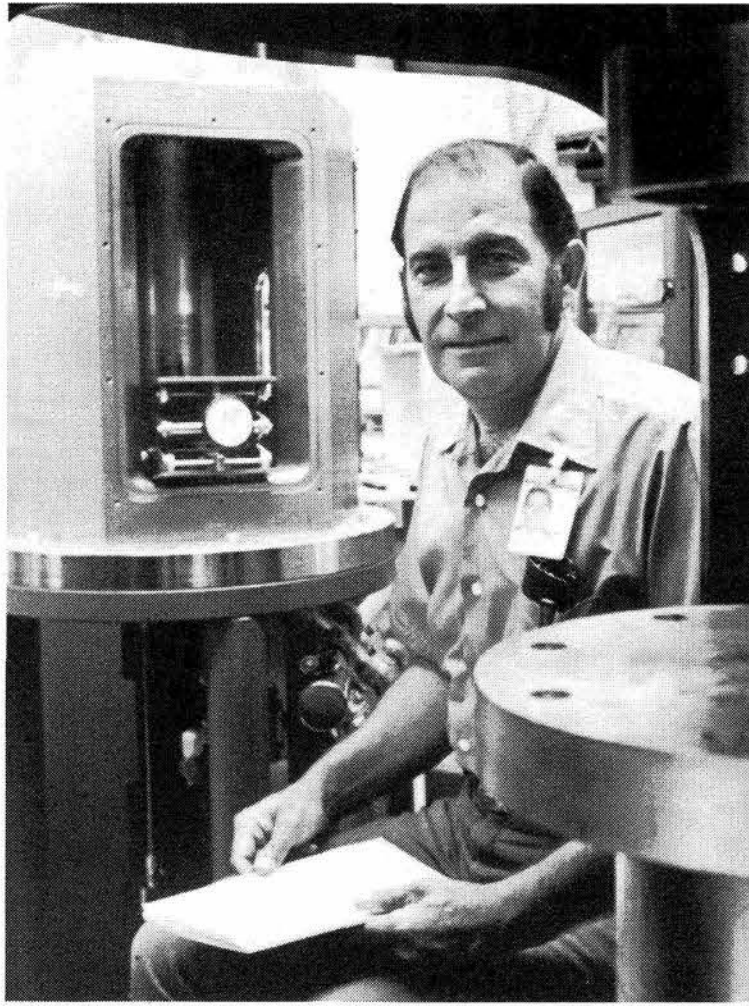
Nels Magnuson — 1641 10



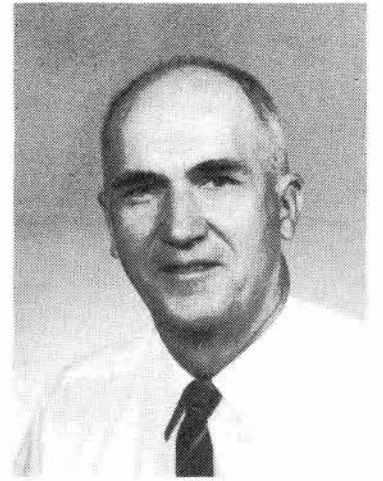
Cathy Banks - 8213 20



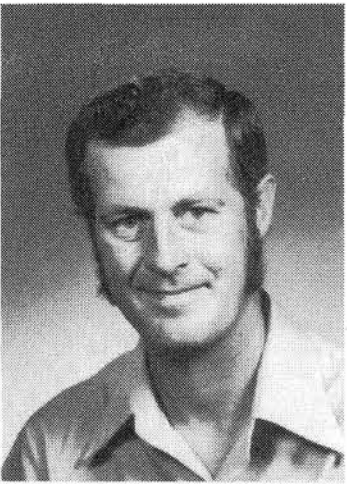
Eugene Church - 1613 15



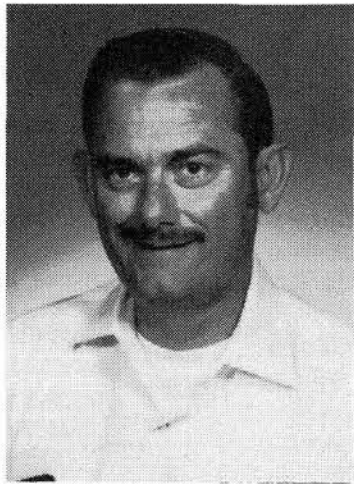
Juan Mata - 5165 20



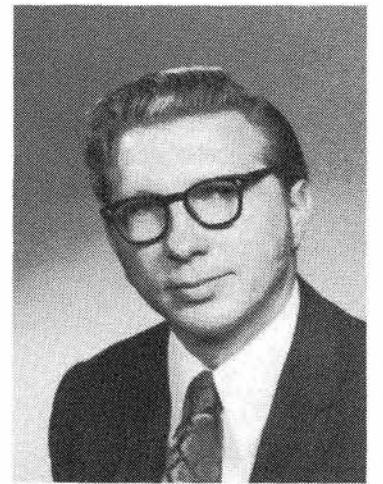
Frank Koletar - 7512 15



Karlou Boultinghouse - 5531 15



Chad Looney - 9213 20



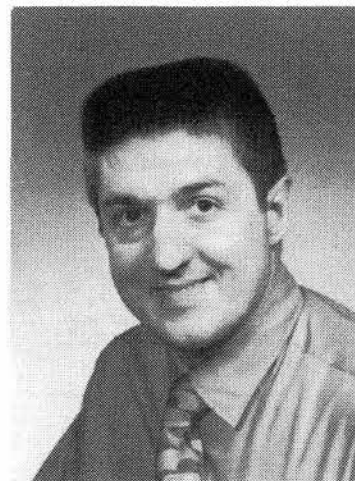
Jack Hickman - 1652 10



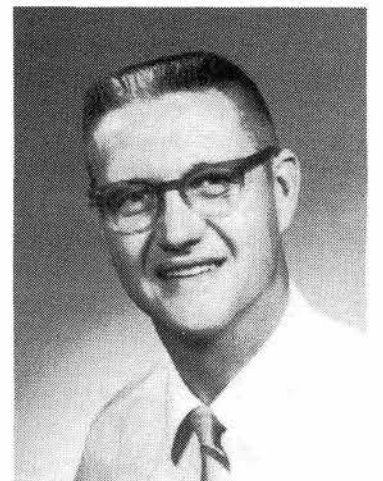
Tom Jones - 8135 15



Eunice Simpson - 7410 10



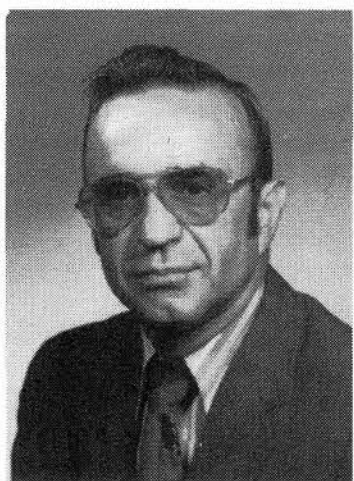
Donald Rigali - 1225 15



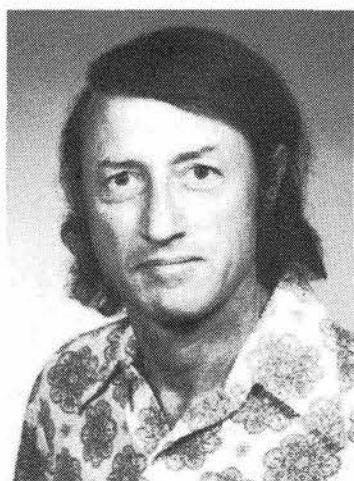
Tom Oglesby - 1614 10



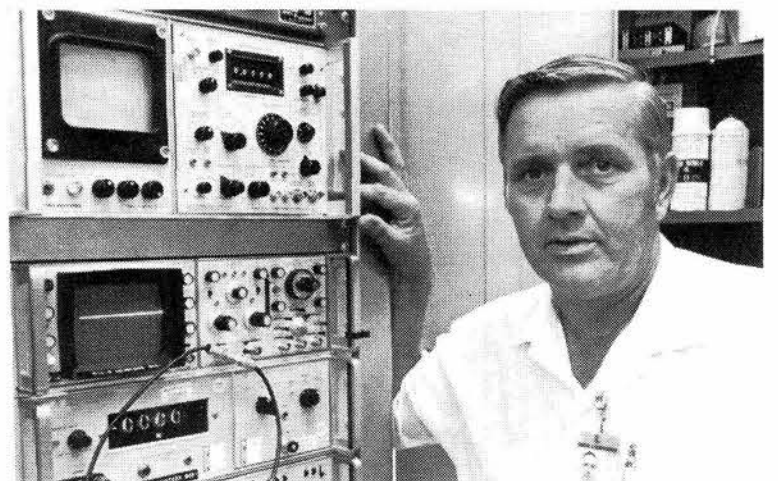
Allen Hurford - 1812 20



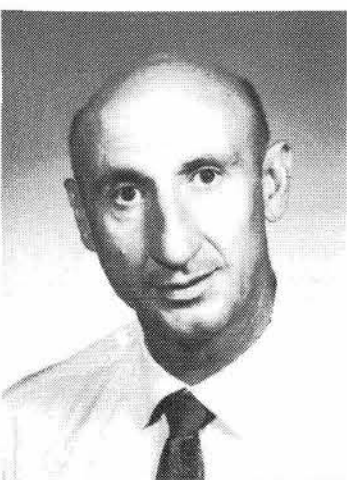
Jack Hanna - 3231 20



David Judd - 9311 20



Vern Brewster - 9485 25



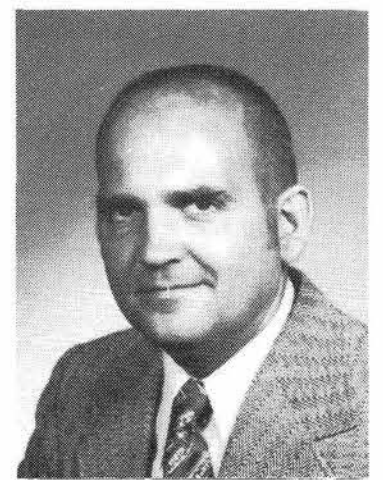
Sam Gaeto - 4141 15



Ray Henderson - 1554 20



Mary Gonzales - 3151 15



Howard Gerwin - 1932 15

Take Note

W.L. Lloyd, Cibola Forest Supervisor, sent the following to the LAB NEWS for transmittal to Sandians who responded to the Land Use Plan for the Sandias survey: "This note is to thank you for the interest you took

in the Draft Land Use Plan for the Sandia Mountains, and to acknowledge receipt of your letter of June 30, 1972, which contained responses from people at Sandia Laboratories." All of the responses from the public are presently being evaluated. Based on the evaluation, a final draft will be prepared. This in turn will be shared with the public and hearings on the draft will be held. These will lead to the formulation of a management plan for the Sandias.

* * * *

Crawford MacCallum (5231), Alan Swain (1644) and Tim Butler (9321) recently completed speaking parts in a movie filmed here. Crawford played a University professor, Alan a NASA-type scientist and Tim a medical doctor. Star of the movie, however, was a 12-foot Komodo dragon and the title is "Track of the Space Beast." Obviously a comedy.

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2. One ad per issue per person
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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.

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37 EACH 1st dubs Amer. Airlines comm. tapes, 1800 ft. rls. — 3 hrs. each. Wright, 298-1789.

BRAID RUG, oval, 8 x 10, olive multicolor, wool fiber content, \$25. Schuster, 299-1072.

16MM movie camera, Revere, \$45. Lenz, 298-9121.

6-STRING metal Epiphone guitar & case, \$120. Roherty, 296-2618.

FRIGIDAIRE refrig., 14.8 cu. ft., white, LHD, mini-freezer 94% frost-proof, \$125. Thompson, 255-3634.

KELSEY-HAYES elec. brake controller w/instructions, \$17.50; Reese equilizer hitch, assembly for tow vehicle, \$25; dinette set w/4 chairs, \$60. Gray, 265-1883.

BUNNIES, 10 wks. old, assorted colors, white, gray & black mixtures, \$1.50 ea. Bassett, 898-1840.

WESTINGHOUSE 30" elec. stove, \$50; 35mm camera, Petri Mod. 7S w/wide angle & telephoto lenses; also polarizing lens, \$65. Hutton, 255-7435 after 6.

BALDWIN room-sized grand piano, 4 1/2 ft., \$750. Slesinger, 1602 Hoffman Dr. NE, 299-4626.

DOG RUN, 16' x 6' x 4' chain link, fenced top, easily assembled, \$95; dog house, will house shepherd sized dog, \$10. MacDougall, 299-8496.

CHILD's rocking horse, lg., sturdy, new \$35, 1 yr. old, will take \$22.50. Liston, Star Rt. Box 40, Tijeras NM 87059.

4 TIRES, Goodyear, 6.95:14, all for \$18; child's organ, Audion, 12 chord, \$12. Delnick, 298-5276.

12 CU. FT. refrig., single door, across top freezer, 2 veg. crispers, \$55 firm. Duvall, 299-8744.

BICYCLE, Sears 3-spd., 26" boys, \$40; 24" boys bike w/high rise handlebars, banana seat, \$20. Gutscher, 298-7203.

SLIDING GLASS DOOR, screen, 6', complete, \$30. Curlee, 298-2669.

POOL TABLE, 7 ft., \$50; Schwinn 3-spd. boys bike, \$25; trumpet, \$15. Peterson, 256-7514.

PATIO glass door, 6' tall. Speakman, 299-8831.

8' CABOVER camper, gas/elec. refrig., range/oven/fan, side dinette, 4 jacks, bunk, 2 gas bottles, ladder & rack, \$1100. Guzman, 344-9287.

'71 HONDA SL 350-K1 dirt bike, low mileage, \$675. McCampbell, 298-8211 after 5.

WESTINGHOUSE electric range, lg. oven & broiler. Sanchez, 141 Headingly NW, 344-4702.

'68 YAMAHA 250cc Enduro, \$400; 4-wd Coot, all terrain vehicle. Smolenski, 265-1667.

TELESCOPE, Edmund 3", 1/2 price, 1/4" drill, Craftsman, \$8; Ampex tape recorder & acces.; 35mm camera, Argus C-3. Sullivan, 299-6545.

185 ENDURO SUZUKI, low mileage, adult ridden, extra sprocket, lever covers, fork covers, larger tires. Kist, 255-0101.

'70 50cc SUZUKI, \$125. Beeson, 255-3249.

PIANO, full keyboard, blond finish, \$400. Hawley, 294-0094.

AIR CONDITIONER for V-8 Scout, custom unit, installation available, \$150. Entrekin, 296-9238.

LABRADOR RETRIEVER, pick of the litter, AKC, OFA parents, 3 wks. old. Benson, 268-9727.

BOAT: 14' Crosby w/35hp Sea King elec. start, trailer, needs some work, consider reasonable offer. Martinez, 299-6984 or 268-4154.

OSSA motorcycle 250 Pioneer, '71, \$675; Tappan dishwasher, built-in, green, \$50; wooden room divider, 6 section, \$35. Jones, 298-8492.

'64 22' STREAMLINE travel trailer, sleeps 4, tub & shower, gas & elec., awning, jacks, hitch. Wardlow, 299-5485.

AKC female Collie; port. Silvertone record player w/2 speakers; pool table; roaster; 110-lb. set weights; beginner's guitar. Rhoden, 294-8297.

AUTOMATIC 4-spd. turntable w/base, diamond/magnetic stereo cartridge, cueing lever, dust cover, \$45. McCord, 255-2638 after 5.

NORWEGIAN ELKHOUND cross pup, male, 11 wks. old, \$10. Wood, 256-1492.

COMMANDER 1 1/2" irrigation pump, 1 hp, \$80. Garcia, 600 Isleta Blvd. SW, 877-1562.

MOTORCYCLE, '70 Suzuki TR-350, 5000 miles, \$525 or best offer. Benson, 255-6004.

'71 CRESTLINER, 17' 12010 tri-hull, full cover, sleeper seats, trailer w/surge brakes, extras, used 25 hrs., \$3000. Kenna, 298-6059.

'69 250 HUSQVARNA dirt bike, very fast, book is \$625, asking \$525; Vetter full touring fairing to fit 750 and 500 Hondas, no cracks, new \$196, asking \$125. Milesosky, 255-8904.

BEAR HUNTING BOW, \$40; 30 amp. aircraft generator, \$35; lg. hunting tent, \$20; Patterson, 877-3158 after 6.

SEARS mini-bike, \$65; boy's standard bicycle, \$15; stingray bicycle, \$20. Demmel, 299-5639.

3-BDR., 1 1/2 bath, w/w carpet, AC, gas range, refrig., dining set, orig. cost \$7200 (Oct. '70), sell for \$4500. Salazar, 865-9881.

FAN TRAVEL TRAILER, 17', fully self-contained plus extras. Sasser, 298-1439.

REMINGTON 700, 30-06 w/Redfield mounts & scope, \$125; Remington 66, auto. .22, \$38; two-man tent, \$3. Klett, 298-7892.

BICYCLE, Raleigh, man's 5-spd., 26" gumwall tires, carrier, basket, light, \$55. Janney, 268-8074.

4-BURNER STOVE w/oven; sink, windows, etc. from my burned camper, sell separately or together. Brumley, 877-2667.

ADMIRAL 23" color TV console, working condition but needs repair, \$100. Hollowwa, 255-6938.

100 PATIO BRICK, hard fired, dark red, 1 bag masonry cement, \$8. Merrit, 299-1482.

SPEAKERS: 2 Electrovoice SP-8B's in modified bass reflex enclosures (3/4" birch plywood); \$30 for the pair, orig. cost of bare speakers \$30/ea. Eagle, 265-7128.

'68 HONDA CL-160, Custom Candy Apple Red w/white highlights paint, matching seat, Rocky mufflers, \$350 firm. Chapman, 255-5263.

TRUCK accessories: shell, insulated, paneled, \$150; awning, \$20; telescopic bumper w/step, \$75; front bumper wheel mount. Denton, 298-0566.

SWING SET w/2 swings, glide ride, lawn swing, 7' slide, \$25; girls spyder bicycle, 20" tires, banana seat, \$20. Fry, 298-1613.

TRUMPET, Conn Director, \$85; refrigerator, 12 cu. ft., \$45. Hubbard, 299-7818.

APPALOOSA MARE, Toemar Tonga T-81979, excellent conformation, prof. training, 6 yrs. old, \$1500 or best offer. Norris, 282-3891.

2 3/4 - 10X WEATHERBY SCOPE, reworked by factory, \$50 or make offer. Schwiner, 282-5207.

BOYS BICYCLE, Dragster, banana seat, high handle bars, new, used twice, 20", \$30 or best offer. Pierce, 268-6057.

WARDS refrigerator, \$35. Rhoden, 268-7191 after 5.

CAMPER JACKS CLP ratchet action, fully extendable; 2 beds: full size and 3/4 w/frames. Wilson, 282-3225.

NMMI UNIFORMS for 5'9" boy; Sears auto. clothes washer, cheap, needs bearings. Stixrud, 298-0478.

TWIN BED; office chair; swing set; damaged 20" bicycle & Norge auto. washer; misc. household goods. McIntire, 1509 Elizabeth NE, 298-6145.

**FOR SALE
CARS & TRUCKS**

CAMPER, Eagle on Ford 350, dual wheels, twin AC, PB,

tunneled, sun deck, completely self-contained. Ingram, 299-6194.

'63 CHEVROLET sedan, AT, 64,000 miles. Walsh, 298-3173.

'69 GMC pickup, factory air, PB, PS, AT w/12' camper, styrofoam construction. Holloman, 345-1635 after 5 call 344-3274.

'67 CAMARO V8, 329, AT, new tires, 20,000 miles; '65 3/4-ton Chevy pickup, V8, 4-spd., lwb, \$595. Baca, 255-3057.

'70 YELLOW OPEL GT, AT, radio, front disc brakes, 22,000 miles, \$2395. Schmierer, 299-2352.

'65 JAGUAR MK X 4.2 lit. DOHC engine, 92,000 miles, 4-spd. & OD trans., AC, PS, PB, AM-FM, new Michelin X radials, \$2100. Baca, 299-0242 after 6.

'67 PLYMOUTH, private one owner, State Police patrol car, 49,000 miles. Thuman, 268-1229.

'63 PLYMOUTH stn. wgn., best offer. Huston, 842-9049 after 6:30.

'58 WILLYS JEEP stn. wgn., OD, \$400. Lindsay, 299-7454.

'71 FORD Ranchero V8, AT, PS, PB, new tires, Delco air shocks. Otero, 294-0060.

'53 FORD 4-dr., 6-cyl. AT, \$75 or make offer. Berg, 266-2058.

'69 JAVELIN, SST model, gray metallic, 290V8, PS, AC, AM-FM, wsw belted tires, still in warranty. Gorin, 298-3100.

'69 FORD Econoline window van w/stereo and new heavy duty tires. Dodd, 299-6330.

'67 PLYMOUTH Fury I stn. wgn., PS, PB, AT, AC, \$825. McAvoy, 869-2223.

'69 VW, Auto. stick, AC, rebuilt engine, new tires, new brakes, below book, consider older VW. Cave, 299-5066.

DUNE BUGGY, chrome wheels, roll bar & exhausts, wide tires, radio, rear seat, bash plate, fiberglass body. Kaiser, 296-5215.

'62 CORVAIR Monza, 4-dr. sedan, AT, windshield washers, radio, \$150. Barber, 299-4287.

FOR SALE REAL ESTATE

2 LOTS, San Pedro Estates, must sell immediately at well below going prices, near hunting, fishing, San Pedro Wilderness & Santa Fe Nat'l. Park. Murphy, 296-4089.

CUSTOM BRICK, 2 1/2 baths, 4-bdr., formal DR, den w/fp, bookcases; boat/camper parking, landscaping, sprinklers, near Academy & golf course, \$45,700. Keys, 299-4723.

5-BDR. MOSSMAN, 2700 sq. ft. including den, DR, rec. rm., many closets, much storage. Moore, 6505 Natalie NE, 299-3758.

LARGE, unimproved pie shaped lot, east of Tramway Rd., facing city. Jones, 298-3165

after 5

3-BDR., 1 1/2 baths, fp, carpeting, dbl. garage, driveway into back yard, \$2700 cash, \$160/mo. payment. Urbanoski, 299-2319.

2-BDR. Bel Air, AC, cfa, walled yard w/garden, beamed ceiling, new paint, \$2900 down w/\$105/mo. Kroth, 268-4661.

2.94 ACRES 3 miles north of Taos, fronts on Hwy 150 (paved road to Taos ski Valley). Syroid, 242-0349.

CORNER residential lot in Pueblo West Colo., 1 1/2 blocks from government recreational land at Pueblo Reservoir. Shoaf, 294-4802 or 299-3609.

WANTED

NAMES of Lone Scouts from years 1915-1924, also books, badges, etc. same era. Fortman, 256-2105.

SLEEPING BAGS. Baker, 299-3403.

10' WIDE older mobile home, good condition, furnished or unfurnished. George, 865-7969.

8MM-06 loading dies. Kurowski, 256-7295.

BOYS used 10-spd. bike, \$50 to \$60. Schuch, 298-9924.

SINGLE GIRL to share lg. 1-bdr. apt., near base, Reiter, 266-9012 after 5.

3- or 5-SPD. 26" man's light bike, best condition. McHarney, 255-7883.

EXERCISE or similar exercising machine. Randall, 299-3935.

OUTBOARD MOTOR, light weight, 5-20HP; looking for high-speed or racing rig. Frauenglass, 344-8344.

NMMI UNIFORMS for student 6', 175 lbs. Moore, 268-9658.

BASSINET, good condition, reasonable price. Raymond, 268-7477.

WORK WANTED

BOY 14 desires yard work between Wyoming & Eubank. Rhoden, 294-8297.

Danelle will give beginning & intermediate lessons on flute and/or piano; located near Grant-Los Altos school. Sasser, 298-1439.

FOR RENT

2-BDR. townhouse. 1 1/2 bath, carpeted, unfurn., utility rm., near Winrock, \$200/mo. incl. utilities, sublet, avail. Aug. 20. Boyer, 294-5280.

FOR LEASE: comfortable 3-bdr. house, furnished or unfurnished, NE heights, kitchen & bath carpeted, many extras. Gallo, 296-0112.

LOST AND FOUND

LOST — Gold circle earring for pierced ear, autpoint pencil — lost in or near Bldg. 832, UNM student ID card. LOST AND FOUND, tel. 264-2757, Bldg. 832.

FOUND — Sea & Ski sunglasses, head scarf, tinted safety glasses, 3 keys, pocket knife. LOST AND FOUND, tel. 264-2757, Bldg. 832.



BRING BIKINIS, sarongs, grass (not pot) skirts, and a convivial spirit to the Beachcombers Ball Saturday, Aug. 12, says Sandy Jewett (4332). A prize goes to

the best costume. Event includes entertainment by the Wickham Brothers, prime rib dinner, dancing to the Top Hats, and swimming all evening in the twin pools.

Annual Meeting Monday: Beachcombers Aug. 12

ANNUAL MEETING of the Coronado Club membership starts at 8 p.m. Monday, Aug. 7. Business will include a review of the year's activities and election of seven members to the board of directors. All members are urged to attend. Suggestions and recommendations are solicited from the membership.

Nominated for the director positions are Bill Davis (4151), Herb Filusch (9213), Jake Gonzales (7143), George Horne (5413), Don Hosterman (3134), Julian Lovato (7624) and Herb Pitts (100).

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Practice 2 wheeler safety



HAPPY HOUR TONIGHT will see the Saints on the bandstand, Rio Grande style Mexican food on the buffet line, and Denny Gallegos in the main lounge. Next Friday, Aug. 11, Sol Chavez and the mighty Duke City Brass will make the happy music while the Club's famous chuckwagon roast beef is the buffet feature. Yolanda Adent will hold the main lounge. On Friday, Aug. 18, a group called Country Establishment will play for dancing while an oriental buffet is served.

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THE BEACHCOMBERS BALL, one of the biggest parties of the year, is set Saturday, Aug. 12. Traditionally the troops fall out about 6 p.m. wearing any old thing — sarongs, grass skirts, short shorts, chopped off jeans, one piece bikinis, etc. — and relax right away with mai tais and scorpions in coconuts.

The Wickham Brothers, a local group rapidly gaining national recognition with hit records such as "Little Bit Late," will present a show during cocktail hour and later during dinner. The Top Hats will play for dancing.

Several Wickham Brothers recordings will be given away as door prizes and the wearer of the "best costume" will receive a valuable prize. The twin pools will be open all evening for swimming and lifeguards will be on hand in case somebody gets tossed in. Odds are someone will.

Dinner will feature prime rib and the works starting about 7 p.m. Tickets (\$4 for members, \$5 for guests) should be picked up by Aug. 9.

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TEENAGERS can do their thing tomorrow night from 7:30 to 10:30 with a group called Summer High on the bandstand. Bobby Box of KQEO will emcee the event. Member parents should pick up tickets for their youngsters.

SANADO WOMEN plan a gala night out Tuesday, Aug. 8, starting at 5 p.m. Happy Hour prices will prevail as the group listens to a jazz concert. A buffet line opens at 6:30. Contact Mrs. George Horne, 7216 Carriage Road NE, today for reservations.

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SANADO BOWLERS will get organized at a coffee Wednesday, Aug. 16 at 9:30 a.m. at 12017 Carl Court NE. The league bowls Wednesday mornings during the season. Call Michele Munson, 299-1400, for more information.

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MAZATLAN, favorite vacation spot of Coronado Club members, is the destination of a Club travel package Oct. 16-23. Chet Fornero (4361), Club president, reports that arrangements for these trips are handled direct — no agency involved — and the price is the best that can be negotiated.

Cost is \$229 per person for double occupancy and \$244 for single. It includes all transportation, rooms at the deluxe Playa Mazatlan with breakfast and dinner there each day, a cocktail party, A Fiesta night, and tips to waiters, bellboys, and maids.

The group will leave Albuquerque at 9:05 via Texas International DC-9 jet and arrive in Mazatlan at 11:30 p.m. The return flight leaves Mazatlan at 11 p.m. and arrives at Albuquerque at 1:30 a.m.

"These are late hours," Chet says, "but they give us an extra evening in Mazatlan. Another advantage is that the whole trip can be accomplished by using only four vacation days — October 25 is Veterans Day."

Deposits of \$50 per person are being accepted now at the Club office. Final payment is due Sept. 8. The trip is open to Club members and immediate family only.