



Dick Prairie Will Spend Year at University of Sao Paulo, Brazil

Dick Prairie, supervisor of Statistics and Computing Division 1643, will be lecturing at the University of Sao Paulo, Brazil, starting Aug. 1. Dick will spend almost a year in Brazil on a Fulbright-Hays Lectureship and then return to Sandia. The program is sponsored by the U.S. State Department as part of the Committee on International Exchange of Persons.

Although he has been studying Portuguese, Dick will be lecturing in English. His subjects will be statistics and industrial applications of statistical techniques. In addition to teaching, he will assist graduate students with theses and perform industrial consulting.

Dick is excited about the trip and the prospect of living in Brazil. He will take his

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LAB NEWS

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SANDIA LABORATORIES • ALBUQUERQUE NM • LIVERMORE CALIF • TONOPAH NEV

Measure for Measure

We May Be Metricated . . .

"Metrication" at Sandia Labs has a foreboding tone, but don't be alarmed. The term refers simply to the adoption of the metric system, a possible step at the Labs which Corry McDonald in Physical Standards Division 7451 is evaluating.

"Actually," notes Corry, "much of the research by Sandia's physicists and other scientists is already within the metric system—meters, newtons, joules, candelas, and so on. The principal area affected by a changeover would be in engineering and product definition, now done solely in the conventional English units."

Curiously, our faithful adherence to English units no longer has a counterpart in Great Britain itself which gave us such odd ball measures as the foot, the stone, the peck and the furlong.

England started conversion to the metric system in 1965, and Canada followed shortly thereafter. So we end up as the only major holdout in the world.

But this decade may see some changes in our country's approach to the subject. A National Bureau of Standards study, soon to be submitted to the Congress, will probably recommend that the nation convert completely to the metric system by 1980. The recommendations also make provision for an interim, change-over period during which both systems would be used. This would be the



METRICS & McDONALD should be an increasingly familiar pairing as Corry evaluates Sandia Labs going metric. Corry is in Physical Standards Division 7451.

painful period but, hopefully, the transition would not cause too great a disruption.

We asked Corry about the implication of Sandia's switching completely to the metric system. He explained, "Sandia and the entire AEC production complex could go metric more quickly than most industries because we are a close-knit, relatively small complex. In a production situation, tooling wears out at different rates and the replacement of inch standard parts with metric parts, while feasible, does create problems of interchangeability, particularly during the interim period."

Not everything is necessarily better metrically. Threaded fasteners—screws, bolts, etc.—in this country represent a high degree of technology, and the United States would probably continue to use its "Unified Thread Series" during the interim period and press for international agreement on a single thread standard.

A particular area of difficulty during change-over lies in the specification of materials for a component or assembly. Sheet metal, rods, pipes, tubes and metal bar stock, now in English units, might have to be selected for use on the basis of nearest equivalent size when the design is described in metric units. The resultant product would be a sort of compromise, with likely effect upon reliability, quality and weight.

During the interim period, drawings and specification would have to be rendered using both systems, a bothersome complication but one which we already are living with to some extent within Sandia.

One thing seems sure: the metric system is coming, sooner or later. Corry asks Sandia people who foresee particularly hairy problems within their fields in any change-over to call him—ext. 1947. He may be able to

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RECOGNITION of his efforts as Chairman of the New Mexico Savings Bonds Committee is here awarded to Glenn Fowler (9000). Plaque is being presented by David Vandivier, Regional Director for U.S. Savings Bonds.



Credit Union Reporter

By Bill Bristol
Credit Union General Manager

CU Bulletin Board

The Credit Union Board of Directors has approved steps taken to enable the Livermore Branch office to operate as a full service facility starting on July 1. "Full service" means that all services offered by the Albuquerque office (with the exception of safe deposit boxes) will be offered at Livermore.

Preliminary plans have been made for an open house at the Sunol Country Club on July 1. Credit Union President Bill Prekker will furnish further details in the next issue of the LAB NEWS.

The Board also approved two changes to the "Policy Statement" which will further improve Credit Union services.

(1) The FHA Title I interest rate was reduced from the dual rate structure of 9.6 **Annual Percentage Rate** for the first \$2500 and 7.2 **Annual Percentage Rate** for the excess over \$2500 to a single rate structure of 8.4 **Annual Percentage Rate**.

(2) Members may now make cash withdrawals from their accounts up to \$200. Cash withdrawal tickets, which must be filled out by the member, are available at the check stands in the Credit Union.

* * * *

When The Rear End Drops Out Of Your Car And The Guaranty Has Expired

For the moment, at least, you have an expensive problem. But an increasing number of legislators are showing interest in bills that would give consumers the right to band together and bring a manufacturer to court when that manufacturer's product turns out to be something less than it should be. This is called a "class action," and the idea is that people with similar complaints could, as a group, present their joint complaint to the courts.

At the present time, chances are that you as an individual would not sue Titanic Motors when the rear end drops out your car because legal and court costs would be prohibitive. Under the proposed legislation, however, you would be able to get together with other persons with the problem and take cooperative legal action. Your combined

group claim would generally be large enough to make it possible to hire a lawyer, and to meet court costs and other legal fees.

Ralph Nader and other leading consumer protection advocates are strongly in favor of class action measures. The proposed legislation has been called the most effective solution yet offered consumers to prevent some practices now found in the marketplace.

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METRICATED

lessen the problem somewhat or, at least, offer a sympathetic ear. Other Sandians interested in metrication include Ed Roth (1212) who recently published an article about the high cost of *not* going metric and Joe Moody (7451), chairman of The Metrication Study Committee of IMOG.

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DICK PRAIRIE

wife and three children. The kids — age eight, nine and ten — will attend public schools in Sao Paulo.

"They're wild about the idea," Dick says. "We plan to travel as much as we can in South America and pack all the living we can into 11 months: We've never been out of the USA before. It should be a tremendous experience."

Dick joined Sandia in 1958 and then took a leave for two years to earn a PhD from North Carolina State University in 1962. He has taught at UNM in the Mechanical Engineering Department and in Sandia's Out-of-Hours program.



LION IN WINTER is Phil Mead's (3412) next play, and it begins tonight at the Adobe Theatre in Corrales (898-3323). It's sort of a medieval Peyton Place with love, hate, treachery, lust, ambition, and religion nicely mixed. Bring the family. . .

Supervisory Appointments

GEORGE SAMARA to manager, Physics of Solids Research Department, effective June 1.



George joined Sandia's physical research group in March 1962. While on military leave from 1963-65, he worked with a solid state physics group at the Army Electronics Laboratories in Ft. Monmouth, N.J. Returning to Sandia, George continued studies of solids under high pressure. Since July 1967, he has been supervisor of Physics of Solids Division.

He received his BS degree in chemical engineering from the University of Oklahoma, and MS and PhD degrees from the chemistry and chemical engineering department at the University of Illinois.

George is a member of the American Physical Society and is on the editorial board of the FERROELECTRIC JOURNAL.

JOHN CRAWFORD to manager, Electron Tube Development Department, effective June 1.



Joining the Laboratories in March 1962, John was assigned to a physics research division where he worked on explosively driven high-energy generators and plasma experiments. From June 1967 until his present promotion, John has been supervisor of Solid State Electronics Division.

He received BS degrees in physics and mathematics from Phillips University and MS and PhD degrees in physics from Kansas State University.

John is a member of the American Physical Society, and a Senior Member of the Institute of Electrical and Electronics Engineers. He and his wife Mary Ann have two daughters.

FRED VOOK to manager, Radiation Physics Research Department, newly created, effective June 1.



Fred joined Sandia in September 1958 in the Physical Sciences Research Department where he studied defects in semiconductors. In 1962 he was promoted to supervisor of the Radiation Effects Division, a group which later evolved into the Crystal Lattice Defects Division.

Fred earned BA and BS degrees from the University of Chicago, and MS and PhD degrees in physics from the University of Illinois. He is a Fellow of the American Physical Society. He and his wife Freddie have two children.

Congratulations

Mr. and Mrs. Peter Lysne (5132), a daughter, JoAnn, May 21.

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AWARDS FOR THE BEST PAPER given at the 19th Annual National Relay Conference were presented to Curt Bates (2331) last week when officials of the National Association of Relay Manufacturers visited Sandia to honor the author. After giving Curt a diploma naming him a Fellow in the College of Relay Engineers, M.S. Steinback (left), NARM president, also gave him a \$500 check for the top honor. Bob Henderson, vice president 2000, welcomed the guests and spoke at the ceremony.

* * *



TONY CHAVES (4137) served as publicity chairman for the recent gathering of the Chaves Clan, Sons of San Fernando Rey, which attracted more than 300 to a mass and dinner in Old Town.

Take Note

Sandia's work in developing new techniques for ice thickness measurement will be featured in the half-hour program "Channel 5 Reports" at 7:30 p.m. Friday, June 11. It will include film from this spring's Coast Guard-sponsored series of tests at Thule, Greenland, and Alert, Canada, and an interview with Project Leader Wayne Young (9327).

* * *

The Society of the Third Infantry Division is in the process of forming a New Mexico outpost. Former Division members are invited to join. Objective: conviviality. Contact Arnold Fieldman (AEC-ALO), ext. 7273.

* * *

The Yale Club of New Mexico will sponsor a concert by the Yale Whiffenpoofs, Thursday, June 10, at Chez Hubert. Tickets may be obtained from Bill Paulus (7236), Joe Miller (4122), or Barry Butcher (5161) for the dinner and concert or for the concert alone.

* * *

The American Society of Certified Engineering Technicians (ASCET) is forming a state chapter in Nevada, with headquarters in Las Vegas. ASCET is the professional association for engineering technicians in all fields (electrical, mechanical, electronic, etc.) who have been certified by the Institute for the Certification of Engineering Technicians, an examining body sponsored by the National Society of Professional Engineers.

Technicians wishing applications for certification or membership in ASCET should contact Nevada State Director James Hamilton (9125), C.E.T., 3964 Pennwood F, Las Vegas, Nev., 89102, or telephone 878-0973.

* * *

"The Way Of A Trout," a prize-winning film produced by Trout Unlimited, will be shown during the noon hour on Monday, June 7, in theatre building 815 inside the Tech Area. Showing time is 28 minutes and the film will be run only once.



SILVER BEAVER, highest honor the Boy Scouts can bestow went to Phil Owens (7616), front, and Walt Scott (9133) recently at a banquet of the Kit Carson Council. Both men have served in many leadership posts with Scout organizations.

* * *

Darrell Hicks (5162) will present "Extensions of the Courant-Friedrichs-Lewy Compactness Results" at the 5100 Staff Seminar June 8. On June 15, Bill Benedick (5134) will discuss "Low Gruneisen Materials and their Application in the Nuclear Radiation Environment."

The seminar meets on Tuesdays at 8:30 in rm. 201, bldg. 836.

Sympathy

To Mary Lee Peckumn (3122) for the death of her mother on May 11 in Oklahoma.

To Lewis Blackman (4222) for the death of his father on May 17 in Sterling, Texas.

To David Gomez (4612) for the death of his father in Santa Fe May 14.

To H.J. Przystas (4612) for the death of his mother-in-law May 17 in Cedar Rapids, Iowa.



VISIT SANDIA — Seventy students of the "School on Wheels," Neighborhood Youth Corps, visited Sandia's Development Shops and Personnel organizations last week for vocational counseling. The tour was arranged by Community Relations Division 3433.



CHARLIE ALLEN (1613) stands in front of his new mobile home in Four Hills Park. This is the second time around for Charlie and mobile homes.

Mobile Home Living

Don't Knock It 'til You've Tried It—Twice

Once upon a time, almost eight years ago, Charlie Allen, an instructor in Weapon Training Division 1613, owned a beautiful home on a big lot in the northeast heights. It was about this time of year and on a bright Sunday afternoon when Charlie, exhausted from the weekend's yard work, said "To heck with it."

Mrs. Allen, who prefers something other than an exhausted husband, agreed with Charlie. "To heck with it," she said.

The Allens put their house up for sale and started looking for an apartment. Well, the Allens had a dog, a very nice dog they did not want to give up, and most apartment owners are picky about pets.

So they bought a mobile home and the couple lived happily for six years in a nice mobile home park.

Why didn't they live happily ever after?

"Well," Charlie says, "for some reason, we decided we needed more room so we bought another three-bedroom house with a den and moved in. Stupid, I guess. After about six months of planting grass, shrubs, trees and all that jazz we sold the house and bought another mobile home. Mrs. Allen had had it with the housekeeping chores also."

The Allens are just now getting settled in their new, double-wide mobile home in Four Hills Mobile Home Park.

OK, Charlie, what's with the mobile home bit?

"Well," Charlie says, "to begin with, we like it. There is very little maintenance or yard work. Mobile homes are comfortable, luxurious, and organized. People who live in mobile homes are generally very active in outdoor recreation — they take a lot of weekend trips. The park offers security while you are gone, and also offers a number of social activities in the recreation center. Mobile home people are friendly but — this is

very important — they respect privacy, no visitors without invitations."

But isn't it cramped in one of those things, Charlie?

"Not really," Charlie says. "We have as much room as we need — two bedrooms, a workroom kind of den, large living and dining area, spacious kitchen with a laundry, two bathrooms, and more storage than in either of our conventional homes. When you buy a mobile home nowadays, you can get the space tailored to your needs and activities."

What about cost, Charlie? Don't you lose money buying a mobile home?

"In comparison with a conventional home which becomes more valuable, if well maintained, through the years, a mobile home depreciates about 20 percent in value. But through the years your monthly expenses including mortgage payments, are considerably less. I'd say that over a period of years the cost averages out about even. Taxes are considerably less also. Others might disagree, but I say that a mobile home is less costly during the years when it counts—when first settling down and in retirement."

Do you plan to remain in your present mobile home after retirement?

"Definitely."

Table Tennis Champs

Paul Longmire (1517) emerged as Sandia's top table tennis player after completion recently of the double elimination tournament which saw about 100 players competing. Daril Gutscher (1213) took second place and Cliff Witten (5161) came in third.

A Class A tournament saw Ed Coca (7532) come out on top with Gene Acton (9213) running second.

Authors

J.F. Banas (1731), "Optimal Piecewise Constant Control of Continuous Time Systems with Time-Varying Delay," Vol. 6, pages 809-811, AUTOMATICA.

C.H. Seager (5151), "High Temperature Measurements of the Electron Hall Mobility in Alkali Halides," Vol. 2, No. 8, PHYSICAL REVIEW B.

J.A. Borders (5111), "A Simplified Technique for Crystal Alignment During Channeling Effect Measurements," Vol. 41, page 1230, REVIEW OF SCIENTIFIC INSTRUMENTS; with K.L. Brower (5111), "EPR of Substitutional Group V. Implants in Silicon," Vol. 6, page 135, RADIATION EFFECTS.

D.H. Anderson (9114), "Thallium Nuclear Magnetic Resonance in Thallous Iodide," Vol. 52, No. 10, JOURNAL OF CHEMICAL PHYSICS.

S.T. Picreux (5111), "Low Temperature Channeling Measurements of Ion Implantation Lattice Disorder in Silicon," Vol. 7, page 101, RADIATION EFFECTS; with F.L. Vook (5111), "Multilayer Thin Film Analysis by Ion Backscattering," Vol. 18, page 191, APPLIED PHYSICS LETTERS.

G.W. Arnold (5111) and R.E. Whan (5522), "Preferential Etching of Ion-Bombarded GaAs," Vol. 7, page 109, RADIATION EFFECTS.

R.T. Johnson (5134) and R.K. Quinn (5154), "Electrical Conductivity and Surface Layer Formation in Semiconducting $As_{50}Te_{45}I_5$," Vol. 9, pages 393-396, SOLID STATE COMMUNICATIONS.

F.L. Vook (5111), "Thermal Conductivity of Electron Irradiated CdS," Vol. 3, No. 6, PHYSICAL REVIEW B; with H.J. Stein (5111), "Evidence for Vacancy Motion in Low Temperature Ion-Implanted Si," Vol. 6, pages 11-17, RADIATION EFFECTS.

D.H. Habing (2654), "The Response of Bipolar Transistors to Combined EMP and Ionization Environments," Vol. NS-17, No. 6, IEEE TRANSACTIONS ON NUCLEAR SCIENCE.

F.G. Blottner (9343), "Viscous Shock-Layer Problem for the Stagnation Point of a Blunt Body," Vol. 7, No. 12, AIAA JOURNAL.

W.B. Pepper and H.N. Post (both 9324), "Wind Tunnel Tests of Small Decelerator Stabilizers," Vol. 8, No. 2, AIAA JOURNAL OF AIRCRAFT.

M.B. Gens (1543), "The Rail Transport Environment," July-August 1970 issue, THE JOURNAL OF ENVIRONMENTAL SCIENCES.

C.M. Percival (5315), "A Quantitative Measurement of Thermally Induced Stress Waves," Vol. 9, No. 2, AIAA JOURNAL.

W.E. Warren (1721), "Interaction of Dislocations with an Irregular Surface," Vol. 8, pages 545-558, INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE.

D.W. Sasser (1722), "On a Generalization of the van der Waerden Conjecture," Vol. 28, No. 2, PORTUGALIAE MATHEMATICA.

J.E. Houston (5332) and R.L. Park (5331), "Low-Energy Electron Diffraction from Imperfect Structures," Vol. 21, page 512, SURFACE SCIENCE.

E.K. Beauchamp (5332) and L.C. Walters (5154), "Helium and Deuterium Permeation through Devitrified and Fused Silica," Vol. 11, No. 5, JOURNAL OF GLASS TECHNOLOGY.

K.W. Schuler (5161), "Propagation of Steady Shock Waves in Polymethyl Methacrylate," Vol. 18, pages 277-293, JOURNAL OF THE MECHANICS AND PHYSICS OF SOLIDS.

Alan Campbell (7281), "Pre-Emphasis for Constant Bandwidth FM Subcarrier Oscillators for FM and PM Transmitters," Vol. VI, PROCEEDINGS OF THE INTERNATIONAL TELEMETERING CONFERENCE.

Frank Biggs (5231), "Hartree-Fock Diamagnetic Susceptibilities," Vol. 2, No. 4, PHYSICAL REVIEW A.

R.A. Hill (9342), "Stark-Broadening of H-beta, H-gamma, H-delta: A Comparison of Theory and Experiment," March issue, PHYSICAL REVIEW A.

B.T. Kenna (5525), "Fast Neutron Activation: Sample Preparation Utilizing Graphite as a Diluent," January issue, JOURNAL OF RADIO ANALYTICAL CHEMISTRY.

P.S. Peercy (5114), "Raman Spectrum of $NaH_2(SeO_3)_2$," Vol. 2, No. 6, OPTICS COMMUNICATIONS.

A.C. Saxman (5114), P.M. Rentzepis and C.J. Mitschle (both BTL-Murray Hill), "Measurement of Ultrashort Laser Pulses by Three-Photon Fluorescence," Vol. 17, page 122, APPLIED PHYSICS LETTERS.

O.J. Burchett (7362) and J.L. Irwin (1225), "Holographic Inspection of the Deformation Patterns of Carbon Carbon Cylinders Under Load," March issue, MECHANICAL ENGINEERING.

A.G. Beattie (5153), "Temperature Dependence of the Elastic Constants of Tin Telluride," Vol. 40, No. 12, JOURNAL OF APPLIED PHYSICS.

Zap! Commercial Power Comes To Tonopah Test Range

A milestone for Tonopah Test Range was achieved May 10 when Sam Moore (7370), range manager, flipped the switch to bring commercial power onto the range for the first time. Since the range went into operation in



COMMERCIAL POWER came to Tonopah Test Range May 10 when Sam Moore (7370), range manager, right, flipped the switch at the new substation. Previously, all power on the range was provided by diesel generators. At left is Art Carey (7373) and Cliff Rudy (4543), Plant Engineering project engineer, is in the center.

1957, diesel generators have provided all electrical power.

The new power system includes 16.2 miles of power lines strung from the Sierra-Pacific Power Company's Rattlesnake Junction transmission line, a 1500 KVA three phase 55KV to 13.8KV substation, 78 distribution transformers, and 36.9 miles of overhead power lines on the range.

Plant Engineering Department has estimated that the \$990,000 cost of the installation will be completely offset within five years. In addition, it will be possible to synchronize any operation on the range as the power frequency will be the same at all stations. Electronic equipment can be programmed to be operational at any time required, saving time that was previously devoted to warmup.

Cliff Rudy (4542) was the Plant Engineering project engineer. Rush Robinett (7250) did the preliminary study for the power system several years ago.

Sandian Elected Secretary Of International Society

Ed Roth (1212) was recently elected secretary of the Society of Manufacturing Engineers (SME) at its annual meeting. He is also a member of the society's national board of directors.



SME is an international organization whose purpose is the advance of scientific knowledge in the field of manufacturing engineering through research and the writing and publishing of information about this subject.

Ed, a registered professional engineer, has been employed at Sandia since September 1951. He is the author of two books and numerous technical papers and magazine articles. In 1966 he received the society's Gold Medal for outstanding service through published literature, technical writings, and papers dealing with tool and manufacturing engineering.

Speakers

T.S. Rathke and M.H. Woodward (7524), "Automation of Velocity Transducer Calibration"; L.C. Bennett and J.H. Morgan (7524), "Rocket Engine Module (REM) Test," Second Symposium on Stored Program Controllers, May 18-19, Lawrence Radiation Laboratory.

C.G. Murphy, O.J. Burchett, and C.W. Matthews (all 7362), "Flaw Detection Sensitivity of Holographic Interferometry on Cylinders Under Hoop Stress"; C.E. Robertston (7514), "Photographic Response of Certain Films to Q-Switched Ruby Laser Energy," 1971 Electro-Optical Systems Design Conference, Anaheim, Calif.

N.F. Hunter and J.V. Otts (7324), "The Measurement of Mechanical Impedance and Its Use in Vibration Testing"; J.C. Crawford (5153), "Transverse Response of a Piezoelectric Field Effect Strain Gage," 1971 Spring Meeting of the Society for Experimental Stress Analysis, May 18-21, Salt Lake City.

L.V. Rigby (1644), "The Nature of Work Motivation," 25th Annual Technical Conference of the American Society for Quality Control, May 19-21, Chicago.

G.L. McVay and E.H. Farnum (5154), "Comments on Diffusion in Glass"; E.K. Beauchamp (5332), "Secondary Fracture and Dicing in Tempered Glass"; H.M. Stoller (5310), "Processing of Carbon-Carbon Composites"; T.R. Guess (5314), B.L. Butler (5313), and J.D. Theis (5315), "Advanced Filament Wound Carbon Composites," 1971 American Ceramic Society Meeting, April 24-29, Chicago.

R.M. Curlee (5312), "Determination of Thermal Gradient During Chemical Vapor Deposition (CVD) of Carbon Matrices"; R.M. Rayner (5312), "Development of Filament Winding Process to Produce a Constant Thickness Wall on a Cone"; J.D. Theis (5315), "The Development of a Filament Wound/Chemical Vapor Deposited Carbon-Carbon Material," 1971 International Engineering Conferences and Tool Exposition, April 26-30, Philadelphia.

R.E. Luna and H.W. Church (9344), "Estimation of Variance of Air Sampler Data Based on Replicate Samples"; A.F. Witte and D.O. Smallwood (7324), "The Use of Multiple Shakers in Sinusoidal and Random Vibration Testing for One and Two Axes Inputs," 17th Annual Institute of Environmental Sciences Meeting, April 26-30, Los Angeles.

R.C. Knauer (5152), "Mossbauer Effect Study of Impurity Interactions in Dilute Cu-Fe Alloys"; A.R. DuCharme (5331) and H.T. Weaver (5154), "On a Pseudopotential Theory for Vacancy Self-Diffusion in Metals"; J.K. Rice (5232), "Intrinsic Line Widths of Inelastic Energy Transfer Distributions"; G.M. Beardley (5151) and J.E. Schriber (5150), "Effect of Pressure on the Fermi Surface of Mg," American Physical Society Meeting, April 26-29, Washington.

C.C. Bates (2331), "Self-Adhesion or Cold Welding of Relay Contacts," 19th Annual Relay Conference, April 27-28, Oklahoma State University.

R.T. Meyer (5224), "Vapor Composition and Chemical Reactions of Laser Vaporized Carbon," 19th Annual Conference on Mass Spectrometry and Allied Topics, May 2-7, Atlanta, Ga.

L.E. Pope (5133), "Surface Studies of Copper," Utah Academy of Science, April 16, Ogden.

W.S. Saric (9341), "Experimental and Theoretical Investigations of a Liquid Film Interacting with a Supersonic Stream," Voly Polytechnic Institute Seminar, April 19.

A.G. Beattie (5153), "Acoustic Emission and Phase Transitions," University of Texas Seminar, April 20, Austin.

N.C. Anderholm (5114), "Material Response to Laser Deposition," Colorado State University Physics Department Colloquium, April 28, Fort Collins.

J.N. Johnson (3433), "Children with Learning Disabilities," Sunport Optimist Club, April 21, Albuquerque.

D. Emin (5134), "Small Polaron Theory," University of California Physics Colloquium, April 30, Riverside.

W.C. Scrivner (9400), "Open Shop or Closed Shop?" Atomic Energy Systems Operations and Programming Association, May, Gatlinburg, Tenn.

C.D. Lundergan and D.E. Munson (both 5163), "Stress Wave Propagation in a Quartz Phenolic Composite," Fourth Annual Solid Mechanics Symposium on Composite Materials and Structures, May 7, Colorado Springs.

J.C. Austin (7323), "Cavitation Study of Underwater Trajectory," UNM mechanical engineering graduate class, May 10, Albuquerque.

J.K. Cole (9341), "Effect of Cloud/Precipitation Particle Impacts on High Speed Rocket Vehicles, the SAMS Program," AIAA Joint Strategic Missile Sciences Meeting, May 10-12, Annapolis, Md.

O.E. Jones (5130), "Shock Waves and the Mechanical Properties of Solids," Third International Conference on High Pressure, May 11-15, Aviemore, Scotland.

J.E. Boers (5245), "Digital Computer Simulation of High Current, Relativistic and Field Emission Electron Tubes" and "Digital Computer Solution of Laplace's Equation Including Dielectric Interfaces and Small Floating Electrodes"; L.P. Bradley, K.R. Prestwich, J.E. Boers, and D.L. Johnson (all 5245), "Characteristics of Cool, High Electron Beam Propagation"; G.A. Carlson (5224), "Spectroscopic Studies of the Emission from Plasma Generated by an Intense Electron Beam"; F.C. Perry and L.D. Buxton (both 5225), "Energy Deposition Profiles in Thermoelastic Media from a 45 kA 3 MeV Electron Beam," 11th Symposium on Electron, Ion and Laser Beam Technology, May 12-14, Boulder, Colo.

S.J. Buchsbaum (5000), "Controlled Thermonuclear Fusion: Why? How? When?" Stanford University, May 15, Palo Alto.

LIVERMORE NEWS

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LIVERMORE LABORATORIES

JUNE 4, 1971



SANDIAN RECEIVES AEC AWARD — Vice President Tom Cook (8000), left, accepts the prestigious E.O. Lawrence Award for 1971 — a gold medal, a citation, and \$5,000 check — from AEC Commissioner James Ramey in recent Washington ceremonies. He is one of five scientists honored for meritorious contributions in the field of atomic energy. The award was established in 1959 to perpetuate the memory of the late E.O. Lawrence, inventor of the cyclotron and director of AEC's Radiation Laboratory at Berkeley and Livermore. The citation and medal are on display in the lobby of Administration Bldg. 911 through June 11.

Take Note

Employees donated 82 pints of blood during the annual Blood Bank Drive at Sandia/Livermore. Administered by the nonprofit Alameda-Contra Costa County Medical Association, the Sandia Blood Bank account makes blood available without charge to all employees and their families. The account is operated on a pint-for-pint replacement basis, with the patient paying for handling, storage, and administrative costs. Jim Henderson of Training and Benefits Division 8236 coordinated the drive.

* * *

Tony Thompson of Metallurgy Division II 8313 presented two technical papers at the spring meeting of the Metallurgical Society of AIME held in Atlanta, May 17-21: "The Work Hardening of Polycrystals" and "Grain Size Measurement and Annealing Twin Frequency."

Several Sandians from Physical Research Division 8331 presented technical papers at the annual solid state meeting of the American Physical Society in Cleveland: Walt Bauer, "He Migration in LiF"; Stew Keeton, "The Effect of Crystal Structure on Rare Gas Mobility"; Rick Wayne, "Helium Mobility in KBr"; and Bill Wilson, "Z₂ Dependence on Alpha-Particle Electronic Stopping Power" and "He Mobility in Alkali Halides." Ed Barsis (8342) presented a paper on "Shock Piezoresistance of Manganin in Alumina."

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Ed Barsis of Instrumentation Development Division 8342 and A. Taylor of Argonne National Laboratory co-authored a technical article entitled "Dielectric Loss in Fluoride Crystals," which appeared in a recent issue of PHYSICAL REVIEW.



TANDEM TYPEWRITER. You probably knew that our compositors were pretty versatile — but using two typewriters at the same time is something else. That's the way it is in the Composition and Printing Section 8231-1, which has just acquired a tandem typewriter. With two keyboards on a common carriage, the machine is ideal for typing technical reports. Compositor Doris Brown says that the second keyboard, containing Greek alphabet, mathematical and other characters, makes the typing of reports with equations go much faster.

Congratulations

Martelle Reid (8231) and Pete Mays, married in Carson City, Nev., May 14.

Environmental Research at LRL Subject of Colloquium, June 9

A resume of environmental research at LRL will be the subject of a colloquium to be held at Sandia Laboratories Livermore, Wednesday, June 9.

Carroll Maninger, chairman of the Air Pollution Committee of LRL/Livermore since October 1969, will review the findings of the committee. The purposes of the committee included an assessment of the major problems in air pollution and the determination of how LRL could contribute to solutions to these problems.

After receiving his BS in physics from California Institute of Technology in 1941, Mr. Maninger was associated with the Columbia University Division of War Research until 1945. Subsequently, he served as a research physicist with the Navy from 1945-48. He was Director of Physical Research and Development for the Vitro Corporation of America from 1948-53, after which he joined General Precision, Inc., as Director of Research for the Librascope Division. In 1962 Mr. Maninger came to LRL where he is now Division Head of the Electronics Engineering Research Division and Deputy Department Head of the Electronics Engineering Department.

Tickets are required for admission. James Gibson (8131) is host.

Sympathy

To Bill Entwistle (8254) for the death of his father-in-law in Albuquerque, April 29.

To Dennis Rathbun (8137) for the death of his father-in-law in Los Angeles, May 15.

Death

Dale Ahlstrom, a technical staff associate in Engineering Division 8332, died May 14. He was 39.

He had worked at Sandia Laboratories 14 years, both in Albuquerque and Livermore.

Survivors include his widow, two sons, a stepdaughter, and two stepsons.



Sandia Receives Results of Transit Questionnaire

1. Place of residence (Please check one)

- 70 Livermore-North of First Street and West of Livermore Avenue
- 67 Livermore-North of First Street and East of Livermore Avenue
- 62 Livermore-South of First Street between Holmes St. & Livermore Ave.
- 125 Livermore-South of First St. and West of Holmes Street
- 152 Livermore-South of First St. and East of Livermore Avenue
- 18 Pleasanton-Southeast of First Street
- 16 Pleasanton-Northwest of First Street
- 9 Dublin
- 5 San Ramon
- 17 Rural Valley

2. Autos owned in your household

- 5 None
- 198 One
- 280 Two
- 49 Three or more

3. How do you usually get to work?

- 359 Drive by yourself
- 31 Drive with passengers
- 39 Ride with someone else
- 53 Rotating car pool
- 0 Bus
- 51 Other _____

Consider the following bus service when answering the questions below:

- A subscription bus service made available for employees of LRL and Sandia at a 75¢ per day round trip or \$15 per month for Livermore residents and \$1.50 per day or \$30 per month for Pleasanton, Dublin and San Ramon residents.
- The bus would pick you up at a boarding point several blocks from your home at a specified time and make a limited number of stops before proceeding to Sandia and LRL to arrive at 7:30 and 8 AM, respectively. The return trip would begin at 4:15 and 4:45 PM.
- Buses would be equipped with air conditioning and hold approximately 50 passengers.

4. If the above bus service were provided, would you consider taking the bus to and from work? (Please check one)

- 93 On a regular basis
- 245 Occasionally as a back-up means of transportation
- 154 Would not consider bus
- 39 Uncertain

	Much More In-clined to take Bus	Perhaps More In-clined to take No Bus Affect	Perhaps Less In-clined to take Bus	Much Less In-clined to take Bus
5. If bus fare were 50¢ per day for Livermore residents and \$1.00 per day for Pleasanton, Dublin and San Ramon residents, how do you believe this would affect your use of bus service?	79	188	217	27
6. If bus fare were free, how do you believe this would affect your use of bus service?	451	104	141	17
7. If it were necessary to make a transfer from one bus to another with a 3 or 5 minute transfer time in order to reach your destination, how do you believe this would affect your use of bus service?	12	7	196	141
8. If small custom transit vehicles were designed to provide the community a unique transit system, how do you believe this would affect your use of bus service?	69	144	251	25
9. If rush hour bus service were limited to a single time, arriving at work at 7:30 A.M. and departing at 4:45 PM, how do you believe this reduced schedule would affect your use of bus service?	9	20	217	126
10. If buses were not air conditioned, how do you believe this would affect your use of bus service?	9	4	301	130
11. If contoured custom padded seats were provided, how do you believe this would affect your use of bus service?	19	60	425	3

Last February, over 500 Sandians living in the Livermore/Amador Valley answered a questionnaire on subscription bus service to and from Sandia and LRL. The results are being used by the Livermore/Amador Valley Transportation Board to determine if public bus service in the Valley is feasible and to help them evaluate transit alternatives.

This is how Sandians responded . . .

12. How would you rate the importance of the following factors in influencing your use of bus service? (Number one through ten)

109	Distance between home and bus stop or destination and bus stop.
40	Time required to reach destination.
121	Fare to be charged.
104	To arrive at work on time.
33	Adherence to bus schedule.
8	Custom design vehicles.
6	Air conditioning/comfort.
17	Alternate bus in case regular bus missed.
2	Attitude of bus driver/courtesy.
82	Reduce air pollution from automobiles.

13. Do you believe that public bus service is needed in the Livermore-Amador Valley?

	Yes	No	Uncertain
For LRL or Sandia employees?	315	85	106
For elderly persons?	393	28	80
For school children?	259	130	101
For low income families?	269	84	137
For housewives?	222	139	129
For commuters into and out of the Valley?	361	68	69
To reduce air pollution?	390	68	63

Retiring



HAROLD BOLSER (4138)



JOHN MORGAN (7524)



ELAINE COONS (7631)



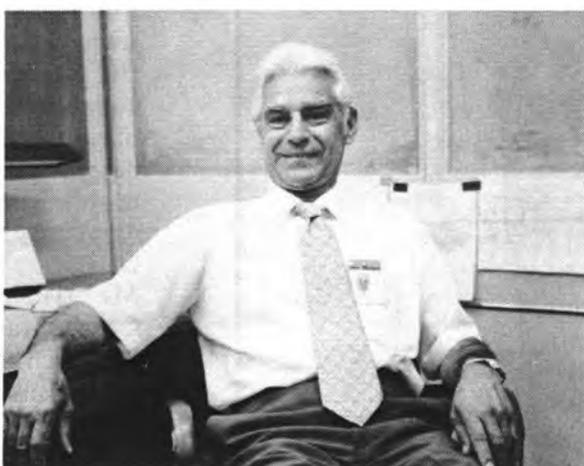
KERMIT SCHUETTE (4623)



CARL NYLANDER (7651)



GEORGE MILLER (4511)



ALBERT RIZZOLI (7432)



FRANK MOON (3510)



GERTRUDE MINSHALL (4137)



EUGENE SMITH (3522)



WILBUR HENRY (7432)



MARY DAVIS (3512)



H.E. BEADERSTED (7533)



HENRY MILLER (4211)



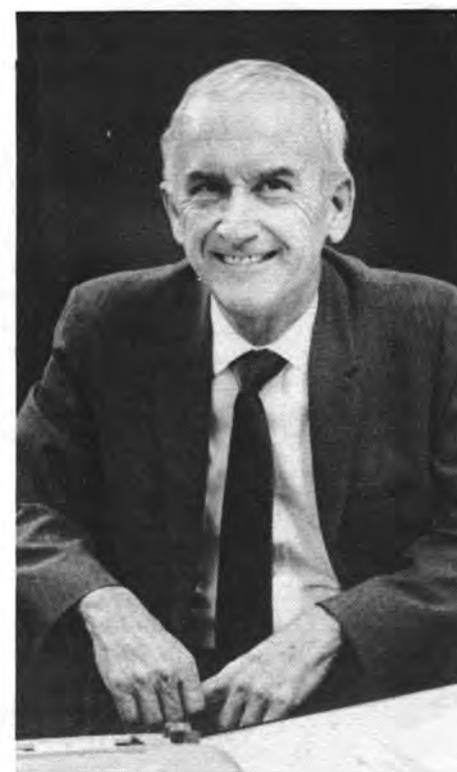
GABRIEL BEATRICE (7652)



JOHN HAHN (4213)



FRANK CHAVEZ (3522)



EDWARD JOLLY (4610)



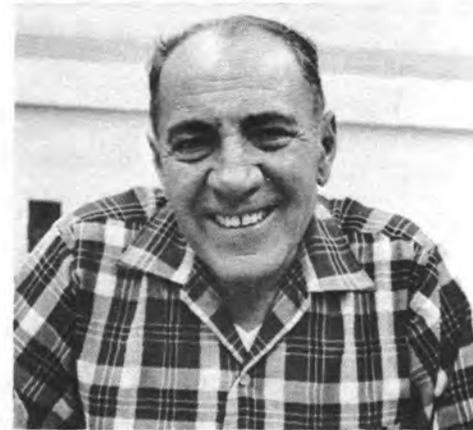
BERNARD CLOUSE (1522)



DORIS COLE (3256)



LUDWIG EVERSGERD (4573)



JOSEPH CATALLO (4514)



PERCY WYLY (3512)



WEBB SHAFER (1522)



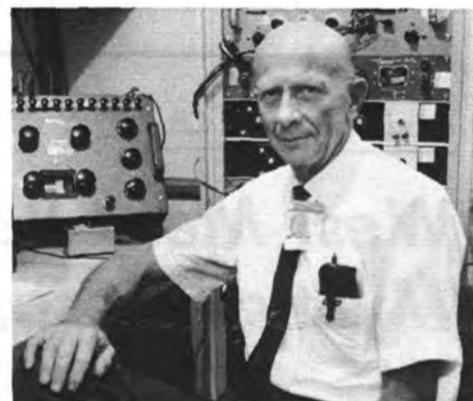
ROSEMARY
MORRISSEY (2491)



BILL STALCUP (4515)



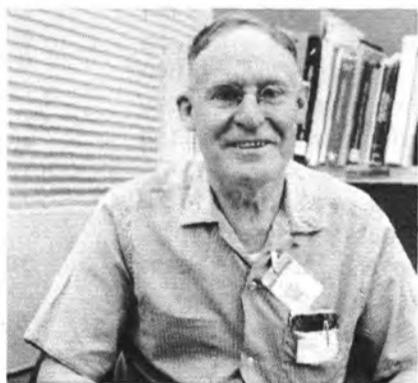
HAP KINDSHI (4514)



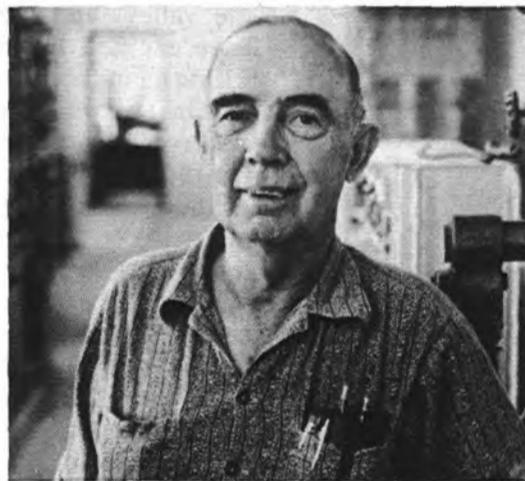
WILLIAM BLAIR (7452)



LOUIS HILDERBRAND (4137)



LEE HOFER (1641)



RAY MOERY (4511)



MANUEL ROMERO (4514)



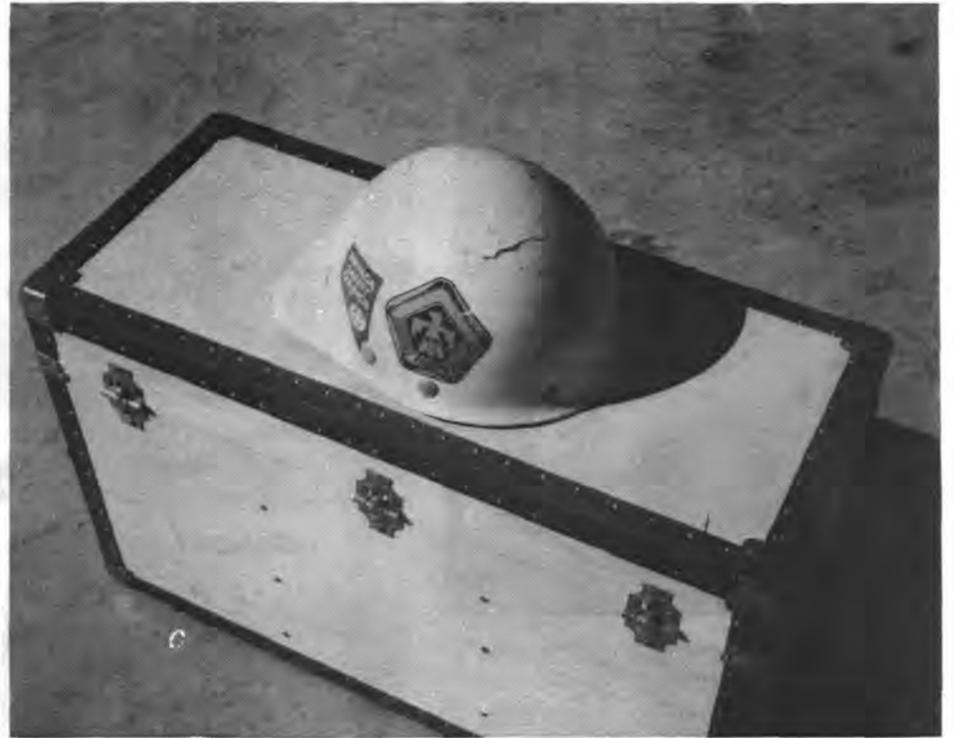
GERTRUDE BUTLER (7225)



C. C. HUNT (4364)



LORNA PETERSON (3300)



PERHAPS your politics aren't hard hat, but there are other reasons for wearing this head gear. Cecil Lang (7372) was working at the base of a tower at Tonopah Test Range when — crunch! — a ball peen hammer (the one he's holding in the picture) was somehow dislodged from an upper platform and bashed into his hard hat, producing the result shown above. Cecil reports a headache but says he's willing to settle for that.

Mini-Tour with CB

West Mesa Petroglyphs May Be Mystic Messages or Just Doodles



FEATURES of Albuquerque's west mesa are extinct (we hope) volcanoes and these petroglyphs chipped on the basaltic flows. Site of these marked rocks is easily reached by car.



When you come right down to it, Albuquerque has three unique scenic features: the mountain backdrop, the green lowlands of the valley, and the volcanoes. The experts have counted the remains of 270 volcanoes within 65 miles of the city.

On the west mesa, the eruption of lava occurred on a north-south line of deep fractures for almost five miles. Although five of these eruptions grew to small cones, there are actually 18 points of eruption along the line.

Along the eastern edge of the lava mesa can be found large numbers of petroglyphs, carved and chipped into the basalt perhaps more than 200 years ago. Some of these can be reached easily: go north on Coors Road to the entrance to Paradise Hills, turning west there and, just as you reach the first homes, you will see a dirt road heading south which skirts the edge of the escarpment. Where there are big jumbles of black boulders, stop and take a look.

Two groups have shown an interest in preserving this unusual attraction: the Albuquerque Archaeological Society and the recently-organized "Save the Volcanoes" Committee.

Archaeologists have charted 23 major sites and 20 minor sites along the six-mile escarpment. Their work includes photographing, numbering, and describing the petroglyphs (at some of the major sites there are several hundred carvings).

Strangely enough, although some of the symbols are the same as those used by present-day Pueblo, Navajo or Hopi Indians and are easily interpreted, there are others that defy definition. Who knows—maybe they are early, early American doodles.

—Cherry Burns

Service Awards

25 Years

John Noe 7222, Robert Crain 2333, Edward Harley 9225, Carle Hunt 4364, and Frank Long 4251.

20 Years

Ronald Hayenga 2451, Elmer Kraft 4253, Howard Burgess 7511, Frank Kite 9327, Robert McConkie 2441, Jose Chavez 4137, Amado Chavez 7363, Orville Rowin 4232, Daniel Neff 4361, Genevieve Hines 7654, Rollins Howard 7374, Eugene Copeland 7523, Adolfo Sanchez 4233, Leon Luke 4151, Avenancio Lucero 5511, Charles Connolly 7323, John Gumm 8172, Ralph Calvert 1715, Roger Baroody 8160, and William McWhorter 8264.

15 Years

Max Newsom 1534, Charles Sandoval 2325, Robert Austin 3112, Cherry Lou Burns 3432, Merrill Palmer 5233, William Burns 7282, John Lloyd 1532, William Lemmon 9132, R. Gabaldon 4614, Willie Montano 4614, Charles Johnson 7221, Lewis McEwen 9132, Curtiss Moses 1534, H.E. Schildknecht 2324, Lester Ptacek 2632, Warren Nilchee 4512, Donald Fjelseth 5525, Bob Wood 7453, Leon Keck 9231, Wilson Botner 9237, Sam Jeffers 9512, Fred Duimstra 2321, Robert Taylor 9222, Calvin Rogers 7224.

10 Years

Alan Swain 1644, J.R. Hollingshead 7324, Adela Bowen 4314, Sandra Borgrink 4363, Ted Sneddon 8136, Kenneth Harper 4542, Samuel Martin 2325, Warren Windle 2336, Emilia Perea 3256, Robert Wemple 5322, Ed McKelvey 8155, Wilbur Schultz 8182, Harvey Frauenglass 3417, Earl Gruer 4542, Daniel Jones 9422, Merejildo Gallegos 7225, and John Snethen 7324.

Recreation Notes

FUN & GAMES

The Sandia Golf Association Open was played May 15 and 16 on the Arroyo Del Oso and UNM South courses. Low gross title went to Ivars Gals (9225) with a 147; Gerald Quinlan (9421) and Bill Saric (9341) tied for low net with 136's.

Highlight of the play on the UNM South Course was Al Asselmeier's (2651) ace on the 175-yard 16th hole.

Next SGA event will be Act I of the Los Alamos "Home and Home" tournament on June 5 at Los Alamos. Chet Fornero (4335) is tournament director.

Psychologist Teaches Indians, Indians Teach Her

"It was one of the most remarkable experiences in my life," says Bette Graham, clinical psychologist in Medical organization 3300. Bette and her husband, a psychiatrist on the staff of the UNM Medical School, recently spent two days as workshop leaders in mental health for a group of Indians from throughout the U.S. The program was sponsored by the Indian Health Service to involve Indian leaders in community health programs.

The workshops were held at Desert Willow near Tucson, Ariz.

"From a feeling of complete alienation and being lost a long way from home, John and I developed warm working relationships and friendships with some of the finest people we had ever met," Bette says.

Like most Easterners, Bette has had little contact with Indians. Until she moved to Albuquerque three years ago, she had never thought much about the native Americans.

"I guess I was guilty of thinking in stereotypes," she says. "I had never met an individual Indian. And this is the remarkable thing about the workshops," she says. "Barriers disappeared, we became friends, we worked to achieve understanding and we worked to solve problems. It was tremendous."

Bette conducted workshops on how to

detect mental illness, alcoholism, emergency treatment for suicidal patients, and also gave individual counseling. She worked in small discussion groups, usually, and encouraged participation.

"What evolved in my mind," she says, "was an impressive picture of people with great sincerity, real concern for their communities, and an overwhelming desire to improve conditions. The talks ranged from individual experiences — stories of heartbreaking mental problems in some cases — to inspiring success stories. We explored basic life concepts and exchanged, I think, some religious feelings."

The Indian leaders will return to their communities to implement the knowledge gained in workshop exchanges. In addition to mental health, other sessions explored community health facilities and services, individual health programs, and health education.

"The experience of being with the Indians has altered my values," Bette says. "Intellectually, you can know that there are all kinds of ways of doing things and approaching life problems. I think I feel this now, more than ever before. The experts don't have all the answers. There are a number of ways to live your life, and the Indians have some beautiful ones."



BETTE GRAHAM, Sandia psychologist, recently conducted a series of mental health workshops for Indians attending the national Indian Health Service program near Tucson, Ariz.

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• SHOPPING CENTER •

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

RULES

1. Limit: 20 words
2. One ad per issue per person
3. Must be submitted in writing
4. Use home telephone numbers
5. For Sandia Laboratories and AEC employees only
6. No commercial ads, please
7. Include name and organization
8. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

For Sale - Miscellaneous

DINETTE SET w/4 chairs, \$30; baby bed, new mattress, \$15; baby dressing table, white wicker, \$10; walnut end table, scratch resistant finish, \$15. Kasnic, 298-5214.

UMBRELLA TENT, 9 x 9', outside aluminum frame, floor, \$20. Walter, 299-2898.

INSTANT HAIRSETTER by Clairol; solid state record player. Oberst, 299-1224.

BABY GRAND Wurlitzer piano; contour chair; dutch hutch; living room chair; mahogany buffet; Haviland china; gateleg table. Bernbrock, 256-2063.

FREE kittens, housebroken, ready to leave their mother. Swartz, 299-0353.

CHROME DINETTE w/six green chairs, \$45; chrome and yellow tea wagon, \$3.50; floor lamp, \$7.50. Kohut, 298-0695.

BLEACHED bull skull, complete with horns, \$7.50. Summers, 299-4710.

DELTA Mark 10 capacitive discharge ignition system, box unopened, 12 volt, negative ground, sell for kit price, \$29.95. Stuart, 299-9190.

AKC AIRDALE, 2+ years, male, proven stud, needs room. Low price to good home. Plagge, 255-1801.

AIR CONDITIONER, refrigerated window type, 11,500 BTU Frigidore; Duncan Phyfe mahogany drop leaf table. Aronson, 268-7109.

SAMOYED PUPPIES, AKC registered. Murphy, 296-4089.

PIANO and bench, Wurlitzer Spinnet, blond Wurolon finish, make offer. Espinosa, 299-3301 after 5.

FREE kittens to good home, solid colors, mostly Persian, 3 black females, one gray male, available now. Leeman, 299-9149 after 6.

REGRIGERATOR, Westinghouse, white, best offer. Gardner, 296-1314.

STEREO mahogany console w/ matching floor speakers, 70 watt amp. Garrard turntable, 12" E.V. cones; 40hp Mercury outboard w controls; Weimeraner puppy. Make offers. Cook, 296-5271.

SWAN Model 400 transceiver complete home and mobile station. Muchow, 299-1813.

CHEST, 4 drawer, white w/glass top, \$15. Hubbard, 299-7818.

CUSTOM drapes, champagne, 18 1/2' x 94"; printed drapes, two, 59" x 83"; Franciscan's "Merry-go-Round" pottery; king size linens; baby items. Hulme, 299-7715.

'66 SUZUKI motorcycle, low mileage, \$200. Smith, 298-5377.

BOX SPRINGS and mattress, twin size, \$20; Whirlpool washer, \$35; portable GE dishwasher, needs timer, \$20. Hayes, 299-5832.

FOUR-year-old bay mare quarter-horse, gentle. Maydew, 256-1696.

'68 COLEMAN camping trailer, sleeps 4-6, sink, stove, icebox. Mrs. Clark, 298-3506.

3-SPEED 20" fan, thermostat control, \$15; 12" tricycle, \$5; slatless bed-rails; white uniforms — some maternity; drapes 96" x 51" lined and weighted. Nunziato, 298-2079.

FREE kittens, mother half father full Siamese, all have blue eyes, 5 weeks old and weaned. Simpson, 299-4080 after 6 or weekends.

'58 CESSINA 172, full gyro panel, IFR Certified MK12 with VOR,

Lear with VOR marker beacon, recent 100 hour. Adams, 242-2026 or 299-5560.

STEREO headphones, Koss, \$15; Hotpoint electric ironer, make offer. Laskar, 299-1024.

AKC REGISTERED, champion sired, labrador pups, ready to go. Taylor, 266-3208.

SONY TC-560 auto-reverse tape recorder, removeable stereo speakers, less than one year old, \$250. DeLollis, 299-5384.

CAMERA, Bell & Howell Canon 35mm, f2.8 lens, automatic electric eye, "zone focus," carrying case, \$25. Norton, 344-1329.

TOY POODLES, silver, male and female, very tiny, AKC registered, 8 weeks old. Shipley, 298-2433.

GOLF CLUBS, 1 & 3 woods, 4, 5, two 7's and a putter, bag, all for \$8. Garcia, 298-9186.

TWO FIRESTONE F70-14 white letter wide oval, \$25 each; Simplex 10-speed bike, less than 50 miles, \$65. Devor, 255-4890.

NEW HODGDON No. 20 catalog, 75c; shooters bible, 1971, \$2.50; Crossman pellets, 250/can, .177 cal., 70c; bullets, full jacket, 140 gr., .30 cal., 1c each. Ristine, 298-8383.

MONAURAL, 3-speed, automatic record players — one hi-fi, \$40; Garrard turntable, \$15; children's portable, \$10. Reynolds, 299-5157.

'69 SUZUKI 500cc Titan, 8000 miles, motor just rebuilt, asking \$565, make offer. Benson, 268-9727.

WEEKEND SALE: Camping equipment; refrigerator; large set children's books; stereo changer; mono am/fm components; Rolleicord; Exakta, more. Sweeney, 2227 Utah NE.

POLAROID Swinger, colorpak cameras; air mattresses; sleeping bags; GI mummy bag; pack; skiing knickers and socks. Dehon, 247-8537.

MOTORCYCLES: 1968 BMW R60US with bags, windshield, \$895. 1970 Moto Guzzi, 5000 miles, \$1295. Gardner, 299-8455.

LUGGAGE RACK for automobile. Reynolds, 299-5157.

INTER-COM SYSTEM for truck/camper, 12 volt negative ground only. Chapman, 299-3946.

BEAGLE PUPPIES, males and females, mother & father AKC registered. Bartel, 296-5270.

POOL TABLE: Mossrite 12-string solid body guitar; basketball goal; sewing machine; golf cart. Swiss, 265-5346.

15" WESTERN SADDLE, \$125; 4' x 7 1/2' Brunswick pool table. Sharp, 867-2815, Placitas.

'70 HONDA CB 450-K3, 5600 miles, rack, manuals, \$885. Kist, 255-0101.

RIFLE, .222 Sako, ammunition, \$135; Starret 2" to 6" micrometer interchangeable anvils, \$40. Sower, 296-7455.

GARAGE SALE Saturday & Sunday, tables, desks, upright freezer, 15 x 15 carpet, drapes, fiberglass polevault, swing set, bikes, Domme, 1217 San Pablo N.E.

Wanted

BOYS 5 or 10 speed bicycle in good condition; woodworking vises; 5 gal. butane cylinder. Hoagland, 282-3825.

RIDE from Holiday Park. Will pay going rate and use my car to cover emergencies. Harrison, 296-3235.

SOMEONE for occasional daytime child care in my home. Edmonds, 268-0929.

USED 5 x 5 scaffolding. Luhrs, 282-3875.

JANITORIAL equipment, heavy mop,

bucket, squeezer, Johnson, 255-5427.

RIDE from Four Hills Mobile Home Park to Tech Area I. Gay, 264-7651.

For Sale — Cars and Trucks

'63 FORD Fairlane, 8-cyl., \$495. Two canvas backpacks, \$5 each. Theis, 299-2953.

'66 CHEVROLET Nova II station wagon, 327 V-8, AC, AT, PS, tan 4-dr., book \$1175, sell for \$1075. Scott, 299-3412.

'60 JEEP 4-wheel drive, hubs, Chev. V-8 motor, bucket seats, Chavez, 877-5541.

'64 SCOUT, 4-wheel drive, 2 sleeping bags just fit floor. Zuppero, 299-3422.

'64 RIVIERA, factory air, PS, PB, PW, new tires. Gerardo, 298-4219.

SELL OR trade for pickup, 1968 Olds Cutlass, vinyl top, all power, AC, AT, 34,000 miles. Connelly, 299-6795.

'58 PLYMOUTH wagon, air, power. Rakoczy, 256-0433.

'63 BUICK Electra convertible, good top, body, electric controls, leather upholstery & tires, \$550. Gardner, 344-2547.

'54 FORD club coupe, V-8, OD, body & interior fair for age, \$175. Snowdon, 344-4637.

'69 FIAT, less than 20,000 miles, best offer. Neiswander, 344-4745.

'65 CAD, Sedan DeVille, all power, AC, below book, \$1495, Watt, 298-8289 after 5.

For Sale — Real Estate

10 x 55 foot mobile home on lot, completely furnished, many extras. Espinosa, 265-8994.

Coronado Club Activities

On Saturday, June 12, the Coronado Club patio will resemble Polynesia for the annual Luau—one of the most popular parties of the year. Tribal rites start with mai-tai cocktails in coconuts about 6:30 p.m. as the huge porker, turning slowly on the spit in the patio, gets the final touches. Roast pork will top the menu which includes sweet and sour pork, lani lani salmon, corn on the cob plus assorted salads and fruit.

Big Bill Kamaka and his Royal Hawaiians, including several grass skirted dancing girls, will provide entertainment and dancing until 1 a.m.

Bring your grass skirts, sarongs and wild Field Test sport shirts—this party will swing. Make your reservations early. Admission for members is \$4, guests \$5.

* * *

HAPPY HOUR tonight features Smiling Jim Noonan's special Italian food buffet and the music of Frank Chewiwie. The north end crew will gather about five when special prices go into effect and stay with it until 9 p.m. Then Yolanda Adent takes over the main lounge with a crazy banjo banger named Stu Bryan and it's sing-along time until midnight. In the meantime, the buffet has been spread from 6 to 8 p.m. and dancing music has continued from 6 to 9 p.m.

On Friday, June 11, Sol Chavez and the mighty Duke City Brass will make the happy music and the Club's famous chuckwagon roast beef buffet will be spread.

Wildman Bob Banks will return to the bandstand on Friday, June 18, with the crazy red Yamaha electronic organ and the terror trio. The group caught a couple of late night horror shows on TV recently and they're

Events Calendar

June 4-6—San Felipe de Neri fiesta, Old Town plaza.

June 4—Twilight tour of Coronado Monument ruins and Indian dances by firelight.

June 5 and 6—Flower and rose show, Floriculture building, State Fairgrounds.

June 6, 9, 11, 13, 16, 18—June Music Festival, 8:15 p.m., Albuquerque Little Theatre.

June 8—Buffalo dances, Santa Clara Pueblo.

June 10-12, 17-20—Broadway's first Western musical, "Destry Rides Again," Popejoy Hall.

June 10-13, 17-20 — Sartre's "No Exit," Old Town Studio, for reservations tel. 242-4602.

• VACATIONS • MAKE THEM ACCIDENT FREE



primed for action. Remember an old tune called "Dinner Music for a Pack of Hungry Cannibals"? Banks does.

Now that the pools are open, it's OK on Friday nights to take your Happy Hour trays onto the patio and join the kids for dining. The snack bar stays open until 9 p.m. serving hot dogs, hamburgers and all that stuff that kids like.

* * *

OTHER THINGS happening this month include a new class for adult swimmers interested in physical conditioning. They will use the north pool on Mondays and Wednesdays from 5:30 to 6 p.m. and an instructor will help work out individual programs. First class starts Monday, June 7, so enroll at the pool office. It's free.

* * *

NEW PHONE NUMBER for the pool office is 256-2406 and it's the number to call to sign up for a class in volleyball. With the new courts in the enlarged patio area, more experienced volleyball players are needed. There's two classes—age 14 to 18 and 18 and over. Enroll at the pool office. The groups will meet at 5:30 p.m. weekdays.

* * *

A NEW INTEREST GROUP for lovers of great movies is organizing Thursday, June 10, at 7:30 p.m. George Kinoshita (1221), Club interest group director, visualizes a Coronado Club Film Society which would meet a couple of times a month to view films of merit.

To start it off, Fellini's "8-1/2" will be

shown along with a "surprise" short subject. Tony Veneruso (1213), will chair the first meeting. A committee will be appointed to select future showings. The first meeting will be free but some kind of membership fee or admission charge will be placed in the future. George says that a film society can book outstanding films at relatively low cost. He sees the society as a source of worthwhile entertainment to augment current Club programs, which include films chiefly aimed at family audiences.

* * *

SPEAKING OF FAMILY MOVIES, the vaudeville night and classic movie this month will be held Thursday, June 17. W.C. Fields will star in "The Barbershop." Entertainment will include a folksinger named Barry, the "Los Chamacos" singing group and classical guitarist Pete Chadman. The show will get underway about 7 p.m. with super sandwiches available and happy hour prices in effect all evening. Oh yes, "The Phantom Creeps" will continue.

* * *

A SOUL SESSION EXTRAVAGANZA with three great bands—Rod King and the Soul Knights, Freddie Williams and the Screaming Yellow Zonkers, and the Top Three—will turn the ballroom and the patio area into a free-for-all on Saturday, June 26. The pools will be open for swimming, the strobe lights will be flashing, happy hour prices will be in effect, and super barbecue sandwiches will be available. Save up your energy and plant to be there. It will be a blast to last.

