

Labs Scientists Isolate Elusive Spores

Separating micro-organisms from soil samples, a problem that has troubled microbiologists for years, has been achieved through a relatively simple new technique developed in the Planetary Quarantine Applied Science Division at Sandia Laboratories.

The new technique involves washing a soil sample with Freon which, because of its high specific gravity, can be used to float spores and other soil organisms to the surface of the Freon-soil mixture.

Freon has a specific gravity of 1.55, compared to less than 1.0 for ethanol, a solution

commonly used as a separation medium. The particular spores separated with the Freon have a specific gravity of approximately 1.30.

In addition to being quite heavy, Freon is inert to micro-organisms and has a low viscosity, thus is easy to filter. Freon is used extensively for cleaning purposes, but has apparently not previously been used as a separating medium.

Use of Freon resulted from Sandia's effort to isolate a particularly heat resistant spherical spore found in soil samples at Cape Kennedy. It appeared that soil particles might

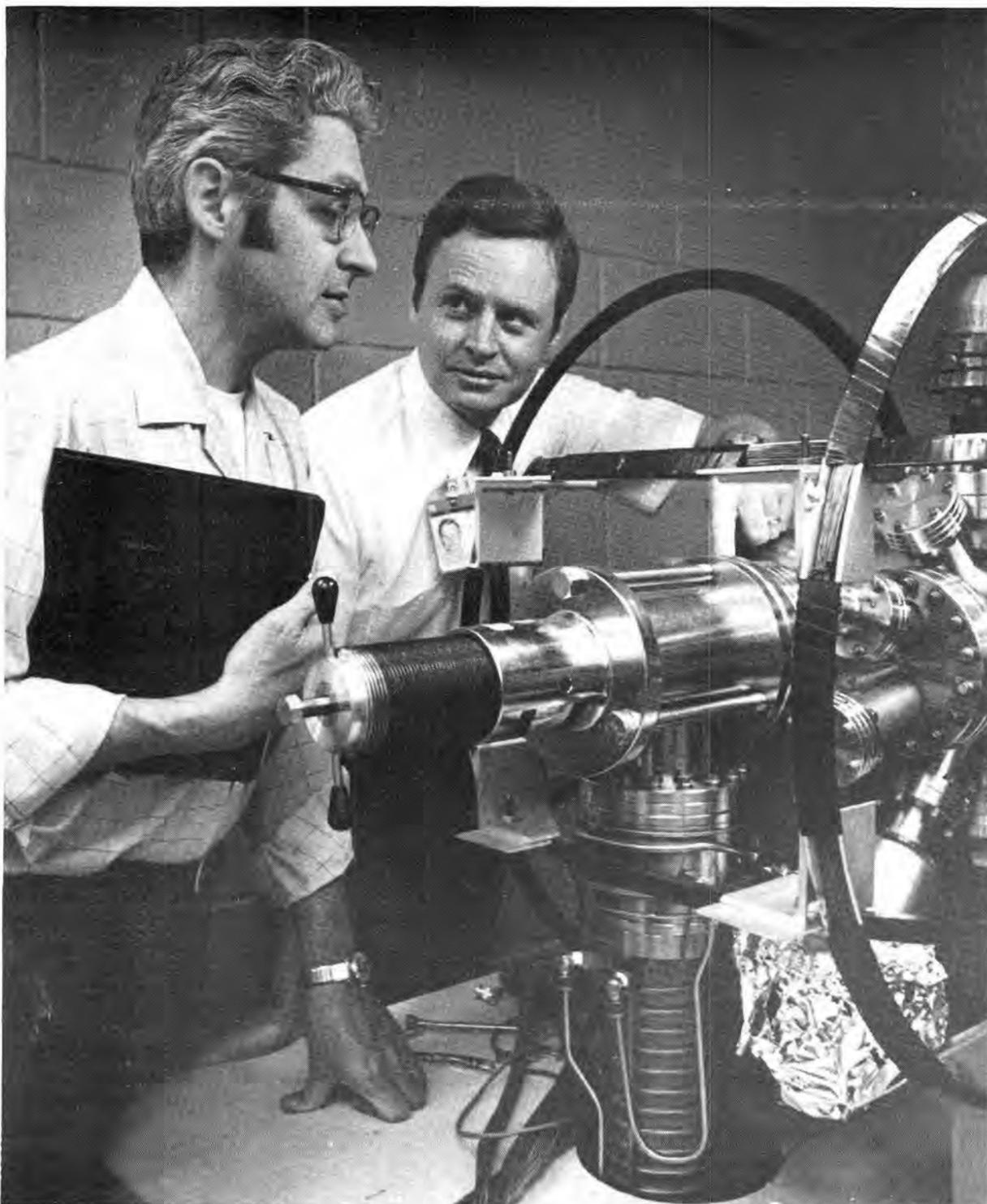
(Continued on Page Two)

LAB NEWS

VOL. 24, NO. 5

MARCH 3, 1972

SANDIA LABORATORIES • ALBUQUERQUE NM • LIVERMORE CALIF • TONOPAH NEV



DON SCHREINER (5331) AND DICK SCHWOEBEL (5330), chairmen of two upcoming important technical conferences, discuss features of an electron energy loss spectrometer. Of interest to attendees of both meetings will be an American Vacuum Society exhibit of equipment.



Inventor Dave Skogmo (1932)

Generalized Circuit Device Invented by Dave Skogmo Is Patented by AEC

A patent has been granted to the AEC for a generalized integrated circuit invented by Dave Skogmo of Semiconductor Circuits Division 1932. The circuit can be used to perform virtually any digital function. The tiny device is roughly the size of the eagle's head on a quarter.

Integrated circuit chips are generally manufactured to perform a specific function such as that of logic gate. By contrast Dave's circuit is a multi-purpose component which is made to function for a specific purpose simply by furnishing the appropriate pattern of connecting resistors and conductors on the substrate.

The device includes nine diodes, three transistors and two resistors, and it measures only 60x40 mils. Output/input is furnished by 16 4x5 mil beam leads which connect directly with leads on the printed circuit board. Four additional beams serve two cross-over conductors, and seven beams are left blank for use with cross-under conductors.

Because of its versatility, the device readily lends itself to changes in circuit design; simplicity of production is also a feature.

Dave has been involved in integrated circuit development since joining Sandia in 1962 after earning a BS in EE at Kentucky University. He completed MS work at UNM in 1964 under the old Technical Development Program.

Sandians Are Chairmen for Two Technical Conferences

Dick Schwoebel (5330) is local chairman for the Thirty-Second Annual Conference on Physical Electronics. This topical conference of the American Physical Society, Division of Electron and Atomic Physics, will be held at the Hilton Inn, March 20-22. Don Schreiner (5331) is chairman of the New Mexico Chapter of the American Vacuum Society, also meeting at the Hilton Inn, March 23-24 for their Eighth Annual Symposium. Overlapping both meetings will be an extensive equipment exhibit, and a comprehensive course on vacuum technology will be offered in conjunction with the AVS meeting.

(Continued on Page Two)

Afterthoughts

Mars, Jupiter & All That--The colloquium announcement appeared in its customary mundane format and carried the title "Recent Results on the Planets Mars and Jupiter." So . . . maybe it'd be interesting. Then, upon reflection, the realization that one of the most extraordinary developments of this decade is our capacity to become blasé about the truly bizarre. When I was very young, next to "G-8 and His Battle Aces" my favorite reading was all about those creepy things that slithered around places like Mars and Jupiter. But the fulfillment of fantasies is never so much fun as the fantasies. So I skipped the colloquium. (The presentation, we later learned, drew an SRO crowd and, in case you missed it, was videotaped.)

* * *

Worth Repeating--"We can never be sure that the opinion we are endeavoring to stifle is a false opinion; and if we were sure, stifling it would be an evil still." John Stuart Mill in the year 1859.

* * *

More On Bikes--1972 has to be The Year of the Bicycle. The Sandia Bicycle Association now numbers some 200 Labs people as members and has issued its first newsletter. And Doug Drumheller (5163), an SBA Committee member, reports that in two days at a desk set up in the Student Union Bldg. at UNM over a thousand students and faculty people completed bicycle survey forms. One consequence has been the formation at UNM of a group called BIKE, whose aims are much the same as those of SBA: to improve cycling conditions in Albuquerque. •js

Events Calendar

March 3-5 — Rodey Season presents "Major Barbara," Keller Hall, 8:15 p.m. For reservations, 277-4402 or 277-4522.

March 3-5 — "America Hurrah," Old Town Studio's Back Door Theatre, 8 p.m. For reservations, 242-4602.

March 3-7 — "Yerma," University of Albuquerque Theatre, 8 p.m. For reservations, 243-9461, ext. 242.

March 5 — N.M. Mt. Club, Exploratory Indian ruin trip, Peralta Canyon. Gulf Mart, 8 a.m.

March 5 — Motorcross motorcycle races, 28 miles N of Albuquerque off I-25, noon.

March 6 — The Stockholm University Chorus, Community Concert Series, Popejoy Hall, 8:15 p.m.

March 8 — Albuquerque Symphony Orchestra, Popejoy Hall, 8:15 p.m.

March 11-12 — N.M. Ski Touring Club, Chama area tour, call Don Elliott (255-1988).

March 12 — N.M. Mt. Club, Sandias hike, Blue Cross Bldg., 8 a.m.

March 15 — Murray Louis Dance Theater, Popejoy Hall.

March 16 — Audubon Wildlife Film Series, "Treasure of East Africa," 7:30 p.m., Popejoy Hall.

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Don Graham Ass't. Editor.

Norma Taylor Pitches In &
Bill Laskar is the Photographer.

In Livermore, Lorena Schneider Does It All



VISITORS to the Labs recently were AEC Commissioner Clarence Larson, at left, and Senator Howard Baker (Tenn.), shown here talking with President Hornbeck. The Senator is a member of the Joint Committee on Atomic Energy.

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SPORES

be providing some insulation from the dry heat used to sterilize the samples, and it thus became necessary to isolate the spores from the soil.

When Sandia scientists first used Freon as a means of floating the spores, the washing attempts were not completely successful — because moisture in the soil prevented complete penetration of the Freon. To solve this problem, soil samples were first heated in an evacuated oven and the oven was then back-filled with dry nitrogen.

Next, the sample container was tightly sealed, removed from the oven, cooled to room temperature, and Freon added. The mixture was subjected to ultrasonic vibration and then allowed to settle. Surface fluid containing the spores was then drawn into a sterile beaker.

Development of this technique permitted studies of very hard native spores which, in turn, prompted a re-evaluation of spacecraft sterilization requirements.

Participants in the study, a part of the work Sandia is conducting for NASA to insure that spacecraft do not carry contaminants to other planets, were Willis Whitfield, Dan Garst and Kermit Lindell, all of Planetary Quarantine Applied Science Division 1742.

Continued from Page One

CONFERENCES

President Hornbeck will give the opening address at the Physical Electronics meet and will present the Nottingham Prize for the best student paper. Invited speakers include D.E. Eastman, IBM Watson Research Center; Erik Bogh, Institute of Physics, University of Aarhus, Denmark; John Lambe, Scientific Laboratory, Ford Motor Company; Gerhard Ertl, Technische Universität, Hannover, Germany; and N.D. Lang, IBM Watson Research Center. The program includes tours of Sandia Laboratories.

Opening remarks at the AVS conference will be made by M.H. Francombe, Westinghouse R&D Center, and president-elect of AVS. Invited papers on the theory and application of quadrupole mass filters will be presented by W. Brubaker, Analog Technology Corp.; N.R. Whetten, GE; G. Bunyard, Uthe Technology International; M. Story, Finnegan Corp.; P.H. Dawson, Cité Universitaire, Quebec; and W.L. Fite, Extranuclear Laboratories.

Dave Pierce Awarded Master's Degree



Dave Pierce (8131) received an MA degree in industrial design recently from San Francisco State College. His thesis was entitled, "A Study of the Temperature and Power in the Radiant Spectrum of an Exploding Wire."

Dave joined Sandia/Livermore in 1961 after receiving his AA degree in electronics engineering technology from San Francisco City College. For eight years he was assigned as a staff assistant technical in the electrical sub-systems organization, and subsequently transferred to his present position in the Preliminary Design Division.

His graduate work, as well as his BA degree also in industrial design from San Francisco State College, were completed out of hours under Sandia's Educational Aids Program (EAP).

Supervisory Appointment



WALTER BAUER to supervisor, Physical Research Division II, 8334, effective Feb. 16.

Since joining Sandia/Livermore in July 1969, Walt has worked in the Physical Research Division where he has studied helium migration in metals, surface characterizations using X-rays and more recently, hydriding phenomena in selected materials. Before Sandia, he was employed by Atomics International, doing materials research for the reactor program.

Walt received his BS degree in physics from the University of California at Berkeley in 1957 and his MS and PhD degrees in physics from the University of Illinois in 1959 and 1962 respectively. He is a member of the American Physical Society and Phi Beta Kappa.

Walt, his wife Suzanne, and their son and daughter live at 911 Via Del Paz, Livermore.

Sympathy

To Bill Campbell (8161) for the death of his father-in-law in Anaconda, Mont., Jan. 26.

To Bob Humphrey (8178) for the death of his mother-in-law in Concord, Calif., Jan. 20.

To Bennie Odegard (8312) for the death of his mother in Seattle, Wash., Jan. 26.

To Jerry Starr (8257) for the death of his mother-in-law in Okemah, Okla., Jan. 18.

To John (8421) and Betty Barnhouse (8433) for the death of his mother in Kansas City, Mo., Feb. 6.

To John Brown (8353) for the death of his father in Oklahoma City, Okla., Feb. 1.

To Emile Wittebort (8257) for the death of his mother in Philadelphia, Pa., Feb. 6.

To Gordon Kibby (8421) for the death of his mother in Walnut Creek, Feb. 15.

LIVERMORE NEWS

VOL. 24, NO. 5

LIVERMORE LABORATORIES

MARCH 3, 1972

for Livermore/ Amador Valley

1972 Bi-Centennial Year

As an eighth-generation Californian, Herbert Hagemann is descended from the old Spanish families of Bernal and Castro. The family home on Olivina Avenue in Livermore, where he resides, was once part of the Bernal's Rancho el Valle de San Jose.

Herb has maintained a strong interest in Valley and California history, writing articles for the University of the Pacific's periodical, THE PACIFIC HISTORIAN, as well as delivering lectures in the Bay Area. Much of his historical material is obtained from family documents.

This is his first of a series on the early history of the Livermore/Amador Valley.



Today's Livermore/Amador Valley was once the home of a few thousand aborigines who lived along its arroyos, lakes and swamps, in a primitive fashion, feeding on the products of the land and forests. Their food consisted of acorns from the abundant oaks on the Valley floor and adjacent hills, the wild rice of the swamp lands, and native game such as deer, antelope, bear and ground squirrels. To supplement their diet, the lakes, arroyos and swamps provided waterfowl and shell fish such as clams and shrimps. Early hunters and explorers reported that herds of antelope fed on the Valley floor. To make better pasture for the native game, the Indians burned the northern hills to clear the brush and trees, which probably accounts for the bareness of that area today.

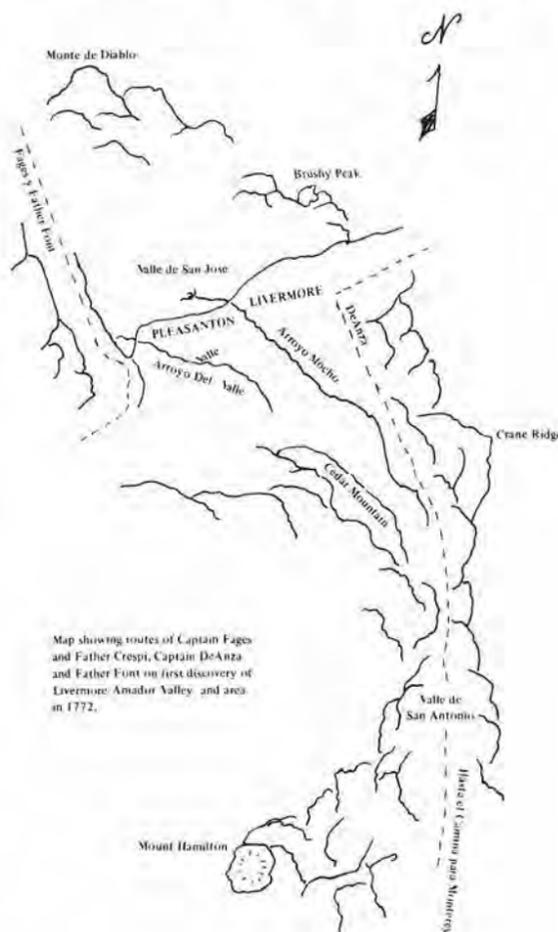
Not only was food abundant, but the native villages were also on the trade routes leading from the interior to the coast. Local produce - acorns, wild rice, the feathers of native birds - was traded for obsidian for arrow heads, feathers of exotic birds, and the like. Exactly when these people lived here is

not precisely known, but it is clear that the local aborigines dwelt in the Valley for thousands of years.

The year 1972 marks the bi-centennial year commemorating the first discovery and exploration of our Valley by Europeans. In 1772, expeditions were sent out by the Royal Spanish Government to explore the reaches of San Francisco Bay and the interior east of the mountains. On April 2 of that year, Captain Fages and Father Crespi led a party of soldiers, carrying the banners of Don Carlos III of Spain, across the western end of the Valley floor, traveling from north to the south. Father Crespi wrote in his diary, "This day we covered two leagues, and by the same valley, all level land, covered with grass and trees - and with numerous villages of very gentle heathen, many of them of fair complexion." He noted that wild game of all types was abundant and that there was good forage, mainly wild oats and a special clover bearing a sticky burr which seemed to be most palatable to horses. He also noted a good site for a mission. The clover referred to was the native California Burr Clover which still abounds.

The appearance of the Valley was different then, and the Spaniards observed that the flat land was largely covered by the willow swamps that encompassed two lakes, a larger one to the west and a small lagoon at the end of the Las Pocitas and Tasagera Arroyos. Creeks flowing through the flat areas were bordered by white oaks and sycamores, and scattered oaks dotted the floor of the Valley. Early pioneers noted that it was possible to walk from Livermore to Pleasanton without being exposed to the sun, if you walked at night.

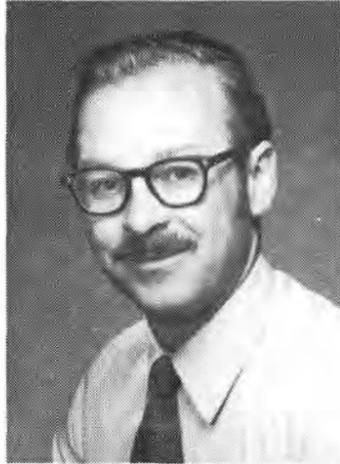
In the same year a second expedition carrying the banner of the Spanish king and led by Captain De Anza and Father Font, entered the Valley from the eastern end, coming from the interior by way of what is now called Patterson Pass. Thinking they had lost their way, they pursued a straight line course over the mountains to a southerly point directly on the road to Monterey, their destination. The group labored past Crane Ridge and Cedar Mountain, through a long narrow mountain valley which they named for San Antonio, past Mount Hamilton, and then dropped down into the Santa Clara Valley.





Wick Howard - 7114

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Stanley Roeske - 9214

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MILEPOSTS

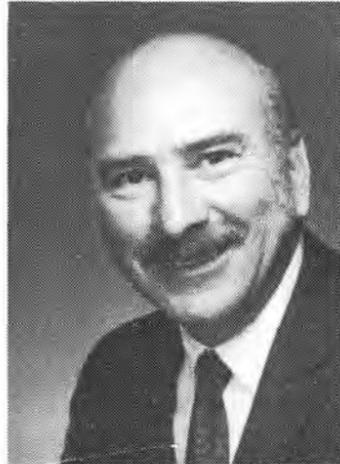
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Theodore Smart - 9424

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Marcel Reynolds - 1742

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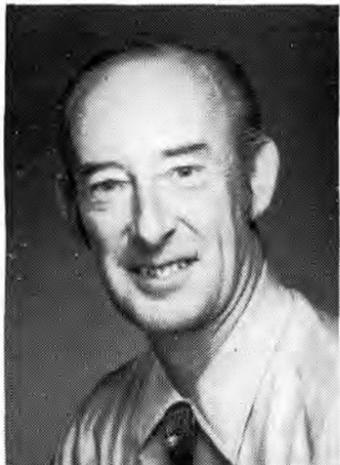
Tom Heaphy - 7540

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Betty Jo Parker - 5411

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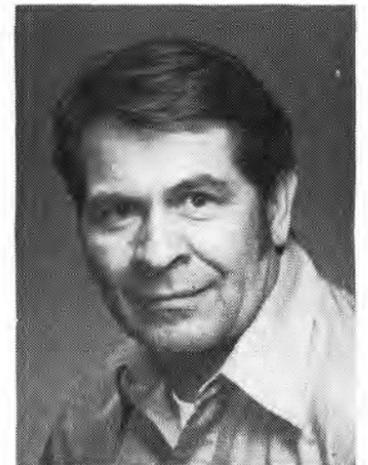
Edward Shepherd - 100

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Leroy Petersen - 4553

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Jose Romero - 4513

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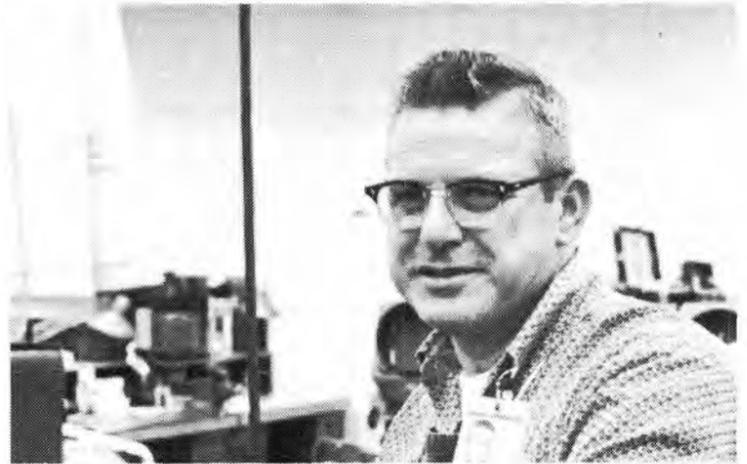
Ralph Sanders - 4614

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Wilma Ash - 4141

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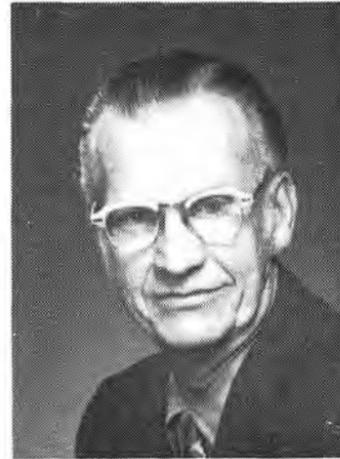
R. F. Turnbough - 7142

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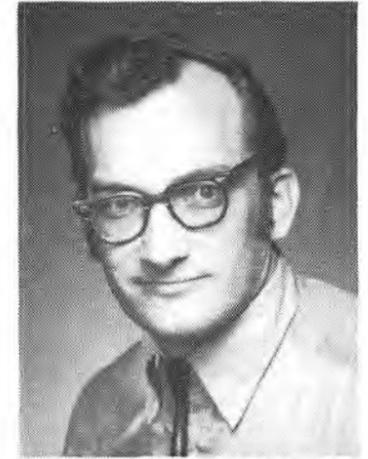
Lyndal Wilson - 7411

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Ernest Yaeger - 7453

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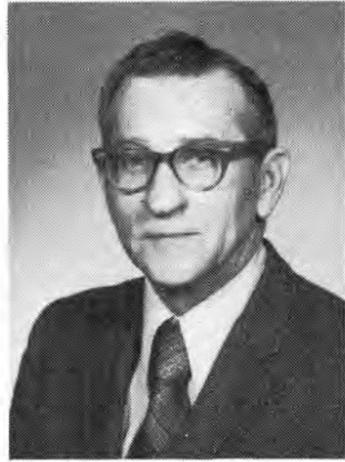


George Schnetzer - 1423

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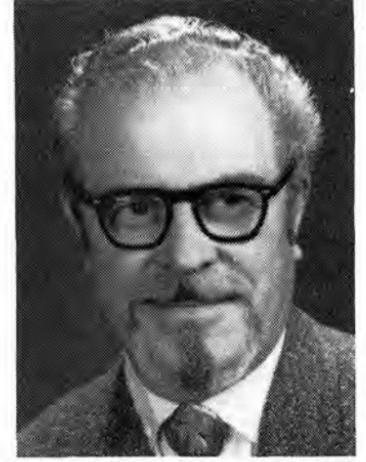
Richard Prokash — 1611 20



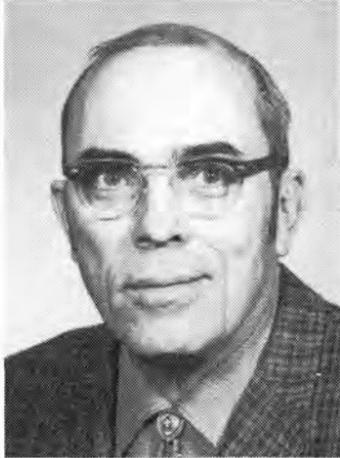
Joseph Gregory — 1614 20



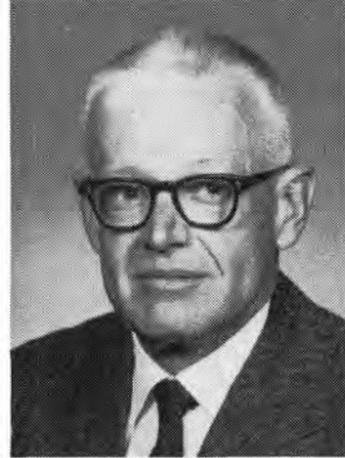
Mary Fischer — 7631 20



Michael Gregory — 8332 15



Tom Moody — 1432 20



Dick Hosley — 5411 15



Doris Brown — 8231 10



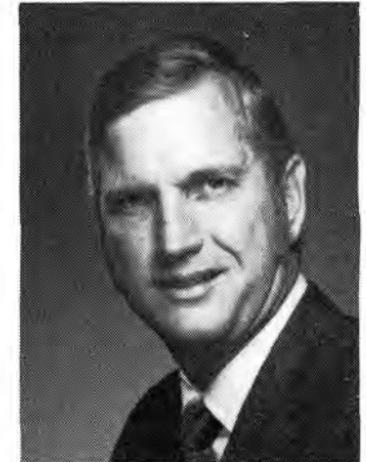
Ralph McClure — 1822 20



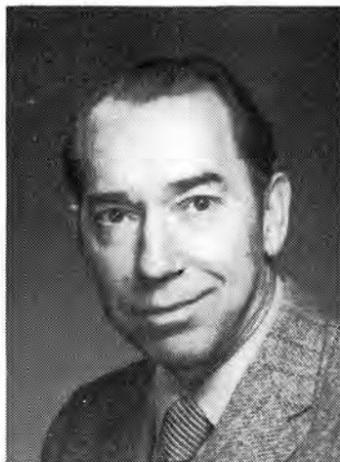
John Carter — 7452 10



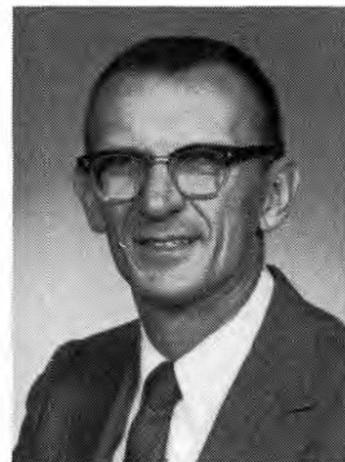
Lester Lathrop — 9221 10



Don Pitts — 9241 20



Richard Kishbaugh — 7614 15



Charles Kyger — 7512 15



Norman Herbst — 7143 15



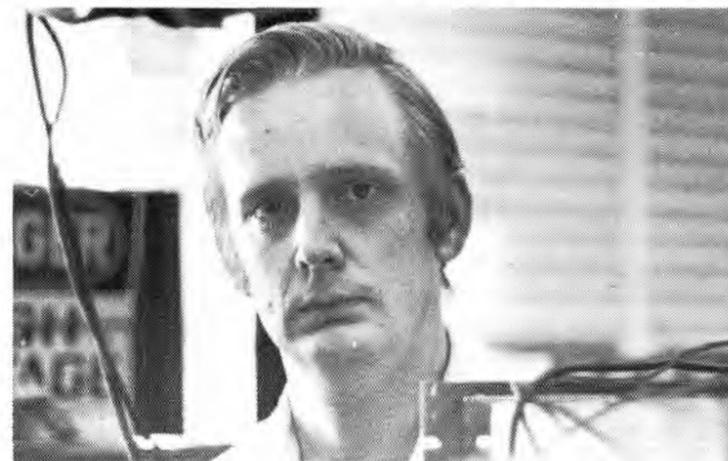
Hugh Church — 5644



Cleavord Giles — 7152 20



William Campbell — 8161 10



Dal Jensen — 1414 10



Frank Garcia — 7151 10



Marvin Barrett — 9461 20



Ralph Griffin — 7143 20



Kermit Cooper — 8164 15



Marvin Glaze — 8260 20



Ramon Garcia — 4137 20



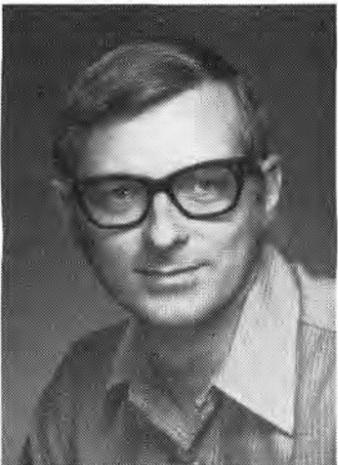
Golden Lane — 4116 15



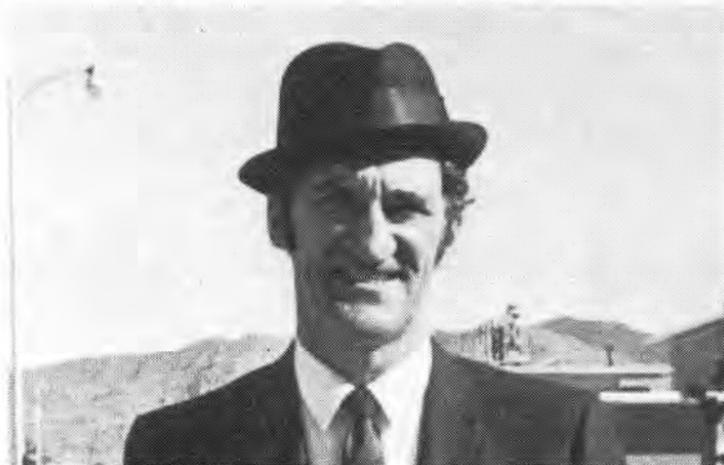
Marvin Plugge — 1554 15



Val Black — 8153 25



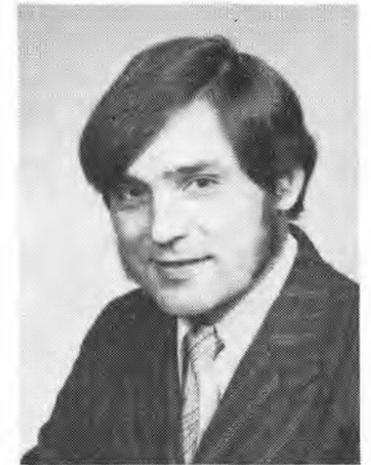
Robert Hughen — 1411 10



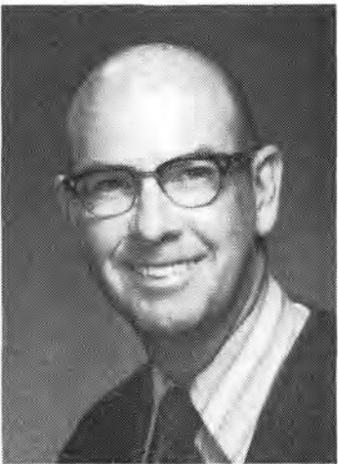
Queento Vandi — 7616 20



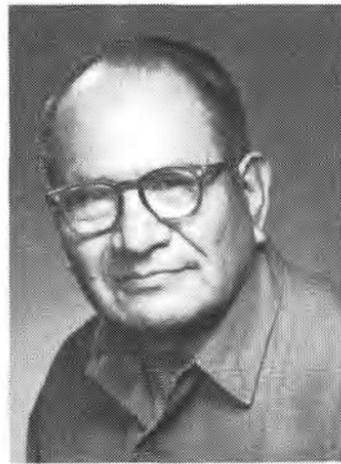
Wilda Ward — 5415 15



Clifford Schafer — 9125 15



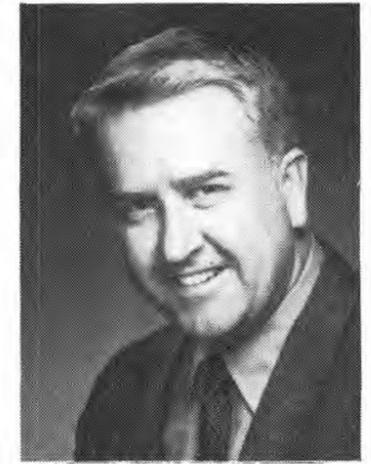
Howard Nunez — 9485 15



Peter Peshlakai — 7112 20



Bill Minser — 7142 20



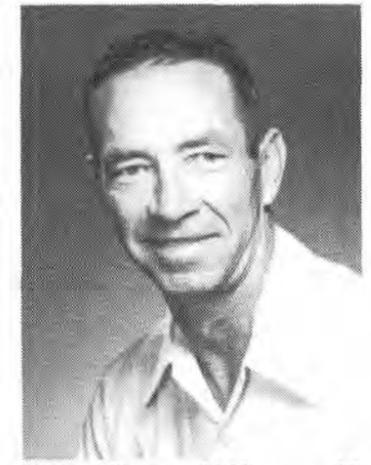
Mathew Roach — 7652 15



Cliff Skoog — 8342 10



Emil Steinkraus — 9224 20



Clifford Shaw — 7142 15

Credit Union Reporter

By Bill Bristol, General Manager

At its February meeting, your Board of Directors approved several changes to Credit Union operating policy in order to expand and improve services. These changes, effective March 1, include:

(1) Increasing life insurance loan coverage from \$5000 to \$10,000. This coverage is applied to the combined total of all loans to a member. The Credit Union is also checking into the possibility of providing optional coverage for those amounts in excess of \$10,000, with the premium paid by the member.

(2) Eliminating the collateral requirements on loans to retired members. Retired members now qualify for all types of loans. In the past certain loans were available only to active employee members.

(3) Increasing the loan value on new automobiles, trucks, motor homes, travel trailers, boats, campers and mobile homes from 2/3 to 3/4 of list (sticker) price. The difference can be financed by use of other collateral, including signature, to provide 100 percent financing in most cases.

With permission of the National Credit Union Administration, the Board also approved the payment of dividends at the close of business on the last day of the dividend period (each calendar quarter) rather than the first day of the following quarter. (Any withdrawal of paid up shares on that day would result in the loss of any earned dividend.) This places dividend payment on the same basis as that of other financial institutions and should eliminate a lot of confusion. Statements for the first quarter of 1972 will show two dividend credits — one on Jan. 1 covering the final quarter of 1971 and one on March 31 covering the first quarter of 1972.



Consumer Help

Let's Buy Well & Wisely — We've received an interesting booklet "Consumer Product Information" which lists in its 15 pages over 200 publications, available from the Federal government, that relate to products of interest to consumers. Sample titles: Selecting Auto Safety Restraints for Small Children - 10c; Managing Your Money - 15c; Mushroom Growing - 10c; Selecting and Financing a Home - 15c; Family Food Budgeting - 15c; and sure-to-be-a-best-seller, Nuts in Family Meals - 10c. This is a good listing for consumers, and the booklet is available for free by writing Consumer Product Information Distribution Center, Washington, D.C. 20407. We have a copy in the LAB NEWS office if you want a look-see.

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CU Bulletin Board

Sales Tax Deductions — According to a release from IRS, the amount you can deduct for sales tax on Federal tax returns now appears in tables contained within the 1040 tax instructions. Sales tax on automobiles, boats, trailers, and airplanes is not included in the table. Taxpayers who bought these items in 1971 may add deductible sales taxes paid on them to the amount shown in the table.

Speakers

S.T. Picraux (5111), "Applications of Ion Channeling to Solid State Studies," EE Dept., California Institute of Technology, Jan. 25, Pasadena.

R.K. Quinn (5154), "Compositional Dependence of the Thermal, Structural, and Electrical Properties of As-Te-I Glasses," UNM Chemistry Dept. Graduate Seminar, Jan. 11, Albuquerque.

J.M. Hueter (3134), "Evaluation of Yourself," YWCA Job Clinic for Mature Women, Jan. 13, Albuquerque; and "Cooperative Education In a Declining Economy," Cooperative Education Association and Cooperative Education Division of American Society for Engineering Education Conference, Jan. 25, Cleveland.

S.T. Picraux (5111), "Channeling Studies of Implantation Disorder in III-V Semiconductors," III-V Implantation Seminar, California Institute of Technology, Jan. 31, Pasadena.

R.G. Bemis (1821), "Microcircuit Temperature Testing Systems with Preconditioning and Post-Conditioning," NEPCON Conference, Feb. 8-10, Anaheim, Calif.

N.J. DeLollis and O. Montoya (both 5332), "Urethane and Primer Evaluation," Adhesives Colloquium, GEND, Feb. 10-11, Pinellas, Fla.

W. Herrmann (5160), "Some Recent Studies in Stress Wave Propagation," Washington State University Seminar, Feb. 14.

C.G. Murphy, O.J. Burchett and C.W. Matthews (all 9462), "Holometric Deformation Measurement on Carbon/Carbon Biaxial Test Specimens," ARPA-sponsored symposium at TRW Systems, Feb. 16-17, Los Angeles.

G.R. Case (1932), "Semiconductor Device Library Program -DVLB," IEEE International Solid-State Circuits Conference, Feb. 16-18, Philadelphia.

T.P. Wright (5231), "Laminar Interactions in Counterstreaming Magnetized Plasmas," NM State Physics Dept. Colloquium, Feb. 17, and University of Texas, El Paso, Feb. 18.

W.J. Brya (5152), "Applications of Moments to Light Scattering in Antiferromagnets," Experimental Solid State Seminar, Feb. 8, BTL, Murray Hill, N.J.

R.J. Detry (5422), S.D. Gasser (5425) and A.J. Arenholz (5428), "Current Approaches to Computer Performance Measurement — Hardware/Software/Simulation," ACM Winter Meeting, Feb. 11, El Paso.

D.M. Mattox (5332), "Morphology of Thick Metal Deposits"; L.C. Beavis (1413), "The Interaction of Hydrogen with the Surface of Type 304 Stainless Steel"; G.E. Laramore (5151), "Low Energy Electron Diffraction (LEED) as a Probe of the Microscopic Properties of Crystalline Surfaces"; R.L. Park (5331) and J.E. Houston (5332), "A Systematic Study of the 3d Transition Metals by Soft X-Ray Appearance Potential Spectroscopy"; J.W. Reichardt (1413), "Some Features of the Reaction of Hydrogen and Deuterium with Thin Films of Titanium"; J.W. Guthrie (1413), "Studies of Thin Film Erbium and Scandium Oxide with an Ion Microprobe," American Vacuum Society Symposium, Feb. 24-25, Clearwater, Fla. In conjunction with the symposium, a one-day Short Course on Fundamentals of System Design was conducted by Ron Ewing (5235).



ELECTROSTATIC RECORDER is demonstrated by inventor Phil LaPoint (9344).

Electrostatic Recording Device Invented by Phil LaPoint

The AEC has been granted a patent for an electrostatic recording system invented by Phil LaPoint of Facilities/Test Equipment Design and Development Division 9344.

Incorporated into a test monitoring system, the electrostatic recorder permits monitoring and recording of data on any number of channels. Programmed to print deviations from normal on a paper graph, the system has speeded up and simplified component testing.

A simple and versatile system, the recorder requires no "erase" function. Data are recorded at a rate of 1000 samples per second on the thin revolving drums of the recorder in combined digital and analog form. The instrument records in volts (rather than millivolts as in tape systems), providing substantially improved signal-to-noise ratio. Playback of the recorded data can be at any desired speed with no compensation required. Playback at 1/100 of recorded speed is entirely feasible.

Phil believes that such systems could be used in other applications besides component testing. For instance, in a medical application, it could continuously monitor a patient's heart beat, sound an alarm if the situation changed, and immediately print a graph for use by the doctor in diagnosis of the condition.

Phil has been at Sandia almost 15 years and holds three patents for devices invented before he came to Sandia. • dg

D.S. Miyoshi (9226), "A Data Gathering System for Studying Underwater Light and Bioluminescence," Scintillation & Semiconductor Counter Symposium, March 1-3.

W.B. Benedick (5134), "Detonation Wave Shaping"; J.E. Kennedy (5133), "Explosive Output Calculations"; O.E. Jones (5100), "Metal Response Under Explosive Loading"; T.J. Tucker (5133), "Explosive Initiators"; E.F. Armburst (3513), "Safety and Neutron Radiography of Explosives"; J.P. Weber (1914) and E.L. Harley (9225), "An Explosive Separation System," ASME Symposium on Behavior and Utilization of Explosives in Engineering Design, March 2-3, UNM.

J.O. Muench (1641), "Reliability," Society of Manufacturing Engineers, March 16, Albuquerque.

New Librarian Brings Many Talents to Job

Pat Newman is soft-spoken, knowledgeable, charming and very busy. She is wife to Wallace (1411); mother to John, age 10, Karen, 9, Jim, 5, and Mark, 2; daughter of Mr. and Mrs. John Tolmie (John works in Org. 1614 and Mrs. Tolmie is a former Sandian); she is an engineer with a BS in EE; she is a translator with a BA in modern languages (major in German, minor in Russian plus a working knowledge of French and Spanish); and she now works at the Labs as a reference librarian and translator.

During the half day reserved for her translation work, the recently-hired librarian/translator gives first priority to providing translation services that cannot be readily acquired through outside agencies. For example, Pat can give an immediate oral translation of portions of an article. She can also dictate translations onto tape for playback and transcription at the requester's convenience. Pat translates from Russian and German into English and vice versa (which is much harder). She can thus convert abstracts from English into Russian or German. Following a French brush-up, Pat will add that language to her repertoire.

Formal translations of complete articles are provided by outside translation agencies. Hazlet Edmonds (ext. 7746) is the contact for arranging for this type of translation work.

"I thoroughly enjoy languages," Pat says, "and I especially like discussions with the requester. I learn a tremendous amount and between us we can usually turn out an excellent translation."

Pat met her husband when she was a summer hire at Sandia and a junior UNM engineering student in 1958. They were married the following year. "I worked while Wally worked on his Master's degree," Pat said, "and then became a housewife and mother. One evening Wally brought home an ad from a technical journal. It told all about the advantages of the technical translation field. For inspiration I posted that ad in a prominent spot and enrolled in a French course during the summer session. That fall I enrolled in beginning German and Russian.

"That's the hard way — for a long time everything came out scrambled in four languages."

Before joining Sandia, Pat taught Russian and German courses at UNM and did translations for Consultants Bureau, a firm that publishes cover-to-cover translations of Russian scientific and technical journals.

Pat's office is in room 5 of bldg. 804 and she can be reached on ext. 7746 if you need a quick translation. •nt



Pat Newman



JIM KENNEDY (5131) and son Davy take an after-school stroll. Davy takes special classes at the Buena Vista Center. Above, Gay Mansell, supervisor at sheltered workshop for the retarded, discusses apron making with trainee.

Retarded Now Face Brighter Futures

When a normal young couple has a retarded child, what happens?

Jim Kennedy (5131) can answer that question because he and his wife Joan have a mongoloid son, age 9. And they also have a daughter who is quite normal — "getting straight A's in fact," says Jim.

"Facing up to the fact that your child is indeed retarded is perhaps the most soul searing moment. Some parents never do, and this is bad for both the parents and the child. Because most retarded children can, with proper training, lead reasonably happy and productive lives," Jim adds.

The Kennedys faced that moment early and have since become deeply involved in the cause for retarded children — and a cause it is. They've had the satisfaction of seeing their own son as well as many other retarded children make nice progress in this world.

Some perspective is useful. The number of retarded is larger than most would expect — about three percent of the population. "Retarded" by one definition means having less than a 75 IQ. Within the retarded category are the "educable," with IQ's from 55 to 75, and the "trainable," with IQ's from 35 to 55. The educable can generally handle abstract concepts and thus can learn arithmetic, reading, and the like. The trainable are given more instruction in manual tasks such as dressing themselves and the use of implements such as dining silverware and simple hand tools.

The Albuquerque Association for Retarded Children (ARC) is the local focus of activities relating to the retarded. "Actually, 'children' is something of a misnomer," notes Jim in talking about ARC, "because the Association is concerned about retarded persons of all ages. In our sheltered workshop, for example, most of the retarded workers are in their late teens and twenties." The workshop is sheltered in the sense that the tasks performed are carefully devised to be fairly simple yet productive. One task that Jim describes involves the making of barbecue aprons. When we visited the workshop, the trainees were also making sewing boxes.

A current project of the Association's is to develop a system of foster homes in the community for retarded children. The homes would replace institutional care. "You

know," Jim says, "it costs about \$5000 a year to maintain a retarded child in a place like the institution at Los Lunas. If the same child lived in a foster home where he or she would have day to day contacts with normal kids, he'd develop at a much better rate. It'd be less expensive too. And a normal child gains a deeper insight into the nature of life through everyday contact with a retarded child."

One element of association with a retarded child is the child's greater emotional dependence. Parents of normal children accept the growing independence of their offspring, and overt displays of affection get to be pretty rare by the time adolescence is reached. Not so with the retarded, Jim observes. "Perhaps because of their diminished intellectual world, the retarded quickly respond to and desire affection. For a parent, having such a loving child is gratifying — though not without its problems."

March is membership month for the Association, and Jim urges people to join ARC even if they have no retarded children of their own. Although funded by UCF, the Association is always in need of members willing to contribute a little of their time and money. Other Sandians who work with ARC include: Art Brown (1341), President, Pat Liguori (7651), Barry Butler (5313), Nick Magnani (5531), Larry Bertholf (5162), Gordon Pike (5155), Mrs. Bob Stromberg (wife of Bob Stromberg in 1212), George Kominiak (5332) and Larry Billmaier (9235). •js

Congratulations

Mr. and Mrs. Frank Thome (5221), a son, Vincent, on Feb. 17.

Sympathy

To Paula Schultz (7511) on the death of her mother-in-law in Miami, Fla.

To Gertrude Byrne (3232) on the death of her brother in Albuquerque, Feb. 19.

To R.S. Cox (4152) for the death of his mother-in-law Feb. 16 in Albuquerque.

FUN & GAMES

Of all the activities associated with the Coronado Club, surely one of the most popular has to be the Ski Club. According to Club President Walt Westman (7414), some 220 families – 700 skiers – belong.

Couple of weekends ago several hundred of this crew took over the Purgatory Ski Area near Durango, Colo. This has become an annual trip for the club.

"It was spectacularly successful," says Walt. "Good snow, total sunshine, no wind."

So what do these dudes do – besides ski?

"Well, there were races and we had 51 entrants – from snowplowers to hot shots. Jim Wurtz (1413), Jerry Barr (9114), and Ken Flynn (1513) were winners. Then we had a dinner party Saturday night and after dinner we had a limbo contest and Mike Michnovicz (7632) spurred the contestants on with his accordion. Then there was a polka contest and this was won by a couple in their 70's."

You can ask Walt what a limbo contest is.

Lots of people caravanned up to Purgatory in their motor homes and set up a small Sandia Village. And Paul Montoya (1517) served up Secret-Recipe Posole and Chili to passing Sandians all weekend. Then there was that wine party after skiing Sunday.

Fun? Si – and it sure beats yard work.

* * * *

The Sandia Labs Bowling Association announces the results of its recent singles and three-man team tournament at Fiesta Lanes. Julie Calderon (9310) was the handicap winner with a 713, and Frank Chavez (7133) won the scratch trophy with 608.

Scratch winners in the three-man team event were Joe Browning (1611), Ruth Brooks (3132) and Gary Miller (5325) with a total of 1740. Handicap winners – Dora Montoya (1542), Harvey Brewster (3231) and Dianna Perry (3232) – won their trophies with a combined score of 1870.

Manuel Cordova (9343), finishing in the third place team, bowled 30 closed frames during the tournament.

* * * *

Winners of the Coronado Bowling Club's Doubles Tournament were Pauline and Gabby Gabaldon (1517). Placing second and third were Ola Meadows and Cliff Fawver (7616), and Kay and Ed Ashland (1514).

The following singles winners qualified for the Women's and Men's State Tourney Team: Edie Williams (AEC), Neita Fitch (4154), Ginger Willems (wife of John, 1513), Pauline Gabaldon, and Rita Sanchez (Field Command); Gabby Gabaldon, John Nakayama (1514), Bob Moore (retired military), Ed Ashland and Archie Sanchez (Field Command). The Women's State Tourney will be held in Clovis, March 24-25 and the Men's in Alamogordo, April 29-30.

Variable Annuity Unit Value

March 1972	1.699
February 1972	1.688
Average 1971	1.628



LAUNCHER, ROCKET, Erector Set, is what this arrangement is all about. Marv Timmerman of Tracks and Guns Division 9333 is designer. When end of I-beam Marv is sitting on is elevated, test vehicle suspended under beam is propelled by rockets down into target at whatever angle of impact desired. New facility is located in Area III.

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Jim Walston Draws Indians

A search for some Indian corn for a Thanksgiving centerpiece led Jim Walston (3155) to Cochiti Pueblo and a life-long friendship with its inhabitants. This was in 1957, shortly after Jim and his family moved to Albuquerque. The corn was given to Jim by the Governor of the Pueblo (recently deceased) and Jim and his wife La Verne returned many times to visit with the governor and his family.

Jim enrolled in a drawing class at UNM in 1968, and then is when it occurred to him that the best subjects for his drawings were his Indian friends. "The first drawing I did was of Joe (the governor) and I still have it. My first sale was to Gordon Snidow (former Sandian and western artist)."

The first public showing of his work was during the 1969 Arts and Crafts Fair and again in 1970. His first entry in the State Fair

1970 won first place. Again in the 1971 State Fair Art Show he won first place, plus a Special Award for his "Little Jemez Girl." He has had several one-man shows — Brandywine Gallery, Albuquerque; Troy's Art Gallery, Scottsdale, Ariz.; Saddleback Inn Gallery in Santa Ana, Calif.; and G. Harvey Gallery, Austin, Texas, also show his work.

"I work from photographs," Jim says, "because my subjects don't have time to sit for me. Although I like to direct, I'm really not a photographer. I've never developed a picture in my life. La Verne found she was interested in this end of the work, so she enrolled in photography and dark room courses at UNM and now has her own dark room. We spend vacations and weekends visiting the pueblos and ceremonials and Indian rodeos."

Jim and La Verne have two daughters — Patricia, a student at UNM, and Bonnie, who is married, has two boys, and lives in California.

The March issue of ARIZONA HIGHWAYS uses one of Jim's charcoal drawings in a special issue featuring "The Big Boom in Western Art." The magazine caption for the picture sums up most people's feelings about his work. "Indian Pony . . . Drawing by Jim Walston. Possessing a finely developed sense of design, keen vision and a technique communicating a warm personal feeling for his subjects." •nt



Jim Walston '71

"Zuni Olla Maiden" (Courtesy of Dr. Jack Adams, Albuquerque)

Take Note

Help! The Base Thrift Shop, now in its new and larger facility just south of the Bank of New Mexico, needs more stuff to sell. Labs employees are eligible to buy and sell merchandise at the Thrift Shop, which operates M, W & F from 10:30 to 2. Volunteers run the Shop and a small commission is charged on items sold. So go through all that junk in the garage and bring it over to the Thrift Shop and make a bundle.

* * * *

Enchilada lovers, unite, there's an Enchilada Supper manana, Rio Grande High School, from 5 to 8 p.m., buck a head. Baron

Brumley (1935) says the dinero (that means money Myron) will help send the school band where they deserve to go — to the band festival of course.



Max Hodge (5413)



J.L. Hollenbeck (4614)



Sam Allen (7111)

Retiring

• 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.

MISCELLANEOUS

REFRIGERATOR, 17 1/2 cu. ft. Westinghouse, \$50; 4 ET mags, 14" w/Goodyear tires, \$125 or trade for 10hp outboard. Hickerson, 268-7605.

CAMPER SHELL, cab high, fits lwb, interior light, side & back windows, \$100. Kirchmeier, 344-5783 after 4.

TWO DT1-MX 250cc Yamahas, one 175cc Yamaha Enduro, one 125cc Mojave; refrigerator; reg. German Shepherd puppies. Causey, 296-0246.

USED WHEEL-MTD. tires, size 6.50-13, \$6/ea. Saavedra, 256-0333.

SKI BOOTS, men's 10 1/2 B Henke Elite plastic, used 1/2 season. Gallagher, 268-1988.

TWO-WHEEL factory made trailer, 7.50x14 tires, 1000-lb. capacity axle, metal covered 41 x 53" bed, lt. wt., \$75. What have you to trade? Stuart, 299-9190.

BUFFET; baby furniture. Fisher, 299-9235.

REES LOAD leveling trailer hitch, No. 750 w/brake control. Grant, 255-6105.

TWO TRANSMISSIONS: Pontiac 4-spd. w/Hurst shifter, 39-46 Ford 3-spd. floor shift. Prevender, 299-5253.

HALF-ANGORA kittens, just at the amusing playful stage. Schwoebel, 268-6440.

RATTAN SOFA, \$50; Sear's gas dryer, \$40; Whirlpool washer, 3 1/2 yrs. old, \$90. Maydew, 256-1696.

B&H/CANNON 8mm movie camera w/zoom, auto. setting, etc.; Kodascope projector, make offer on one or both. Henderson, 898-4427 after 6.

HONDA CB 350-K2, bought new 2/1/71, less than 2000 miles, w/Wixom fairing. Creamer, 296-8450.

12 x 60 Town & Country mobile home, 3-bdr., 1 1/2 bath, fully carpeted, AC, \$4995 cash. Knight, 242-0308.

DOUBLE SINK kitchen cabinet. Riggs, 255-5725.

'70 CAVALLIER slide in camper, fully insulated, lights, ice box, 8' long,

closet, can storage, \$500. Vigil, 296-3590.

HAND MOWER, \$10; 3-dwr. file/safe cabinet, \$30; lg. wood desk, \$80; infant car seat, \$12; early American chair, \$35. Estes, 299-3881.

SOLID MAPLE bunk beds w/mattresses, need refinishing, \$30. Peabody, 296-6239.

PURE BRED German Shephard puppies, 14 wks. old, erect ears guaranteed, males, \$30, females, \$20. McCampbell, 282-3966.

SKIS, 5'8" metal, white top, yellow bottom, \$23. Lenz, 298-9121.

LABRADOR Retriever puppies, hunting stock, AKC reg., father champion, males & females, 6 wks. old March 11. Vollendorf, 298-4574.

SEAR'S best tent, 10 x 16, cost \$200, used one season, pole & tent bags, cost \$18, all for \$100. Hymer, 298-2232.

TRAVEL TRAILER, '68 Aristocrat, 16', sleeps 6, many extras, Reese equalizer hitch, mirrors & '72 license. Garst, 299-5870.

MR. & MRS. CHAIR & ottoman by Kroehler, modern w/avocado green covers & walnut legs, \$50. Gentry, 296-5876.

FOLD-DOWN CAMPER, marine plywood, sleeps 2, mounts on sta. wgn. or truck; twin bed, mattress, box spring; rollaway bed, inner-spring mattress; utility base storage unit. Dodd, 299-6330.

OLD STEEL floor safe, \$65; antiques; irradescant stemware glasses, \$5 ea.; boudoir set, mirror, brush, comb, etc., \$15. Smitha, 299-1096.

'70 MOBILE HOME, Twin Lakes, 24 x 54' dbl. wide, 3-bdr., 2 full baths, dishwasher, garbage disposal, AC, double insulated. Arnold, 282-3218.

WOLLENSAK Raptor 75mm f4.5 enlarging lens, click stops, \$20. Berg, 299-7334.

DANISH MOD. LR sofa, 2 chairs, end table, \$40; fire screen, anvils, wrought iron hearth, \$40. Rack, 294-1751.

8-TRACK Packard-Bell cartridge tape player plus one tape, \$35. Sullivan, 299-6545.

15' GLASTRON boat, 60hp Johnson motor, skis, covers, jackets, tilt tongue trailer, \$1350. Burns, 268-1306.

'70 HONDA 350 full dirt bike w/extras, chamber for PT-1; .22 rifle; rock records. Roeschke, 282-3234.

4-CYLINDER JEEP engine, \$35, Aubuchon, 865-7790.

'69 TRIUMPH Trophy, 650cc, Rizkalla, 264-2449.

MOBILE HOME, 8' x 36', '70 Sunflower, 2-bdr., furnished, AC,

\$3500. Kaspar, 265-8228 after 5:30.

APPALOOSA MARE. Marquez, 242-2332.

TABLE, 30" dia., formica top, wrought iron w/2 chairs, patio or kitchen, \$25; cast-iron fireplace grate, never used, \$8. Wright, 298-4567.

EXERCISE BOARD, \$6; large tent, \$35; Coleman stove, \$10; camper 75-lb. ice box, \$10; swing set, \$10. Niper, 299-6290.

TV, Sear's color, early American, \$300; Poodle, female, spade, to good home; couch & chair, \$15. Rhoden, 268-7191.

CREAM COLORED reg. Chihuahuas; small white female poodle w/new Oyster clippers, \$50. Stanfill, 255-6652.

COUCH, 2-cushion full-size, nylon upholstery. Savitt, 268-0158 after 6.

CRIB w/mattress & chest, by Simmons, new \$255, sell for \$140; rocker to match, \$20. Campbell, 268-8445.

TAPPAN DISHWASHER, 3 yrs. old, \$35. Jones, 298-8492.

REFRIGERATOR, 2.3 cu. ft., Norcold 12VDC/115VAC; camper, Motor-home type, \$100. Janney, 268-8074.

BIKES: boy's 28", \$20, boy's 26", \$15, need tires. Buss, 298-1589.

KENMORE Zigzag sewing machine, \$50; Westinghouse B&W 21" TV, new picture tube, \$50; medium size dog house, \$10. Erni, 268-1721.

PUP TENT, Sear's No. 86013, 6 oz. duck, ground size 5' x 7', center height 3'3", \$7; snow tire, nearly new, 600 x 15, \$8. Wilkinson, 299-8327.

1970 1/2 TS 250 II Suzuki dirt bike, not street legal, helmet, kidney belt, manual, trailer that needs fixing, \$525. Gravning, 299-0117.

ELEC. DRYER w/auto. timer, white, 220V, \$50. Schmidt, 299-7305.

SHOTGUN, Browning, single barrel trapgun; 2 take-down foam lined luggage gun cases. Hubbard, 299-7818.

TWO USED CHAIN SAWS, \$75 & \$45; Colt .22 Buntline, \$50; 220V window air conditioner, \$20. Ernst, 898-4772.

HOOVER port. washing machine; Magnavox console stereo. Bernard, 282-3279.

CARS & TRUCKS

'65 FALCON 4-dr. stationwagon, 6-cyl., AT, R&H, AC, rebuilt trans.

& engine, \$675. Preston, 344-4059 after 5.

'69 CAMARO SS, 350 engine, 4-spd., fully loaded, disc brakes, mag wheels. Miziker, 265-7330.

'65 FORD stn. wgn., full power, AC, trailer hitch, \$675. Coughenour, 296-4146.

'67 CORVETTE coupe 427, PS, power windows, AM/FM radio, many extras. Sena, 294-2325.

'69 OPEL stn. wgn., AC, AT, radio, 1900cc engine, \$1395. Schmierer, 299-2352.

'69 VW sedan, vinyl interior, undercoating, 17,000 miles, \$1500. Kobs, 298-9133.

'68 VW BUG, \$975. Westman, 255-6048.

'58 CHEV. 1/2-ton pickup, \$200; '69 Chev. Caprice 4-dr., air, PS, PB, 350 cu. in., 36,000 miles, below book. Arnold, 282-3218.

'65 FORD WAGON, PS, AT, AC, R&H, recent motor overhaul, \$800. Davis, 298-6944.

'66 CROWN IMPERIAL Chrysler, fully loaded, price right. Hopper, 299-5515.

'61 MERCURY 4-dr. HT. Quinn, 296-1810.

'69 FORD club wagon, 34,000 miles, still under warranty, 3/4 ton heavy duty package, AC, V8, manual AM-FM radio, 12-pass., \$2195. Arnold, 296-5712.

'61 CHRYSLER Newport 2-dr. HT, R&H, AT, all-around tinted glass, orig. owner. Lenert, 299-8670.

'68 CAMARO, 327 engine, PS, AT, factory air, vinyl roof, radials, new battery, many comfort options, \$1800/offer. McGovern, 296-6813.

'68 PONTIAC Firebird, 350 CID, 2V, 4-spd., vinyl top, \$1400. Corlis, 298-9762.

'66 AUSTIN HEALEY 3000 MK III convert. Adams, 268-5943.

'67 DODGE VAN, must sell for best offer this weekend. Hansche, 296-1387.

REAL ESTATE

LARGE residential, pie-shaped lot, near Montgomery & Parsifal, \$2000 plus paving & utilities. Hawk, 265-2228.

MOSSMAN resale, 3207 Georgia NE, 4-bdr., & den, near schools & Coronado Center, sell for FHA appraisal. Ehler, 268-8830.

FOR RENT

2-BDR., 1 1/4 bath, furnished house, \$190/mo. including all utilities & phone, available March 25 through Aug. 31. Falacy, 344-9548.

NEW APARTMENTS: 2 ea. 2-bdr., 2 ea. 1-bdr., 8311 Trumbull SE near Wyoming gate. Sanchez, 268-5372 after 5.

WANTED

LARGE SIZE pressure cooker or equivalent steam pressure unit. LaPoint, 268-2290.

METAL DETECTOR. Ludwick, 255-0289.

GO CART FRAME. Fisher, 299-9235. CAB OVER CAMPER that will sleep 6 or more. Maestas, 242-6196.

WW II MILITARY-TYPE JEEP, any condition, reasonably priced. Carter, 296-3781.

FAMILY OF SIX wants used round maple table w/chairs, must be sturdy & reasonably priced. Jenkins, 344-4405.

ELECT. BASS GUITAR w/amplifier, inexpensive job suitable for student use; Suzuki 50cc motorcycle, basket job, need for parts. Frasier, 299-6933.

HOME for Penn State professor & wife to occupy during summer employment at Sandia. Anderson, 299-9037.

OWNERS MANUAL for '66 Int. Scout, 2 15" 5-hole wheels for 4 x 4 Scout. Perez, 898-3002.

GAS REFRIGERATOR, prefer propane conversion. Westman, 255-6048.

HOUSE TRAILER—1965 or later model, 12 x 60 size, 2-bdr., front kitchen, in good condition. Noel, 298-2142.

VW CAR RADIO, 12 volt. Shunny, 265-1620.

SPARE WHEEL for Datsun pickup. Lederer, 268-6934.

MOTORCYCLE bumper carrier to carry a Suzuki 90. Kepler, 298-5652.

ACETYLENE WELDER. McFarland, 282-5346.

HOUSE for visiting consultant, family of four, for 3 weeks beginning July 31, moderate rent, good burglar insurance. Stump, 264-4561.

AN OLD PLAYER-piano, will pay plenty or trade beautiful, very old, squash blossom necklace. Howard, 299-5761.

LOST AND FOUND

LOST—Rx safety glasses w/brown frames, brown leather wallet w/yearly pocket calendar, Cross pencil w/initials TRG, \$10 bill lost at Gate 6 Feb. 18 about 4 p.m. LOST AND FOUND, tel. 264-2757, Bldg. 832.

FOUND—Keys found on Main & 8th St. may be claimed at Security, Ortiz, small gold earring. LOST AND FOUND, tel. 264-2757, Bldg. 832.

Coronado Club Activities

HAPPY HOURS either end your week or start your weekend depending where you draw the line. And Happy Hours are longer and livelier these days — from 5 to 10 p.m. with special prices.

Tonight the Country Express will make sagebrush shuffle music while club manager Smiling Jim Noonan wheels out an oriental buffet. This includes chicken chow mein, sweet and sour pork, egg foo yong, egg rolls, and so forth. At \$1.75 for adults, \$1.50 for kids, you can't beat it anywhere. Denny Gallegos and guitar will entertain in the main lounge from 9 to midnight.

Next Friday, March 10, the Club's famous chuckwagon roast beef will be spread for the buffet while Sol Chavez and the mighty Duke City Brass play the samba sound. Yolanda Adent will conduct a sing-along in the main lounge.

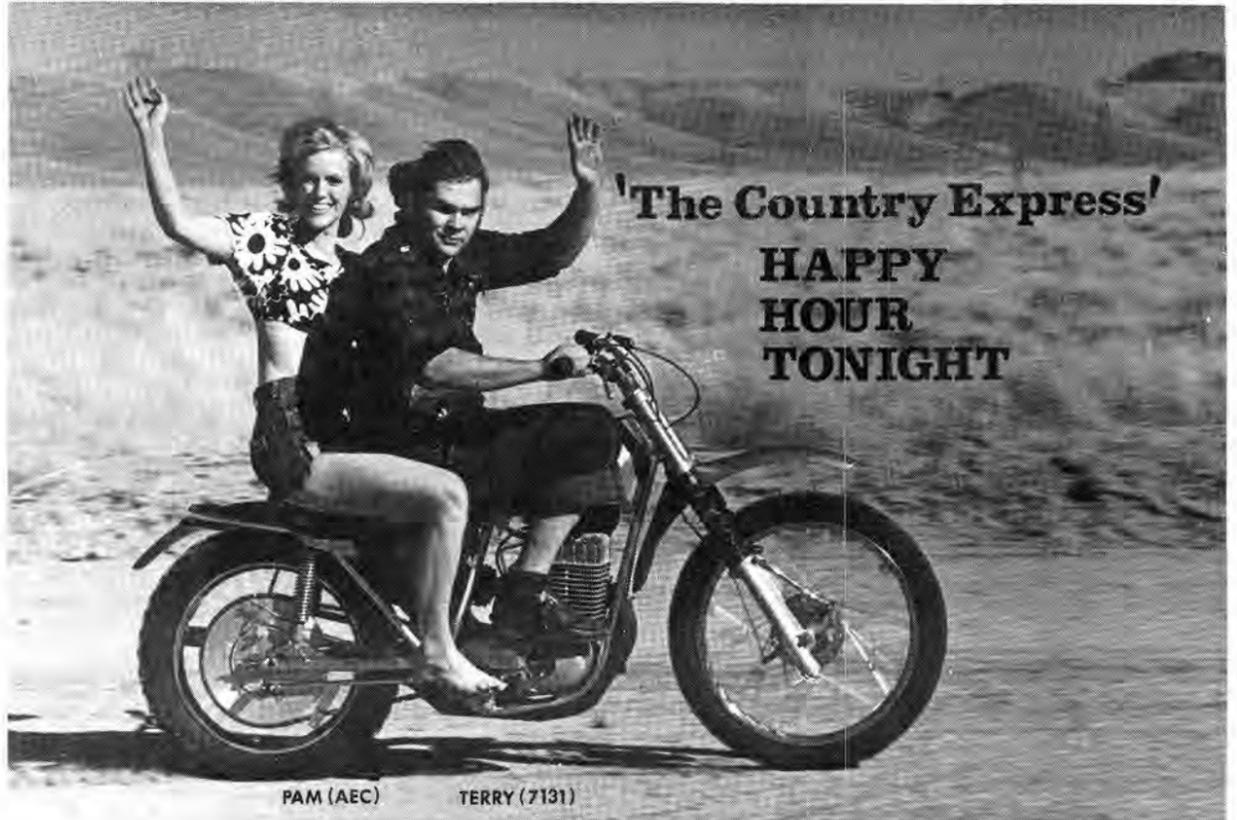
St. Patrick's Day will be celebrated at Happy Hour March 17 with a corned-beef-and-cabbage-Irish-stew-type buffet, and the ol' original Irishman himself — Tommy Kelly will join Bob Banks and the trio on the bandstand. This one may be something to write home about. Denny Gallegos will wear a green tie and Smiling Jim Noonan will become the world's largest leprechaun. There will be leaping and cavorting about until 1 a.m.

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TOMORROW NIGHT teenagers will gather for early rites of spring from 7:30 to 10:30 with something called "Backseat Bogie" plugged into the bandstand. Chuck Logan of KQEO will emcee the bash and give away a few record albums. Member parents should pick up tickets (25 cents for members, 50 cents for guests) at the Club office.

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UNSAFE PRACTICES CAN BE A PAIN



Join Cyrano March 11

CYRANO DE BERGERAC was a long-nosed cat who was the fastest sword in Louie XIV's France and also the fastest man with a rhyme — a sword fighting poet no less. If you missed the 50's movie starring Jose Ferrer you shouldn't miss it this time. It will be featured at the Club's Family Vaudeville Night Saturday, March 11. The stage show, starting about 7 p.m., will spotlight the Potts Puppets followed by the movie. Admission is free to members and families. Super sandwiches will be available and Happy Hour prices will prevail.

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A LOBSTER is a dear delicacy growing more expensive each year. And once upon a time William Bradford, one of the Pilgrim fathers and governor of Plymouth Colony, wrote back to England that things were so bad that there was nothing to eat but lobsters, but fortunately the beaches abounded with them. There will be no puritans at the Club's New England Seafood Dinner March 18. Call

the office (265-6791) right now for reservations and pick up your tickets on the way home. The deadline is tomorrow. Dinner will be preceded by a wine taste and followed by dancing to Bud Fischer's orchestra.

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SANADO WOMEN will view spring fashions during a dessert tea Tuesday, March 14, starting at 1:15 p.m. Betty Reuscher will be commentator. All models will be Sanado members. Reservations should be made with Mrs. D.S. Tarbox, 1305 Florida NE, by March 10.

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TRAVEL DIRECTOR Bud Wheeler (3251) reports that there is a possibility of 40 open seats on a flight from Albuquerque to London and return via Brussels. Price is \$275 for transportation only and the date is in June. Call the Club office if you are interested.



CORONADO CLUB MEMBERS board chartered jet for eight-day package tour of Hawaii. Bud Wheeler (3251), tour director, and wife Barbara report that the group "had a ball." It's not too late to sign up for the 16-day tour of Spain and Portugal in October. Deposit \$100 at the Club office now.