

CLASS OF '79 — Youth Opportunity Trainees, more commonly referred to as YOT's, posed for LAB NEWS photographer Gerse Martinez last week on steps

of Bldg. 800. The high school seniors/college freshmen numbered 53 this year, were assigned jobs throughout the Labs.

## Labs Given Major Role In Oil Program

Sandia has been named by DOE to direct geotechnical studies for the Strategic Petroleum Reserve (SPR) sites in Louisiana and Texas.

SPR is a government program to store up to one billion barrels of crude oil in underground salt domes near the Gulf of Mexico as a hedge against foreign oil embargoes and other disruptions in fuel supplies. About 85 million barrels of crude are now stored at three of the five existing sites.

The new assignment comes following release of an SPR systems and engineering study prepared by Hap Stoller's GeoEnergy Technology Department 4730. Prepared at the request of DOE, the study provides a basis for many of the upcoming geotechnical studies.

"We found no insurmountable technical problems which would preclude a successful SPR," says Jim Ney, supervisor of SPR Projects Division 4701.

The division was formed last December to conduct the study. Its staff includes Tom

VOL. 31 NO. 14

JULY 13, 1979

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

Bickel, Ken Goin, R.J. Hart, Jim Linn, Mickey Lyle, and John Mitchner. Other organizations and people supported the effort as well. Principals were Tony Russo (5511), Pete Hilton (formerly 5522), Joe Tillerson (5531), Dave Douglass (5831) and Marv Becktell (4004).

About \$7 million has been earmarked for the new geotechnical program over the next two years. Some 25 Sandians and several contractors will pursue two major efforts — geological site characterization and design assistance and evaluation for both present and future storage sites.

Techniques and locations for excavating new storage caverns at two of the sites will also be studied. Each of these new caverns — 2000 feet high and 230 feet in diameter — will hold 10 million barrels of crude.

Caverns are created by leaching — injecting water into a borehole to dissolve the salt, leaving a void. This salty water (brine) is pumped to the surface and disposed of in deep

wells or into the sea. The existing caverns, which were leached to obtain brine for commercial uses, vary greatly in size and shape.

Three operating SPR sites in Texas and Louisiana are filled to 60 percent of their capacities. The schedule calls for them to reach their 147-million barrel limit this fall, depending upon oil availability. Two more facilities, scheduled to get oil later this year, have capacities of 75 million and 22 million barrels. After additional expansion in the 80's, SPR's five original sites will be capable of storing about 530 million barrels.

DOE currently is evaluating proposals from private industry for development of additional storage locations. Plans call for this aspect of the project to add another 250 million to 500 million barrels to SPR by late 1985.

(Ed. Note: Sandia's initial interest in salt domes dates back to the early 70's when the domes were studied to determine if underground explosions could be decoupled within the cavities.)

# LAB NEWS

## Afterthoughts

The new military--Having served in the military for so long (nine years), we retain a strong interest in that institution and its sometimes curious workings. Here's an item that caught our eye in a recent KAFB Bulletin. "Uniform Change. Umbrellas are now an optional item for men. They must be commercial, solid color, dark blue or black, without ornamentation. May be carried when weather conditions warrant, provided safety regulations/practices are not violated. It will not be carried during military formations. The umbrella will be carried in the left hand to permit saluting."

Well now, that's sort of revolutionary. In that military world of which we were a part, you were expected to be stoic in the face of the ineffable danger (or, as Navy Regs so memorably put it, you were not "...to pusillanimously give quarter"). Yet today we acknowledge that our soldiers, maybe even our generals, can flinch just like regular folks under a few raindrops... You know, it's probably just as well John Wayne isn't around to see something like this. Can you imagine the Duke striding through the Vietnam monsoon, umbrella deployed, as he wipes out the enemy in "Green Berets"?

\* \* \*

Big sense--Every now and then amongst the whines, mutterings and assorted ruck of the Journal's Letters page, there appears a fresh thought of manifest sensibility. I refer to that recent letter in which the writer boldly proposes that one answer to the fuel shortage is the suspension of driving privileges for 16 and 17 year old students. "The parking lots of the high schools are jammed with student autos, ridiculous in light of the free and working busing system. Too, the streets are teeming with drivers of this age 'cruising' needlessly each evening and weekend... Another benefit for revoking the licenses of these youngsters: given their record of recklessness and accidents, it is certain that fewer grieving parents will regret." Now here is an idea whose time has indeed come. Unfortunately, given our society's obsessive deference to our adolescents, it's not likely we'll ever see passage of the legislation necessary to put the 16 and 17 year olds on their feet. \*js

## Supervisory Appointment



DICK STRATTON to supervisor of Systems Studies Division III 5613, effective July 1. Dick has been a member of the technical staff in the Exploratory Weapons Systems Directorate 5600 since joining Sandia in August 1969. As a systems analyst, his work has been to compare and evaluate various weapons systems in support of Phase 1 and 2 studies. He has also conducted studies of new weapon systems in advanced development programs.

Dick earned a BS in engineering science and an MS in EE from Brigham Young University. He received his PhD in EE and systems studies from Michigan State University. Off the job, Dick enjoys church activities, soccer, gardening, photography and his family — wife Teddy and five children. The Strattons live in NE Albuquerque.

## Sympathy

To Reyes Chavez (1474) on the death of his wife in Albuquerque, June 26.

To Adelina Wade (3321) and Donald Wade (3426) on the death of their son in Albuquerque, June 23.

To Alfred Herrera (1471) on the death of his brother in Albuquerque, June 24.

To David Judd (2625) on the death of his father in Albuquerque, July 2.

To Bob Schowers (1171) on the death of his mother in New York, June 27.



TV HOST Amado Trujillo (4552) has been the interviewer on KNME's (Channel 5) *Ayer Y Hoy* program for a number of years. He's shown here as he interviewed Dean and Mrs. Robb for a one-hour special to be run tomorrow, July 14, at 5 p.m. Entitled *Dean Robb: A Portrait*, the program was shot on location in Dean Robb's home and portrays the still-active life of the 86-year old composer.

## LAB NEWS

Published every other Friday

SANDIA LABORATORIES

An Equal Opportunity Employer

ALBUQUERQUE, NEW MEXICO  
LIVERMORE, CALIFORNIA  
TONOPAH, NEVADA

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8100 DIRECTOR Bill Spencer confers with Harry Reynolds, Associate Director for Nuclear Explosives at LLL, about current programs.



THE 8-INCH ARTILLERY SHELL (AFAP) is examined by Jim Barham (8110), Don Bohrer and Joe Vieira (both 8111).

### The Directorates

## 8100: Systems Development at SLL

8100, Livermore's principle weapons group, is facing some new challenges these days. Formed in 1956 to complement the weapon work across the street at LLL, the directorate has played an important role in the development of many of the nation's stockpiled weapons, including Minuteman and Polaris.

Bill Spencer is the third 8100 director, following Leo Gutierrez (now 8400) and Jack Howard (now 2). Bill summarized for us the shifts in philosophy governing weapon development over the last three decades. In his view, the first phase (covering the period in which Sandia Livermore was founded and continuing until the early 60s), "was dominated by schedule — increase the stockpile as rapidly as possible."

In the second phase, from the mid-60s to the mid-70s, "the emphasis was on performance. The number of weapons in the stockpile actually decreased. From high yield weapons we went to weapons tailored to a particular job or to weapons suitable for use in a variety of operational situations.

"We're now in a third phase, one dominated neither by schedule nor by performance alone. One contender for dominant theme is improved command and control capabilities. Another is safety and safeguards. But I believe that cost effectiveness, along with performance, will emerge as the dominant

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theme of the current phase." The key to a cost-conscious weapon program, Bill feels, is close cooperation among the groups involved — LLL, OMA, ALO, DoD, the production agencies, and Sandia.

Bill's goal for the directorate — maximum performance, minimum cost — is reflected in the departments and divisions, especially in Phase 3 program work. Says Jack Wirth (8150), "We're coordinating the mechanical and electrical work on the B83. This is a modern bomb that uses components and technologies first developed for the B77 and B61. We're constantly scrubbing material costs with David Schuster and Dick Claassen, component costs with Don Gregson, Charles Tapp and Gene Reed's 2000 organization, test costs with Roger Baroody and Bill Gardner, and we're concerned with the costs of the whole bomb system, from its inception through production and stockpile sampling."

Other Phase 3 programs — the W84

GLCM (ground-launched cruise missile) and the two artillery rounds (the W79 eight-inch and W82 155 mm) — as well as the W70-4 Lance missile warhead (now in Phase 4) face similar scrutiny. Not only must these new weapons meet rigorous performance specs, they must also "always work when they're supposed to work but never when they're not supposed to work" (such as during a transportation accident or if in the hands of terrorists), and at the same time meet development budget and production cost goals.

"This means," says Jim Barham (8110), "that we won't use expensive, advanced technology unless it offers a major advantage in terms of performance or safety. Every new component or material must pass both a performance and a cost examination." His group includes the "ideas ahead of time" people who study possible future weapons and their requirements in terms of Sandia-developed technologies.

"We're also cost-conscious when it comes to support activities," says Ralph Cozine (8160). "This applies whether we're building testers (which Ralph's people do) or working with the production agencies. We try to get more done with less money."

Bill Alzheimer's Applied Mechanics Department 8120 contributes another kind of support to the directorate, with expertise in structural analysis, experimental mechanics and the thermal sciences. Work here, principally related to the weapons programs, has also found application in the solar central receiver program.

Summing up his directorate's working philosophy, Bill Spencer has this to say: "We proceed on three assumptions. First, nuclear weapons remain the keystone to national defense. Second, because resources to develop them are limited, there is a need placed on us for the highest order of engineering skill. And third, to be a credible deterrent our nuclear weapons must be modern yet cost-effective."

MANAGERS OF THE B83 PROGRAM, Jack Wirth (8150), Gary Beeler (8152), and Jim Wright (8151), visit Bendix to check progress of new components.



# Credit Union Reporter

By C.L. Turner, Associate Manager

The Credit Union offers several types of savings accounts, outlined here:

Type of Account	Annual Dividend Rate	Effective Yield	Minimum Balance
Regular Share Account	6.00%	6.13%	\$ 5
Fixed Rate Share Certificates:			
12-35 months	6.75%	6.98%	500
36-59 months	7.25%	7.52%	1000
60-72 months	7.75%	8.06%	1000
Variable Rate Share Certificates:			
48-72 months	*	*	1000
Money Market Share Certificates:			
26 weeks	**	**	1000

\*Rate is based on the higher of 7.75% or 1% below the average 4 year rate for U.S. Treasury securities as determined each month.

\*\*Rate is based on the 6 month Treasury Bill average auction discount yield established at the most recent weekly auction. (Contact the Credit Union to find out the current rates.)

On regular share accounts, dividends are earned for the month if funds are deposited by the 10th of the month. Dividends are paid quarterly and, if funds are withdrawn before the end of the quarter, dividends are lost on the amount withdrawn. The dividend rate on regular share accounts is anticipated to be 6% but is, of course, dependent upon earnings being available to cover all dividends.

On share certificates, dividends are dependent upon sufficient earnings being available for that dividend period. While it is anticipated that sufficient funds for the specified dividends will always be available, Federal regulations prohibit payment of dividends in excess of available earnings.

Dividends are compounded daily on share certificates and posted to those accounts on the first day following each calendar quarter; an exception is the Money Market Share Certificates upon which Federal regulations do not allow compounding of interest. Dividends are paid at maturity on the Money Market Share Certificates.



RECENT GRADUATES under Sandia's Educational Aids program are (front row) Randy Dabbs (4251), MS-EE, UNM; Neita Tucker (3252), BSBA, UofA; John Bornholdt (2454) MS-EE, UNM and Larry Jennings (2454), BS-Math; UofA. Standing are Lettie Carroll (4313), BS-Psy, UofA; John Garcia (3653) BSBA, UofA; Larry Holmes (3253), BSBA, UofA; Silviano Candelaria (2553), BSBA, UofA; Soila Brewer (4337), BSBA, UofA; Arthur Ahr (2654), MA-Bus. Ad., Highlands; Viginia Podvin (1247), MA-Bus. Ad., Highlands; Jean Gaeddert (3543), BSBA, UofA; and Joe Honest (2454), MA-Bus. Ad., Highlands.

Posted dividends may be withdrawn without penalty at any time, but if left on deposit they continue to accrue dividends at the same rate as the certificate.

All or part of the principal amount of a share certificate may be withdrawn at any time; however, early withdrawals of principal must be in multiples of \$500. If certificate funds, other than dividends, are withdrawn prior to maturity, a substantial penalty is imposed.

Each member's account is insured to \$40,000.

**Bonus Dividend On Regular Share Accounts** — We are pleased to announce a bonus dividend on regular share accounts for the second quarter of 1979. The bonus dividend, 1/2 of 1%, was added to the 6% dividend for an effective annual rate of 6.50% for that quarter.

## Take Note

Besides those shown in the photo above, a number of other Sandians have recently graduated or received advanced degrees.

Awarded PhD's are Charles Albright (1473) and James Kelsey (5613). Master's degrees have been bestowed on Frances Armijo (3433), Serafico Carrillo (3253), David Devore (4542), Hazlet Edmonds (3511), Kermit Goettsche (1711), Sandra Green (3644), Charles Hills (5822), Adrian Jones (5532), and John Mareda (2251).

Those receiving bachelor's degrees include Wanda Cupp (3322), Edwin Hawn (1472), Larry Stephenson (5831), Stan Love (1417), Katherine Ward (1000), Irene Leyba (4200), and Betty Mathis (4200).

\*\*\*

Colloquium for Wednesday, July 25, features Prof. John Kessell, a recognized historian of the Spanish Southwest, whose talk is entitled: "From dust to dust, the missions of New Mexico since 1776." The colloquium begins at 10 a.m., Bldg. 815.

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If you plan that far ahead, the State Fair dates this year run from Sept. 12 to 23, with the premier event — the parade — set for Saturday, Sept. 15. Entertainers at Tingley include Benitez, Pride, Rabbitt, Milsap, Rogers & Smith, but not all on the same night.

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A rather little publicized development became effective April 1 when, under a new ruling by the New Mexico DMV, motorists will now "own" their license plates. If you sell your car, you take off the plate and put it on your next vehicle. If you don't place it on another vehicle within 30 days, you are then required to surrender the plate to a DMV office. No additional fees will be charged under the new setup. Plates will be replaced only when the old one is lost, stolen, or becomes illegible. We suggest you call DMV if you have need of further information.

THIS IS THE "BEFORE" — Last month Ben Armijo of Reclamation & Custodial Division 3426 glumly noted that the Tech Area was beginning to resemble the back yard of a confirmed junk collector. But since then Ben and his crew have pushed, hauled and toted some 600,000 pounds of stuff away, including the odds and ends in this picture, and the Tech Area grounds have been transformed.



## Fun & Games

**Biking** — We had an interesting note from retiree C.W. (Dick) Dickinson following our article on bicycling to work. Dick lives in Sun City, Ariz. and writes: "Bike riding is something Sun Citians are quite familiar with. I look out from my patio at 7 a.m. and see a convoy of bikes 50 strong with a flag waver in front and one behind. Reaching a crossing, the front man stops and waves furiously until the last biker passes. And woe betide the driver of an auto or golf cart (of which there are hundreds) if he doesn't stop on the dot!"

Our Plant Engineering contact relates that work to construct a paved bike path from inside the Gibson Gate across the school yard should begin this month. The bike path will lead into the military housing area; from there, it's an easy shot into the Labs.

\* \* \*

**Skiing** — Here's the present schedule of Coronado Ski Club trips: Steamboat Springs, Jan. 12-19; Telluride/Purgatory, Jan. 25-29; Best of Colorado/Dillon, Feb. 3-8; Crested Butte, Feb. 15-18 & 22-25; and Utah, March 15-20. Fast trips are also planned to Wolf Creek and Monarch in December, Purgatory in January and March, and some one-dayers to Taos. Bob Butler, 4-3126, has additional information on these trips.

\* \* \*

**Running** — If you're looking for a different kind of run, you might consider the 4th annual Taos Ski Valley to Red River & Return Running Tour, being organized by Pete Richards (5132) for the weekend of July 28 and 29. The first day's route takes you over Wheeler Peak (New Mexico's highest), while the return run on Sunday goes over Gold Hill. Pete notes that the more participants (and vehicles), the more variations and greater ease of logistics. What's it like? We'd say several La Luz trail runs, back-to-back.

\* \* \*

**Tennis** — Local pros are being engaged by the Sandia Tennis Assn. to give lessons to Sandians, their spouses and kids. The kids' lessons are set for Tuesday and Thursday mornings at the C-Club courts starting July 24. Cost for four lessons is \$4. For beginning adults, there are lessons on Tuesday and Thursday evenings after work and, for intermediates, lessons on Monday and Wednesday evenings. These begin the week of July 23 at the Albuquerque Academy courts, and the series of four lessons costs \$6. The number of participants is limited; call Chris Morgan on 4-9854 to sign up.



PASSENGER TRAFFIC AGENTS: (standing l to r) Shirley Cleary, Donnie Papineau, and supervisor Sandy Borgrink; (seated l to r) Archie Stannish and Pat Maurer. (Onella Allen was not available for the picture.) These six Sandians attended TWA's training school in Kansas City to learn to use the PARS equipment.

## PARS Means Fast Travel Arrangements

Programmed Airline Reservations System (PARS) has recently been installed in Travel Planning and Reservations Section 3743-2. Sandy Borgrink, supervisor of the group, explains: "PARS is a computerized reservations system. It gives us instant access to flight availability and schedules anywhere in the world. With a direct link to TWA's central computer in Kansas City, Sandia's travel section and SATO now have the same up-to-date equipment as the airlines themselves."

Before PARS, the making of reservations following preliminary discussions with the traveler required one or more telephone calls to each of the airlines involved. With PARS those calls are eliminated. For Sandians this means that during your initial call to Traffic, your flight is arranged and confirmed, and hotel and rental car requests made.

All aspects of travel arrangements are now speeded up. A CRT for each of the five

passenger traffic agents provides instant access and retrieval of information required to complete the reservation; a copy printer produces a copy of all information pertinent to the confirmed reservation; and another printer produces the ticket, thus eliminating hand-written tickets.

"It's Traffic's great leap forward," says Sandy. "We move people — fast."

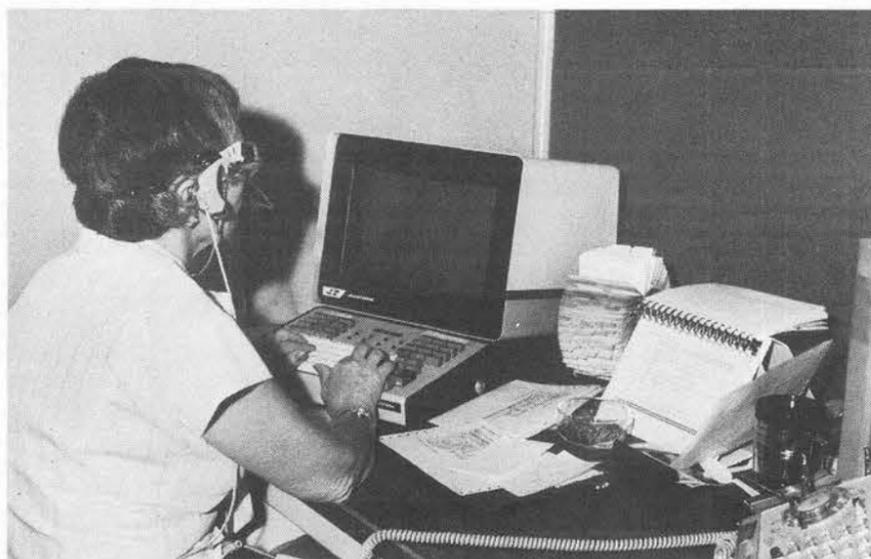


With the cost of gasoline sailing higher than a spring kite, drivers do almost anything to squeeze the last mile from a gallon of gas — except drive 55 mph. As a last resort, we presume they may even decide to give that a try. Continental Oil Company (Conoco) did, with impressive results. They demanded that the drivers of their fleet of 200 tractors and 400 trailers (who log 25 million miles a year) drive no faster than 55. Gas consumption dropped 25 percent. Not all this savings could be attributed to decreased speed, but the lion's share could. Conoco also found ways to improve the aerodynamics of their rigs and used proven concepts like radial tires, fuel-efficient diesels and improved clutches to boost their miles per gallon.

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CATEGORY-INF SUBJECT-LAX ...
01 THURSDAY JULY5 1979
02 ABQ 90F/32C 60F/15C PRTLY CLDY-20PERCENT CHCE OF RAIN
03 LAS 105F/40C 69F/20C SUNNY DAYS - FAIR NITES - WINDS 15/25MPH
04 LAX 75F/23C 60F/15C SOME AM CLDINESS - SUNNY DAY - WARMER
05 PSP 105F/40C 75F/23C CONTD DRY
06 PHX 105F/40C 78F/25C SUNNY - WARM
07 RNO 85F/28C 45F/7C FAIR/BUT SOME ISOLATED THUNDERSTORMS
08 TUS 100F/37C 70F/21C SUNNY AND WARM
09
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THIS COPY FROM THE PRINTER shows weather conditions for specific areas. Other information is available too — skiing conditions, shows playing in Las Vegas, London and on Broadway; currency conversion rates, etc. This information is passed on to the customer via telephone while the reservation is being made. PARS can also make arrangements for other services such as special meal requirements or assistance in transfer between flights.

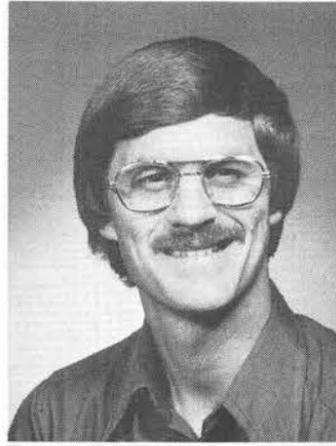


SHIRLEY CLEARY reads PARS display screen to determine best itinerary for her customer. She has instant access to all domestic and international flight schedules and seat availability, types of fares (super saver, excursion and the like), fare quotes, hotel and rental car availability, tour arrangements, credit card validation, in-flight movie and meal schedules, and much more.

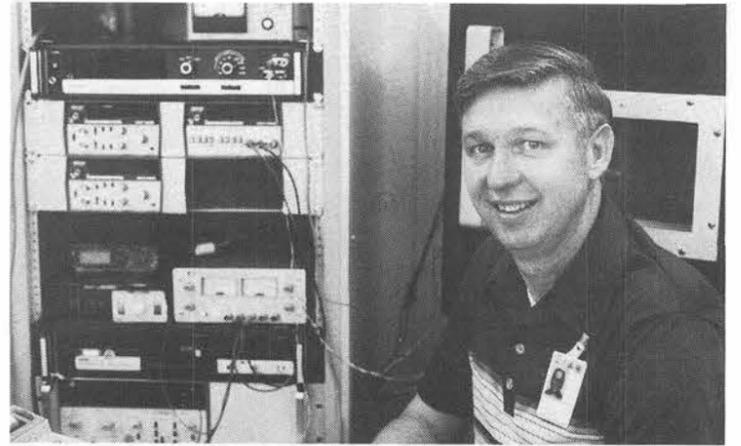
# MILEPOSTS

## LAB NEWS

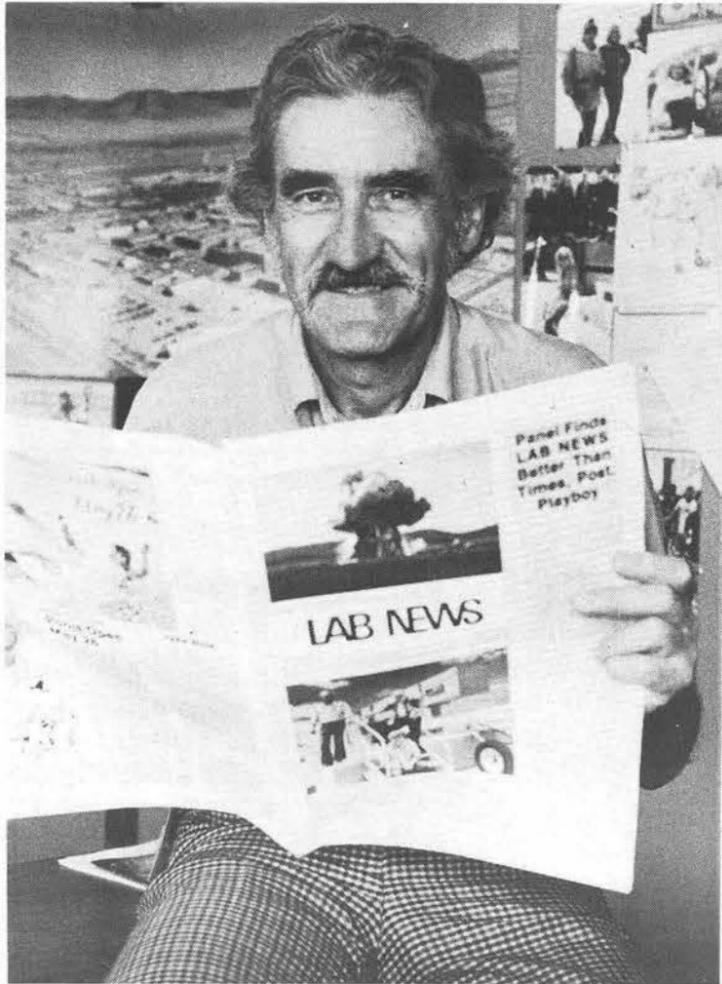
JULY 1979



Mike Nielsen - 3651 10



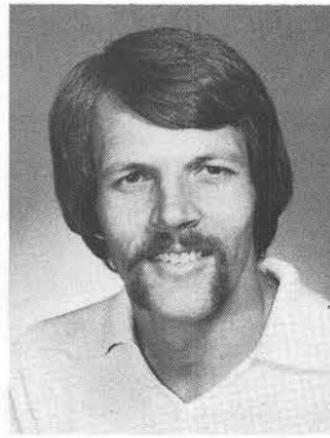
Garth Fahrback - 2326 20



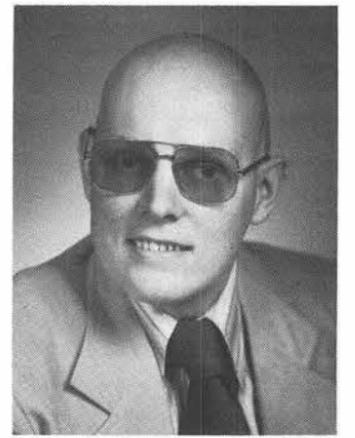
John Shunny - 3162 25



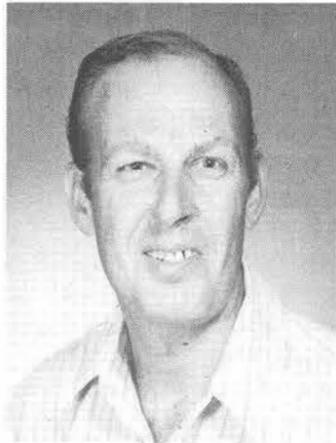
Les Jones - 8463 20



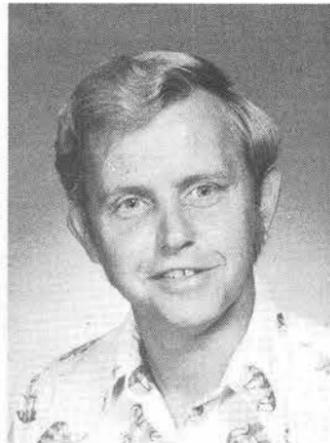
Alan Spencer - 3611 10



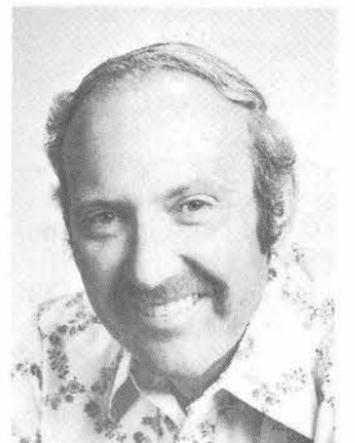
Ted Dellin - 8451 10



Howard Seltzer - 2455 15



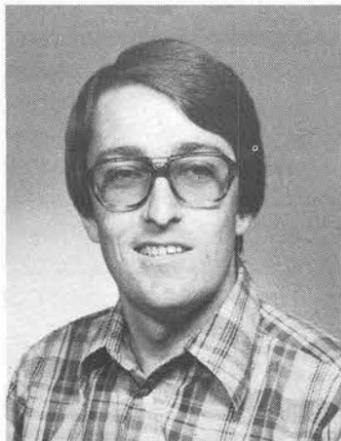
Kevin Lynch - 2457 10



Dave Dean - 8111 20



Tony Veneruso - 4736 15



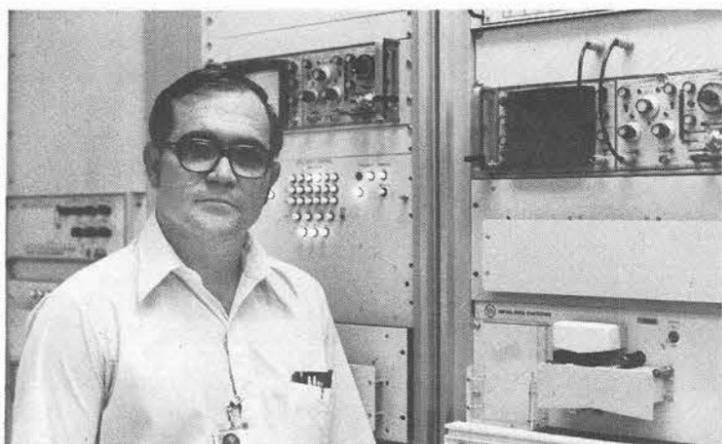
Paul Hatch - 2457 10



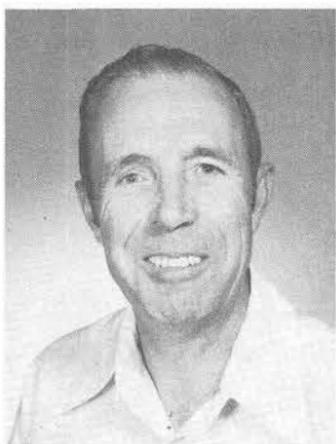
Max Richter - 3411 30



June Moore - 3141 30



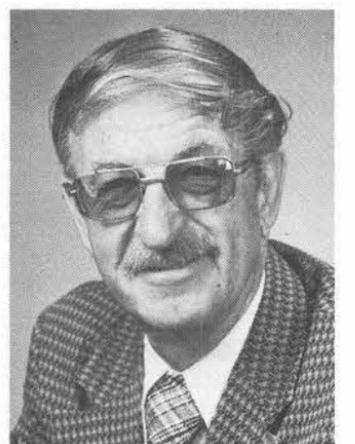
Ray Jones - 1242 15



Norman Baker - 4311 20



Bob Tockey - 8461 25



Cliff Selvage - 8420 25

# Retiring



John Atencio (1473)



Bill Lewis (1127)

# Pre-register for T-VI

Pre-registration for T-VI's fall trimester runs from July 23 to Aug. 10, while registration itself takes place Aug. 29 and 30 for those accepted into classes.

Sandians may enroll in T-VI evening courses on a cost-free basis provided the course is job-related or supports a job to which the employee can logically aspire.

Pre-registration forms and T-VI catalogs may be obtained from Ruth Brooks of Education and Training Division 3521, Bldg. 632. The T-VI forms as well as Sandia enrollment cards must be validated by Division 3521 if you wish to take the course at no cost. T-VI classes start Sept. 10.

## JUNK • GOODIES • TRASH • ANTIQUES • KLUNKERS • CREAM PUFFS • HOUSES • HOVELS • LOST • FOUND • WANTED • & THINGS

### CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday. Mail to: Div. 3162 (814/6).

#### RULES

1. Limit 20 words.
2. One ad per issue per category.
3. Submit in writing. No phone-ins.
4. Use home telephone numbers.
5. For active and retired Sandians and DOE employees.
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

- LOVESEAT, plaid Herculon, \$75. Brown, 298-1303.
- CAMERA, Yashica TL Electro X, 35 mm SLR w/electronic flash, 2 x tele-extender, case, \$150. Stump, 293-1272.
- SEARS power mower, 20" rotary, 2 1/2 hp, \$20. Csinnjinni, 299-1249.
- FREE: 7-mo. puppy, black & tan Doberman markings; dog house included. Busse, 881-4153.
- 10 ADOBE FORMS, each makes 4 bricks, \$1.50 ea. as is. Baxter, 344-7601.
- FLOOR POLISHER; B&D elec. edger; push-type lawn mower. Lambert, 293-8825.
- SOFA, 82" Kroehler, green naugahyde, \$135; 30"x30" end table, \$15; 41" table lamp, \$25. Petruno, 265-1826.
- 10 1/2 MITCHELL cabover camper, gas or elec. refrig., heater, 4-burner stove, bathroom, sleeps 6, storage space, \$2500. Knee, 268-1169.
- COOK STOVE, wood burning, 6-lid, oven, warmer, porcelain on all doors, 1/2 price of new one; 2 shallow well water pumps w/pressure tanks; deepwell jet pump & tank. Gregory, 867-2432.
- LARGE jigsaw puzzles, \$2 ea., 3 for \$5. Pope, 255-6702.
- HAM RADIO, HW22-40m.-comp. operating station, \$140 or trade for 2 meters. McCammon, 255-6125.
- CARTRIDGE VIDEO GAME, \$125; stereo w/turntable, 8-track, cassette, \$150; 4-chan. R.C. system, \$100; chord organ; guitar. Kubas, 883-3030.
- STEREO, AM-FM receiver, 2 small floor speakers, Realistic turntable, \$50; vanity, 4-drawers, lg. mirror, \$50. Smith, 299-7151.
- 11,000 BTU Fridge King recreation vehicle air conditioner, used 2 weeks, \$360. Smith, 299-1981.
- BOOKCASE w/built-in desk, contemporary, walnut, 15" deep, 59" wide, 70" high, \$175. Marion, 294-8256.
- SAND WEDGE X31, wide bottom flange, \$15; bed frame, adjustable, on casters, \$7.50. Stang, 256-7793 after 5.
- GIBSON SG custom & case, \$350; speaker cabinet w/15" Jensen, \$50. Baca, 296-8474.
- BALDWIN Orga-Sonic concert organ w/Leslie speaker, walnut cabinet & bench, \$750, consider offer. Lyon, 299-9423 or 884-8515.
- BED FRAME, hardwood, full size, includes headboard, footboard, & 2 sideboards, needs refinishing, \$15.

- Joseph, 299-6989.
- HOMELITE grass trimmer, Model ST 101, used a few times. Nelson, 881-0148.
- COVERED utility trailer, tandem axle; Datsun tool box; women's folding bike; 3'x5' mirror. Westerdahl, 298-6429.
- PHILCO FORD refrigerator, 14 cu. ft., \$100 or best offer; Jensen stereo speakers, 90 watts/channel RMS, \$200 or best offer. Corradini, 266-4307.
- PIANO, remodeled upright, matching bench, light finish w/mirror. Caster, 299-1239.
- POOL TABLE, full size, non slate, incl. balls & cue sticks, first \$100 or highest offer. Rueb, 299-4805.
- ANTIQUA SOFA & chair; canopy dbl. bed; 30" trundle bed w/2 mattresses; lounge chair; '67-72 Ford pickup rear windshield; misc. items. Garcia, 256-7606 after 5:30.
- LOWREY French provincial console piano, tuned regularly, \$1250. McLroy, 8907 Los Arboles NE, 299-4977.
- BOOKCASE HEADBOARDS: 2 single size, antique green, \$10 for the pair. Williams, 299-1631.
- SINGER 401 sewing machine, reconditioned, cabinet & bench, all attachments, \$150. Tabor, 299-0490 or 299-5272.
- LAVATORY SINK, cerulean blue, hardware, \$10; 5-week-old pups, father Samoyan, mother Keeshound. Rakoczy, 881-1372.
- CUSTOM DRAPES, yellow, less than 2 yrs. old, 1 pr. 176"x85", 1 pr. 110"x85" w/decorator rods, \$150. Reinhardt, 296-1815.
- EDELBROCK intake manifold for small block Chevy; Holley 850 double pumper carburetor, \$110. Arnold, 281-5542.
- 30" MAGIC CHEF elec. set-in range, self cleaning, 3 yrs. old, needs oven relay replaced, \$40. Unkelhaeuser, 281-5624.
- MITCHELL Fishing Hut, icebox, heater, stove, elec. pump, radio, jacks, \$1000. Himes, 869-6559.
- DINING ROOM SET: 8-piece French provincial, oval table w/2 arm chairs, 4 side chairs, china hutch, set \$450; table & chairs, \$250; hutch, \$250. Montoya, 881-6898.
- WROUGHT IRON etagere, 6' high, 4 glass shelves & plant hanger, \$60; box spring, 72x37", new, \$40. Dalphin, 265-4029.
- ROOF-MOUNT COOLER, 4300/4800 CFM, down discharge hole, size 14"x18", complete, \$80 cash. Williams, 266-6724.
- ALUMINUM STORM DOOR, left opening, 35 3/4" wide; Swing-O-Matic baby swing; circular baby walker. Bonahoom, 296-4450.
- SWAN Mark II linear amplifier, \$450; 2 meter Handi Talkie, \$125. Cochrell, 298-2068.
- REFRIGERATOR, 19.3 cu. ft., Coldspot, gold, ice maker, \$350; washer/dryer, avocado, set, \$150; sofa, 84", beige, \$135. Mortensen, 298-5348.
- ROYAL elec. port. typewriter, 5 yrs. old, manual return, \$100; Kodak Colorburst 50, 2 weeks old, \$37.50

- new, \$25. Jennings, 299-3082.
- KITCHEN SINK, porcelain, dbl. basin, white, 32x20, for Hoffman or other home w/wall mounted faucets, \$15. Sherwood, 299-2169.
- KITCHEN CABINETS, including elec. stove top, hood, elec. self-cleaning wall oven, sink, counter top, complete or separate. Borgman, 299-6010.
- STRATFORD T-cushioned chair & ottoman, \$70 or best offer; chrome-formica table & 4 chairs, \$70 or best offer. Shieler, 881-8723.
- WIRE HAIR Fox Terrier puppies, AKC reg., good blood line. Pink, 292-0146.
- CAR TOP CARRIER, Sears, \$30; Admiral refrig., \$75; Westinghouse heavy duty washer, \$125; 5 hp engine, Briggs & Stratton, \$100. Hatcher, 266-0932.
- GE 40" stove; Westinghouse elec. roaster. MacGibbon, 881-1657.
- IBM Selectric, \$200; Hammarlund SP600 receiver, \$150; Hewlett-Packard 8 1/2x11 plotter, \$100. Scott, 281-5715.
- SOFA w/matching love seat, Herculon green pinstripe in contemporary style, \$275. Ratzel, 821-7089.
- FOUR wheel rims from '72 Camaro to fit FR-78-14 tires; hardwood, single, bedroom suite. Jennings, 255-5950.
- WASHING MACHINE, \$85; rural mail box, \$5. Falacy, 293-2517.

### TRANSPORTATION

- SCHWINN Suburban, mens' 10-spd., \$85; '74 Glastron V178 open bow, 115 hp outboard, \$3900. Robertson, 299-7561.
- '72 DODGE Dart, 4-dr., rebuilt engine, R&H, AT, \$1250. Steck, 299-2313.
- '66 FORD Fairlane, 289 V8, 2-dr., bucket seats, \$300. Rios, 299-8188.
- '73 PONTIAC Gran Safari, 9-passenger, all power, \$1750 or best offer. Cohn, 296-0262.
- '71 VEGA, blue, make offer. West, 281-3460 or 345-4827.
- '72 CHEVROLET Impala, AT, PS, radio, new brakes, \$750. Gonzales, 247-9406.
- '76 MERCURY Bobcat wagon, low miles, below book. Kubas, 883-3030 or 294-5675.
- '78 CHEV. pickup, 3/4, long bed, Scotsdale deluxe, AT, PS, PB, AC, fiberglass camper shell, 15,000 miles, reg. gas, take trade. Roeder, 881-9472.
- '73 YAMAHA 360 Enduro, 6500 miles, torque induction, new rubber & brakes, O&M manuals. Manhart, 268-3017 after 6.
- BICYCLE: man's 5-spd., \$60. Williams, 299-1631.
- '76 FORD F-250, 4x4, 360 C1, 4-spd., PS, PB, LWB, dual batteries, dual aux. tanks, 34,000 miles. Walla, 299-2209.
- '68 OLDS Cutlass, as is, V8, PS, PB, AC, \$250. Brunacini, 344-7456.
- '73 MOTOR HOME, Explorer, 20', many extras; 300 Savage rifle. Singleton, 299-1613.
- HONDA 90 trail bike licensed for the road, new tires, \$225; 10-spd. Sears touring bike, \$80. Whan, 268-0687.
- '76 MALIBU str. wgn., AT, AC, PS, PB, 41,000 miles, \$2395. Eversgerd, 265-2303.

- YAMAHA 200cc twin, less than 3500 miles, \$600. Whitley, 842-6715.
- BOAT, 17' fiberglass w/50hp motor & HD tilt trailer w/spare tire, \$995. Rodriguez, 296-3277.
- '77 LTD Landau, 6800 miles, fully equipped, \$8700 new, sell for \$5800. McMaster, 884-8055.
- '74 CHEV., 3/4 ton vCamper Special, AT, AC, PS, PB, new tires-brakes-paint & overhaul, \$3000. Kerr, 299-7527.
- '76 HONDA Civic, 4-spd., 42,000 miles, SB radials have less than 5000 miles, \$3000. Headrick, 299-0119.
- '72 DODGE pickup, 4-spd., short bed. Mangan, 298-9448.
- '54 CHEVY 1/2 ton pickup. Sanchez, 298-4680 after 5.
- '74 MERCEDES BENZ 280S, Blaupunkt, AM-FM, long-waves, Cassette recorder player, auto., sunroof, 6-cyl. Yaniv, 821-0009.
- 15' 4" CHRYSLER Courier boat; 105 HP Chrysler motor w/power trim; 16' Moody trailer; ski equipment, many extras. Dougherty, 264-8486.
- '74 TOYOTA Corona, reg. gas, 23-25 city, 30 highway, orig. owner, low mileage, \$2500. Burgess, 296-4254.
- '73 DODGE VAN, 3/4 ton, long wheel base, pre-pollution control, 2-bar. V8, new tires. Packwood, 292-1739 or 821-8282.
- '69 FIREBIRD, 350, AT, PS, vinyl top, recent rebuild, one owner, sb radials, \$1200 or best offer. Scott, 281-5715.

### WANTED

- CABIN or cabin site in Jemez Mountains. Carne, 296-4219.
- UTILITY TRAILER in good condition. Dancolec, 293-6663.
- JOIN CARPOOL from residence near San Pedro & San Antonio to Labs. Binkley, 821-1210.
- PASSENGERS to share expenses of 4-to 5-hr. weekend/holiday flights to Austin/Houston area in Cessna-182, dates negotiable. Schkade, 265-5473.
- RETURNING male employee willing to house sit short term basis July/Aug. Aterburn, 299-3620.
- PUPPY, Peke-Poo or Peke-Poo-Poo, F. Roberts, 255-9527.
- BICYCLE, Ladies Mixte 10-spd., 19-20". Cafferty, 898-3102.
- SANDIA WOMEN for winter bridge marathon/1 night per month. Sheldon, 293-0467 or 821-2187.
- PERSON to repair Hi-Fi equip: tuner-amplifier, turntable, 2 speakers. Hawk, 255-7752.
- TWO-MAN carpool, Kachina Hills-I to gate 1 or 11. Rand, 299-1048.
- PLUMBER for 1 or 2 days. Sena, 881-6659 between 7-8 a.m.
- HOUSE to house-sit or rent from 8/1 to 8/25/79; have child & 2 dogs. Mitchiner, 281-3086.
- AVON rubber boat, \$250 or \$300, or equivalent, need motor too. Benson, 255-3094.
- SLEEPING BAGS for backpacking, mummy style only. Boverie, 255-1071.

### WORK WANTED

- SWIMMING LESSONS, private or small group, experienced instructor, references. Atkins, 298-5762.

### REAL ESTATE

- 3-BDR. HOUSE, carpeted, new paint inside & out, carport, 2 patios, 18x24 bldg.; 2 mobile home lots rented. Gregory, 867-2432.
- FIVE ACRES in Manzanos, 25 mins. to Sandia. Condit, 281-3788.
- 10 ACRES grassland, 10 miles NE of Edgewood in S.F. County, Moriarty school dist. Arsenault, 281-3758.
- 3-BDR. HOUSE, 1 1/4 bath, lg. den, fp, hw floors, new heating system, carpeted, circle drive, 2 patios. Caster, 299-1239.
- 1824 SQ. FT., 3-bdr., 1 1/4 + 1/2 bath, schools, shopping, I-40 close; \$73,000 at appraisal, 9.2% financing, CTL \$26,800. Bolduc, 298-9985.
- TWO adjoining lots, Deer Lake Estates, 10 miles east of Cuba in S.F. Nat'l Forest. Benson, 268-3586.
- WOODED 1/2 acre in Sherwood Forest, 50 miles from ABQ, \$1500, payments accepted if necessary. Tabor, 299-0490 or 299-5272.
- MOBILE HOME, 3-bdr., 2 full baths, new carpet throughout, \$15,000 or best offer. Sena, 296-5619 or 881-6659.
- 12 ACRES Frost Road area, East side view of Sandias, \$46,000, terms or \$42,000 cash. Ault, 281-3280.
- 4-BDR., 3-yr.-old house, 1940 sq. ft., \$64,500 total price, \$28,500 ctl or refinance at 9 3/4% (\$5700 minimum down). McBride, 299-4347.

### FOR RENT

- 2-BDR., 1 1/2 bath, Condo, NE, all utilities paid, \$365/mo., plus \$150 cleaning deposit, lots of amenities. Orlando, 883-6980.
- LG. 2-bdr. duplex, unfurnished, private backyard (maintained), patio, garage, stove, ref., dishwasher, \$240 + gas/elec., near base. Konnick, 265-1409.
- CONDOMINIUM, unfurnished, 3-bdr., 2 baths, atrium, patio, pool privileges, immediate occupancy, \$525/mo., first, last, \$150 DD. Lawrence, 344-9973.
- NEW TOWNHOUSE, unfurnished 1 & 2-bdr., avail. Aug., \$210 & \$240, 2 miles from Base. Gallegos, 255-5264.
- HOUSE, \$375/mo. first & last mos. rent, \$200 DD, 600 Cagua SE, 1 1/2 miles from base. Souther, 842-9630.
- 3-BDR. HOUSE, near Sandia High, drapes, carpets, all appliances, \$425/mo., available Aug. 1. Renken, 296-9713.
- HOUSE, Montgomerie-Eubank area, avail. 8/20/79 - 9/1/81; 1900 sq. ft., 3-bdr., 2 bath, study, den w/fp, dbl. garage, landscaping w/sprinklers, \$475/mo. Ratzel, 821-7089.

### LOST & FOUND

- LOST — Ladies' white cardigan sweater, ladies' digital watch, briefcase w/phone list pocket guide, brown Rx safety glasses, 4 microscope slides.
- FOUND — Two small brass keys, silver square earring for pierced ear. LOST AND FOUND, Bldg. 832, 264-1657.

**Coronado Club Activities**

# Remember The Good Old Days

TONIGHT the Bob Banks Trio returns to the Happy Hour bandstand while Club manager Pat Corcoran and the staff serve a special seafood Bouillabaisse for the buffet. Next Friday sees Smoothie wired into the bandstand, barbeque ribs on the buffet. To reserve buffet tickets call the Club office, 265-6791, by midweek.

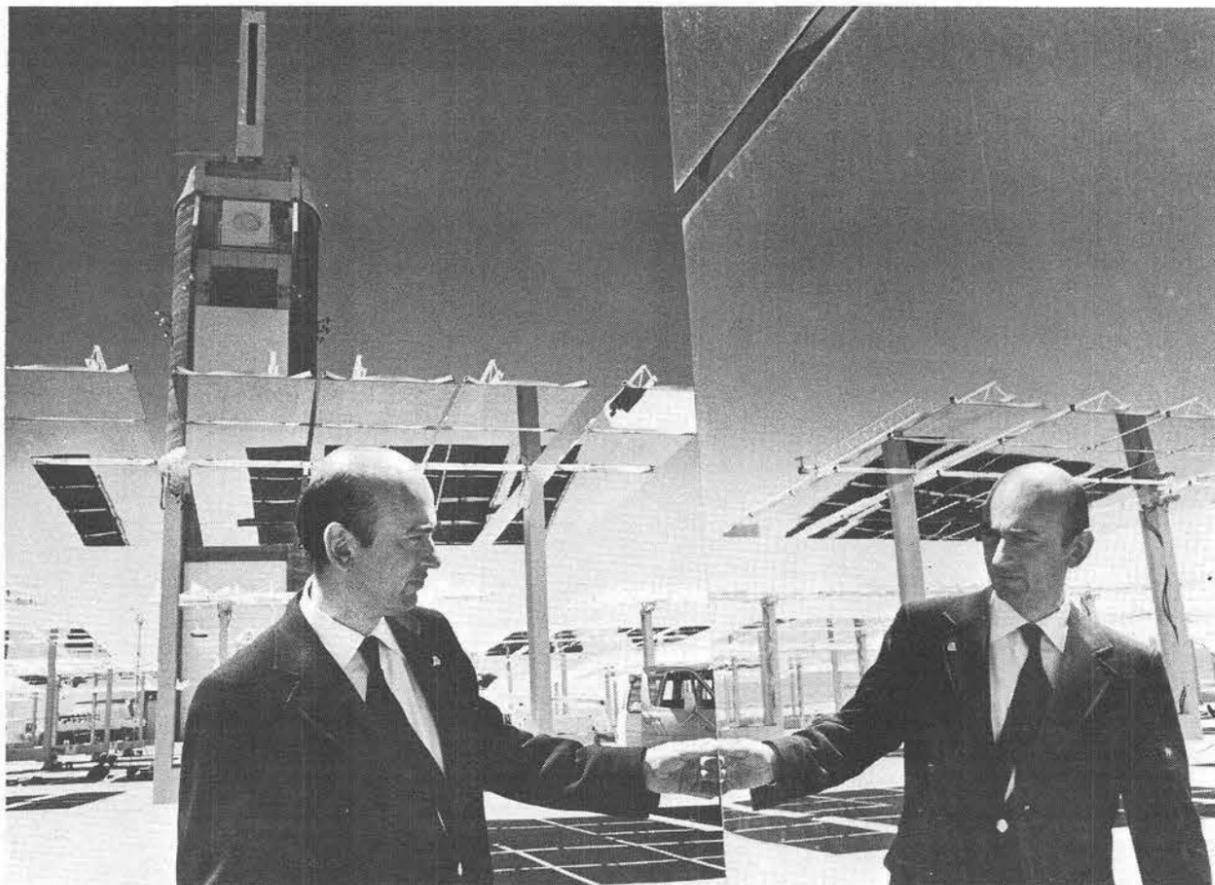
"THE GREAT NOSTALGIA" is what they're calling the big one this month. The event is set for Saturday, July 21, and starts with a veal cordon bleu dinner with the works at 6:30. Local radio personality Ken Dungen provides the music and show from 8:30 to 12:30. He plays all the old records and various performers pantomime to the music. Those who have seen this say it's great fun. Tickets cost \$5.25 for members.

TEENAGERS disco to "Sounds Unlimited" on Thursday, July 26. Member parents should pick up tickets for their youngsters.

CANCUN TRAVELERS will meet at 7:30 Tuesday, July 24, for a post mortem on their trip and show movies and slides. Everyone is invited.

TRAVEL DIRECTOR Ed Neidel has packages to Europe, Hawaii, Mazatlan and Ixtapa. He'll be in the lobby tonight between 6 and 7 with the full scoop.

THE TWIN POOLS will be closed for recreational swimming at 7 p.m. Friday, July 20, and all day Saturday, July 21. The annex



THE AMBASSADOR & THE HELIOSTAT — From Spain comes Ambassador Jose Llado who included Sandia Labs' solar facilities in his four-day itinerary of New Mexico. The diplomat visited Santa Fe, Los Alamos and northern New Mexico, winding up his tour in Albuquerque. Jim Scott (4700) was the ambassador's host during his Sandia visit.

pool will be open from 1 to 5 p.m. on Saturday. The Coronado Aquatic Club is holding a competitive swim meet. You're invited to be a spectator.

SPEAKING OF POOLS, the twin pools and patio area are available for private party rental starting at 6 p.m. any evening of the week except Fridays. Check with the Club office for details.



Cigarette smoking may be more hazardous to your health than you think. A DePaul University study on the effect of irritant air pollution on human aggression shows "that exposure to secondary cigarette smoke significantly increases aggression in both angered and nonangered subjects."

## Events Calendar

July 13-15 — "Our Town," Corrales Adobe Theater, 8:30 p.m., 898-3323.

July 15 & Sundays through Aug. 26 — Free chamber music concerts by the Cimrosa Chamber Players, 2 p.m., Old Town Plaza.

July 16 — Lecture Under the Stars: "Solar Heating in New Mexico," J.D. Balcomb (LASL), 8 p.m., UNM Union Ballroom.

July 20-22, 27-29 — Civic Light Opera, "Company," 8:15 p.m., (Sun., 2:15 p.m.), Popejoy.

July 21 — "Trio Americano," music of North and South America, 8 p.m., Downtown Center for the Arts, 216 Central SW.

July 23 — Lecture Under the Stars: "Old Time Ranching in New Mexico," Stan Steiner, 8 p.m., UNM Central Mall.



THE UNITED WAY — *Share Your Care* is the name of this United Way agency, and its objective is to serve "... the frail elderly and dependent adults and their families." These young musicians performing for the group are Richard, Thomas and Andrea Chavez, the children of Ray Chavez (3155), while the older couple is another generation of Chavezes (Mr. & Mrs. I.F.), Ray's parents. The senior Chavez is a Sandia retiree, class of '61.