

 **LAB NEWS**
CHRISTMAS 1977

Afterthoughts

Ploy revealed -- The Office Procedures Manual, that somber collection of rectitude, is trying to put one over on us. Recently there's been issued a Section 8 (very significant!) for OPM entitled "Abbreviations," and there are things on that list that don't exist in this world. To wit: bel, mho, neper, oersted, siemens, tesla, var, weber and -- our favorite -- poise. Such a put on! We decided their sly game is to see if anyone actually looks through this 4-page listing. What happened is they picked up these words from an old Gothic about Transylvania, and we finally traced down the passage. Here's how it reads: "As the mad Count von Oersted and his henchman Tesla nepered the cringing, multi-limbed var, not one but both siemens began to bubble furiously. The webered Bel, poise akimbo, screamed piteously, 'Why mho?'"

* * *

Sky is falling dept. -- Larry Chavez (3725) sends us an item that says something about your world and mine: "The Journal of Environmental Health has recently warned that an improperly shielded pocket calculator can explode. Researchers have found that any metal object that inadvertently comes in contact with the unprotected battery charge contact points will cause a thermal runaway. This in turn shorts out the nickel-cadmium batteries, and an explosion with enough force to knock a person down will result. Even the lead of a pencil can cause a thermal runaway."

* * *

Well, you can always try low life -- "There is no more mistaken path to happiness than worldliness, revelry, high life."

Schopenhauer, Our Relation To Ourselves

*js

Events Calendar

- Dec. 22-24—UNM Collegiate Singers will carol at Old Town Plaza, 7-9 p.m.
- Dec. 24—"Amahl and the Night Visitors" and Dickens' "Christmas Carol," KHFM 96.3, 6:30.
- Dec. 26-Jan. 1—"Mame," Albuquerque Civic Light Opera, Popejoy Hall, 344-2317.
- Through Dec.—"Finishing Touches," with Russell Johnson, Barn Dinner Theatre, 281-3338.
- Jan. 1-5—"No Hard Feelings," Albuquerque Little Theatre, 242-4750.



If you feel like you're at the bottom of the heap, take hope. Joe Engleberger, President of Unimation Inc., a robot company, says, "I look at this from the sociological viewpoint. There's nobody to look down on anymore. But these robots are definitely not equal to people."

LAB NEWS

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Retiring



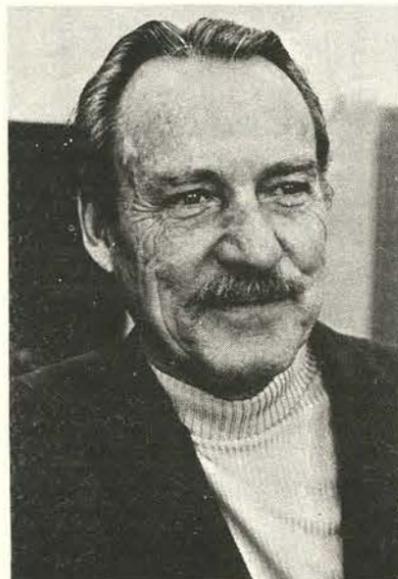
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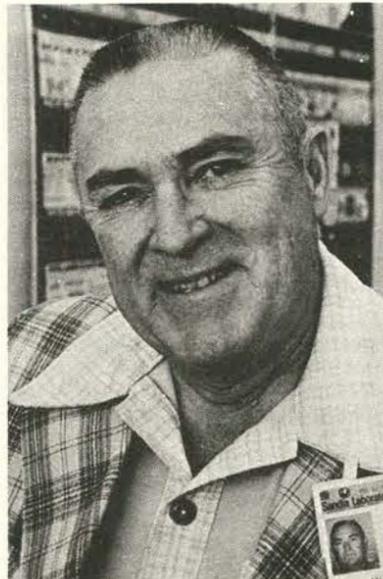
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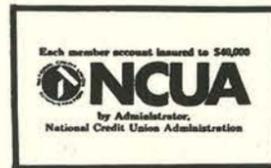


Bill Kingsley (3310)



Ray Mitchell (9583)

Season's Greetings From CU



The Board of Directors of the Credit Union is pleased to announce a bonus dividend for the last quarter of 1977 and an interest refund to those who borrowed money during 1977. The bonus dividend is 1/2 of one percent. This, added to the 6.5% dividend declared for the quarter, equates to a 7.0% dividend for the quarter to all shareholders of record on December 31st. As usual, the dividend will be posted to all accounts on the first working day of 1978. The interest refund will be 5% of interest paid during 1977 to shareholders of record at the end of each quarter of 1977. The refund will be computed and posted to the share accounts December 31st.

During the past year, the law covering Credit Union reserves was modified to require a smaller reserve. This resulted in a one-time surplus of money in our Credit Union. The Board of Directors felt it appropriate to divide the surplus between borrowers and savers since both are responsible for our successful Credit Union.

The Board of Directors and the staff of the Credit Union wish you all a Merry Christmas and a happy and prosperous new year.

Clarence Sandy, President
 Board of Directors

Supervisory Appointment



John Barnhouse, to supervisor of Computer Operations Section, 8323-1, effective Dec. 1.

Joining Sandia/Livermore in 1961, John worked in ozalid, receiving and transportation dispatch organizations for eight years before transferring to the Computing Division as a systems programmer. In 1976 he was promoted to computer operations coordinator.

John has an AA degree in business administration, a certificate from Chabot College, and currently attends Cal State/Hayward. His military service includes six months active duty in the Air Force and five-and-a-half years in the Air Force Reserve.

Off the job, he enjoys golf, photography and playing his electric organ. He, his wife Donna, and their three children, twin sons and a daughter, live on Roxanne Street in Livermore.

Fusion Is Subject of International Exchange

Walt Bauer (8347) returned recently from visits to research institutes in the Soviet Union, Germany and France. Walt serves as chairman of the Plasma-Materials Interaction Task Group formed last year by DOE to study surface problems relating to the practical application of magnetic fusion energy. Representatives from DOE, Oak Ridge National Laboratory and Princeton Plasma Physics Laboratory accompanied Walt.

Purpose was to assess these countries' research into the complex plasma-materials interaction phenomena which occur at first wall surfaces in fusion devices. In addition, the second information exchange on plasma-material interaction took place at the Kurchatov Institute in Moscow.

Soviet papers presented at the Institute were devoted primarily to helium blistering and impurity behavior in Tokamaks. Walt reports that the Russians are pursuing an aggressive surface effects program and are skillfully using the latest U.S. and European information to minimize impurity contamination from walls and limiters of their Tokamaks. However, their hydrogen and helium implantation for fusion are limited in scope.

Walt presented two papers at Kurchatov Institute—one authored by Ken Wilson (8347), "Multiple Energy He Implantation of Stainless Steel"; the other authored with Ken and George Thomas (also 8347), "He Bombardment of Aluminum Coatings and Plasma Sprayed Beryllium."

The group also visited the Baikov Institute in Moscow (principal metallurgical center in the U.S.S.R.), the Efremov Institute in Leningrad, the Institut fur Plasmaphysik in Garching, Germany, and the Fontenay-aux-Roses in Paris.

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LIVERMORE LABORATORIES

DECEMBER 16, 1977

After 35 Years, No More Switchboard

"I like talking to people," says Bertha Frick (8433). It's a good thing. As Sandia's switchboard operator, she talks to well over 200 people a day.

Bertha began her "number please" career with the phone company in Livermore 35 years ago. When the operator function was transferred to Hayward, she had 14 years of service so she transferred too.

After three years, commuting to Hayward became intolerable. She applied at SLL and, 18 years ago, became one of four switchboard operators.

She was the only one left a couple of weeks ago when the new Centrex system came in and the last switchboard went out. "I'll be around for awhile," she says, "but I'm down to a six-button phone, intercepting calls to our old number and offering assistance. I think it's important to have a person in the system somewhere—it's a dead end otherwise." She still provides fast service; she knows several hundred people's phone numbers by heart.



Bertha Frick

Bertha will probably stick around for a couple more years—her 20 year service anniversary is coming up—but retirement is looking good. "Lots of time for gardening and hunting and playing with my grandchildren."

Joan Madsen Is CowBelle-of-the-Year

"Ranching is a very rewarding life, but it's getting harder for the small family ranches to hold on," says Joan Madsen, chosen CowBelle-of-the-Year by the Alameda County CowBelles. As the women's auxiliary of the Cattlemen's Association, the CowBelles' main interests are in the beef industry and its promotion through consumer education.

Joan has been at Sandia/Livermore for 18 years, first as a secretary and for the past two years as a graphics programmer. She works with computer graphics, digitizing and plotting printed wiring boards and integrated circuits, making the masters for printed circuit boards.

An active CowBelle member since 1965, she has served locally as parliamentarian, historian, vice president and, most recently, president of the 150-member Alameda County chapter. She is current membership chairman.

A city dweller, Joan discovered ranch life when she married her rancher husband Louis. They live and own property on Mines Road and lease additional acreage on Tassajara Road. They also own property in Northern California where they run steers during the summer. Ranching can be frustrating, she reports, citing the last several years waiting for rain to end the drought. Range conditions and the cost of hay and grain have forced the Madsens to sell many of their cattle. "I'm in sympathy with the consumer," she comments. "But most people don't realize the cost of producing a beef animal."



Joan Madsen

Sympathy

To Marty Abrams (8124) on the death of his father in Fort Lauderdale, Fla., Nov. 17.

To Lee Ann Hubbs (8323) on the death of her father in Pleasanton, Nov. 30.

To Bill Ashurst (8354) on the death of his father-in-law in Fresno, Nov. 29.

To Joe Bradshaw (8413) on the death of his father-in-law in San Antonio, Tex., Nov. 6.

To Joyce Doyal (8250) on the death of her mother-in-law in Jackson, Calif., Nov. 8.

Supervisory Appointments

MAX NEWSOM to manager of Exploratory Systems Department 1320, effective Dec. 1.

For the past five years Max has headed Drilling Projects Division 5735, which has been concerned with the development of new technology for the geothermal and petroleum industries. The division also had responsibility for DOE's Geothermal Well Technology Program.

Max joined Sandia in June 1956 after earning BS and MS degrees from Texas A&M in EE. His first work at Sandia was in electrical systems development. He was electrical systems project engineer for the development of the Pershing missile warhead.

In 1964 he moved to exploratory systems to head a division developing command and control and tactical delivery systems. He worked on the Jigsaw, Tiger, Rumpler, PAL and PAPS programs.

Leisure time Max spends on Coronado Club activities—he's serving his fourth term as Club president—and coaching a Young America Football League team. He's also on the YAFL Board of Directors. In the winter Max skis; summers he grows roses.

Max and his wife Rose Marie have four children—one a nurse, two in college and one teenager at their home on Eastridge Ct. NE.

CHARLIE BURKS to manager of Systems Development Department I, 4310, effective Dec. 1.

Since December 1966, Charlie has headed several divisions in Systems Development 4300.

He joined Sandia in July 1954 after earning a BS degree in EE at the University of Missouri. Early assignments included



RECENTLY PROMOTED—Charlie Burks (4310), Max Newsom (1320), Don Habing (2116)

systems engineering on the Mk7, Mk28 and Mk43 weapons. After four years of exploratory development work, he returned to systems engineering to head a weapons development group.

Until last year Charlie owned his own plane and did a lot of flying. Nowadays he jogs—about four miles every day.

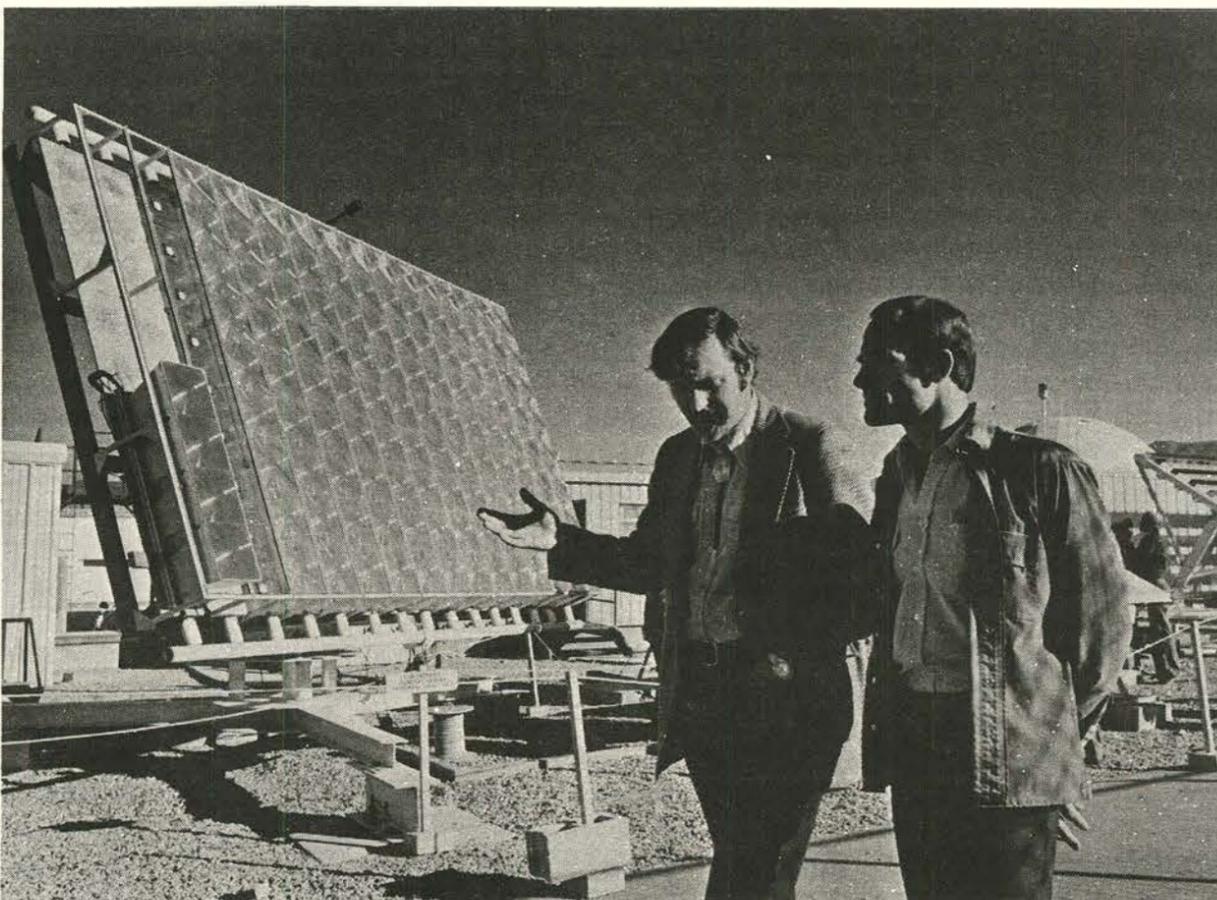
He and his wife Sally have four children—a married daughter, one in college and two teenagers at home on Bear Canyon Rd. NE.

DON HABING to supervisor of MOS-ICS Division 2116, effective Dec. 1. Except for recent months spent with Division 1754, a Safeguards group, Don has been a

designer of CMOS integrated circuits in Division 2116 since 1973. Earlier, he worked with a research group studying radiation effects on electronics and in a component development division.

He joined Sandia in August 1961 after completing an MS in EE at the University of Illinois. Don had earlier attended DeVry Technical Institute in Chicago and then spent two years in the Army Signal Corps at Ft. Huachuca, Arizona.

At home Don considers himself a "do-it-yourselfer," tackling any project from new additions to car repair. He and his wife Ruth have two daughters and two sons—all teenagers—and they live on Moontree Ct. NE.



VP & CONGRESSMAN—Al Narath (VP-5000) conducts California's Barry Goldwater through solar and photovoltaic test facilities at the Labs last week. The congressman and several associates spent the day being briefed on Sandia's energy programs and touring the Labs' energy facilities.

Speakers

R. E. Loehman (5844), "Silicon Nitride Ceramics," Ceramic Research Seminar, Nov. 21-22, SLL.

A. B. Donaldson (2513), J. M. Alcone (5742) and W. P. Schimmel (1261), "Effective Thermal Diffusivity for a Two-Layer Composite Wall Subject to Periodic Boundary Condition"; C. E. Hickox, A. C. Ratzel (both 1262) and D. K. Gartling (1261), "Techniques for Reducing Thermal Conduction and Natural Convection Heat Losses in Annular Receiver Geometries"; R. B. Pettit (5842), "Evaluation of Portable, Optical Property Measurement Equipment for Solar Selective Surfaces"; P. R. Dawson (5162) and E. G. Thompson (Colo. State Univ.), "Steady-State Thermomechanical Finite Element Analysis of Elastoviscoplastic Metal Forming Processes"; W. P. Schimmel, D. O. Lee (both 1261) and C. E. Hickox (1262), "Geometric Considerations of Solar Energy Collection"; W. Herrmann (5160) and R. J. Lawrence (5162), "The Effect of Material Constitutive Models on Stress Wave Propagation Calculations"; A. Veneruso (5736), "A Simple, Cost Effective Solar Collector Temperature Control System"; C. E. Hickox (1262), W. P. Schimmel and D. O. Lee (both 1261), "Tracking and Shadowing Models for Solar Collection Systems," ASME Winter Annual Meeting, Nov. 27, Atlanta, Ga.

Sympathy

To Robert Nagel (2335) on the death of his father in Neligh, Neb., Nov. 28.

To Tom Hinkbein (5824) on the death of his father in Kentucky, Dec. 5.

Christmas '77 At The Labs

Many people at Sandia contribute to Christmas projects in their organizations. The projects—some formal, some not so formal—universally aim at making the holiday brighter for a family or a child whose prospects and fortunes are at low ebb. Here are a few of these projects.

* * *

Org. 9600 Christmas Project—Now in its 21st year, this project uses its donated monies to buy a week's groceries, including a Christmas dinner, for 24 families. Names of the families are provided by the Salvation Army. The goodies are distributed by people in 9600 on Dec. 23. Priscilla White (9651) and Ed Garcia (9657) are co-chairmen of this year's project.

* * *



IT'S HEAVY—Jerry Hastings (9633) and Priscilla White (9651) heft one of the 24 food boxes prepared as part of Org. 9600's Christmas project.



THIS young lady, who lives near Escabosa, shows quiet smile as she stands with bicycle donated by Labs' person.

Shoes for Kids—Another project with a long tradition (20 years), Shoes for Kids is sponsored by Org. 1200 and chaired by George Bradley (1222) and Dick Vivian (1211). Last year the group purchased shoes for 87 youngsters but this year was able to increase that number to 150. Funds are donated by people in the 1200 and other organizations. The kids, from several elementary schools in the city, were bussed up to Kinney's Shoes on Central this week for a mass fitting. Kinney's gets into the spirit of the thing and offers the shoes at discounted prices.

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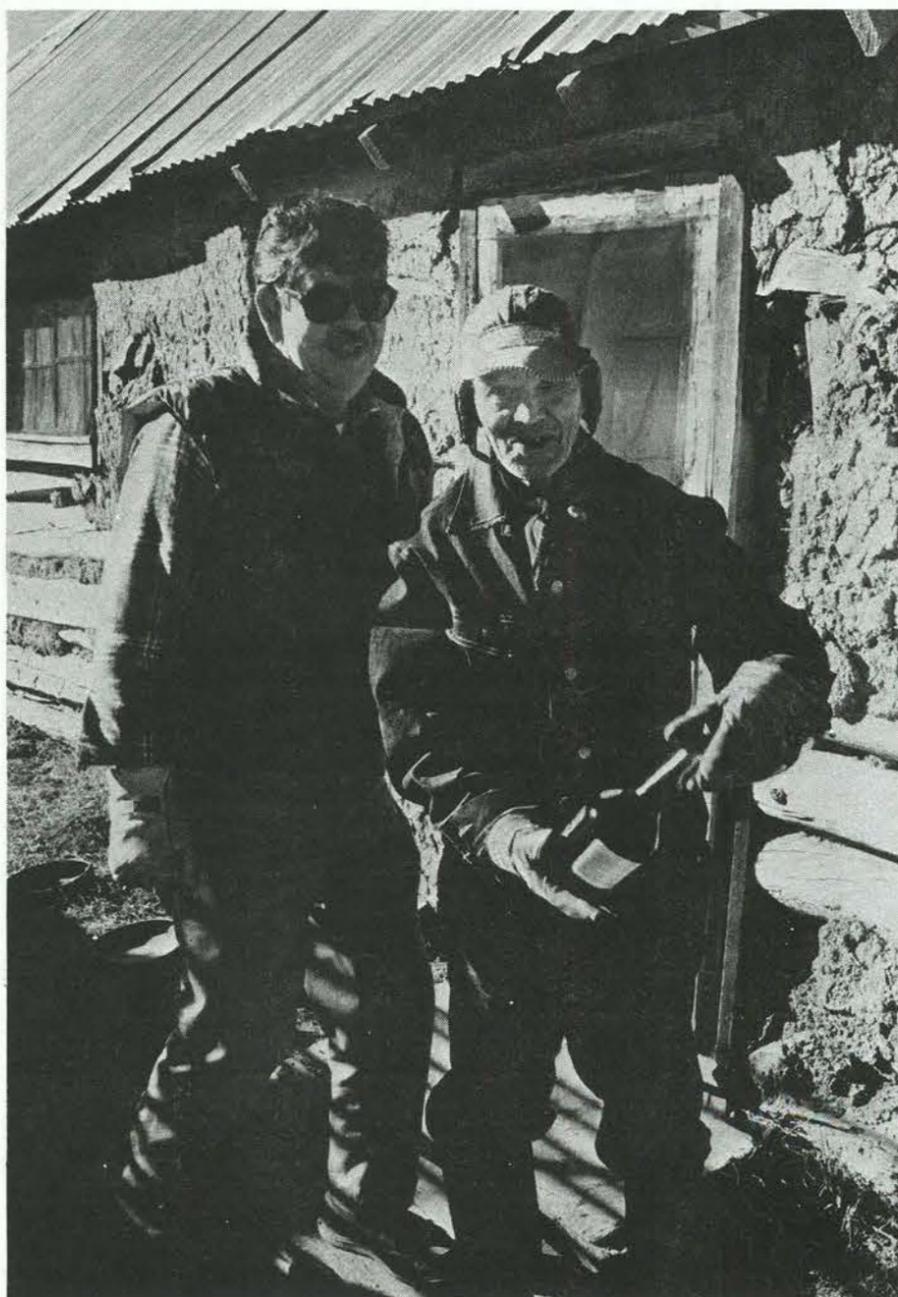
South Highway 14 Village Project—This year, in addition to helping villagers along South 14, the project has provided assistance to the 15 or so boys who reside at the Villa Santa Maria in the small community of Cedar Crest on Highway 14. The boys generally come from less-than-happy homes, are referred to the Villa by a social worker, and some have emotional problems. Project money is buying softball gloves and bats and helping to buy a color TV set for the Villa's recreation room.

Some 25 families in the villages of Escabosa, Chilili, Tajique, Torreon and Manzano are receiving Christmas boxes which include food, new and donated



WIFE of retiree Richard Pass, Frances Pass, is indefatigable knitter and each year is a faithful contributor to Labs' Christmas project. This batch included 25 sets of mittens and hats.

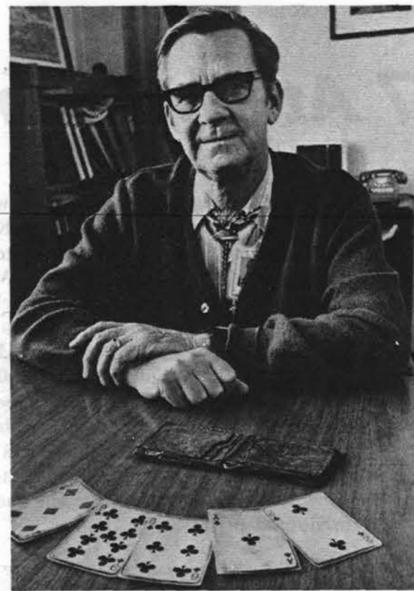
clothing and other household items. Turkeys go to the large families, while canned hams are given to the many "singles"—usually older people living alone. Revenue comes from the used book stands located around the Labs, from luncheons and bake sales by people in Orgs. 3151 and 3152, and from donations. People in Orgs. 3162 and 3512 also work on the Project.



THE old-timer in front of his house outside Chilili received a box of food and this bottle of wine. Julian Sanchez (3512) helps run the South Highway 14 Village Project.



DICK MALONE (DOE/SAO) was playing poker at a gun emplacement on Clark Field in the Philippines when Japanese bombers struck. Cards, wallet and Dick spent three Christmases in Japanese prison camps. Above, his prison ID.



Dec 25-1944 Niigata, Japan
Over 14 months have passed since I have set my pen to this book—14 hard months that will never be forgotten. I had little desire to record things as they happened as the little time and effort it would take could not be comfortably spared. Once again things have been coming our way. The past month has almost been pleasant; the past week has been downright bliss. The 19th of this month the entire camp went into quarantine due to the outbreak of dysentery. Work has ceased, and the 24th Red Cross parcels were

issued to every man. Those who have never been in any position, this will seem very little. They do not know what tobacco, coffee, sugar and small cans of American food mean to us. I will have to list this as my best Xmas. My bill this one, 1944 at the PL prison camp was 14 months we have learned what it is to suffer all the hardships we went thru when we were let taken prisoner in the tropics, again, under more adverse weather conditions. COLD. This country along this coast endures hard winters. And I do mean hard. I will make no

attempt to describe the misery we spent. Now we have good barracks, clothes, simple food, and that which most men desire. May I never spend another winter without heat, unless that is the price to pay to get home. Another luxury we are enjoying now is rest. In Japan people don't rest. It is hard for me to believe that I am not dreaming at this moment. I am lying on my bunk in a warm barracks, (snowing outside) my clothes are clean and warm. I am not hungry. I have coffee and sugar. I have American cigarettes, and my number is posted on the bulletin board as one of the lucky ones who will receive mail today. Bob is here with me enjoying these fine things. We are both well. Yes, this is a splendid Xmas. If only the folks could know at this moment how we are faring. Their Xmas would be much better.

AS A GUNNER with the 200th Coast Artillery, lately out of Carlsbad, New Mexico, then stationed at Clark Field in the Philippines, Dick Malone (head of DOE's Sandia Area Office) acquired the dubious distinction of being among the first captured by Japanese forces in early '42, spent the balance of the war as a POW. Dick relates that of some 300 men who entered the prison camp with him at Niigata, Japan, only 125 made it through the war. He managed to keep a strictly forbidden journal during his imprisonment. Christmas '44 is reproduced here from the pages of that journal. The "Bob" referred to toward the end is Dick's brother, captured and incarcerated with him for the duration. His captors never realized the two were brothers. Bob survived too.



THE SNOW came out of the north, wind-driven and full of rage. The temperature was far below zero.

The Spirit of Christmas Past: Three Relate How It Was

December, 1967—The Navajo Nation

It was the winter of the big snow. The storm had come out of the north full of anger and rage, wind-driven, with temperatures far below zero. No flakes fell—only ice crystals. It went on day after day after day until the Navajo Nation was buried, the surface of the land a long, unbroken sheet of white. The temperature wavered, but never above zero.

Sickness struck—a veritable epidemic of respiratory infections complicated by stomach flu and diarrhea. Hundreds of Navajos crowded around St. Michael's, a small Catholic mission run by nuns. When there was no room for them inside, they stood silently in the storm, blankets over their heads, waiting with stoic patience in the semi-darkness of the blowing snows for the Sisters to call them inside, to treat them, to perform their healing. Then the medicine gave out.

Joe Flanagan (3171), a founding member of St. Jude's Express, a non-denominational flying mission service, picks up the story at this point:

"The call came to us by phone. It seemed distant. There was static on the line and the voice of the Sister kept rising and falling, fading, then pulsing again. It was like a message borne by the wind: 'We need medicines...we need kapectate—all you can bring.'"

"St. Jude's Express had only been organized a short time," Joe recalls, "and since it was the holiday season, we had already used up all our money buying and delivering Christmas items. But the need seemed so urgent, Ed Young (formerly of Sandia) and I bought \$300 worth of medicine on credit.

"When we left Albuquerque, the weather had cleared and the tail end of the storm was far to the east. As we flew, the earth below us was bleak, featureless. Landmarks were covered with snow. Aloft, the air was calm—but when we crossed the New Mexico/Arizona border, our spirits

Ever spent a Christmas away from home? Or celebrated the holiday in some unusual fashion? We found three with interesting tales of Christmas past.

sank. There was a ground wind. It stirred the ice crystals, filling the air with them for two or three hundred feet above the surface—so dense in places you couldn't see anything below. Our most optimistic estimate gave us no more than a 40 percent chance of being able to land once we arrived.

"As we neared St. Michael's, the sun, striking the floating crystals of ice, turned them lemon yellow, pink, shades of orange and red. It was beautiful—and it was impenetrable. Like a giant heliograph, the ice crystals threw the light of the sun upward into the sky. We were blinded—and the ground was a mystery.

"The landing strip was invisible, so we began to circle slowly—and to wait. Time seemed endless. Then we saw a small plane coming from the east. It dipped down toward the ground where the landing strip near St. Michael's should be, then rose again into the bright sky and turned back the way it had come. Over the radio, we heard the pilot report: 'The strip is socked in. I'm turning back. No way to land.'

"I glanced at the fuel gauge and then at Ed. 'We haven't got much time left, either,' he said. 'Once more around and we'll have to head for home, too.'

"A question crowded in, almost palpable there in the cockpit: How many people would suffer if we had to turn back?

"I looked out the window. Nothing but sun and ice crystals. I prayed aloud: 'Lord,' I said, 'We've done all we can. If you want those people to have this medicine, you'll have to give us a hand.'

"Almost immediately, Ed spoke up. He was excited. 'It's breaking up!' he said. Swiftly Ed lined up on the runway and dropped through an opening in the ice cloud—an opening that began to close in behind us as soon as the wheels of our aircraft touched the ground. By the time we rolled to a stop, the skies had closed in again. The ice crystals glowed above us and around us. There was light everywhere."

After a moment, I asked Joe: "Weren't you just a little surprised when the cloud opened up?"

"Not really," he said. "I've always believed in the power of prayer."

I rose. One more question came to mind: "Why do you call it St. Jude's Express?"

"Simple," Joe replied. "St. Jude is the patron saint of the impossible."

December 25, 1961—Istanbul, Turkey

"Nineteen sixty one was my in-between year," Ken Miller, Writer/Director in Motion Pictures (3153) told me. "I was just out of the Army and not ready for reemployment. Christmas that year was conspicuous by its absence.

"After I was discharged in Frankfurt in May, I spent most of the summer touring Holland, Denmark, France and Germany on a ten-speed. In the early Fall I rode through the Swiss Alps, then toured Italy. Venice was mostly water and there's nothing in Pisa to speak of but a tower—and it's badly built. Florence was noisy and winter was coming on, so I rode down the coast to Rome in the rain. I kept moving south looking for warmer weather. There wasn't any in Italy so I sailed for Piraeus, the port city of Athens.

"To satisfy a dream, I stood in the shadow of the Parthenon—and then went island hopping, arriving in Agos Nikolas on Crete in mid-November, the day before the feast of St. Nikolas. I swam that afternoon in the Aegean and sunbathed until I burned. I thought I'd stay a month, but the natives only shook their heads and smiled. 'Enjoy today,' they said. 'Tomorrow summer ends.'

"That was hard to believe under those cloudless skies, but the locals knew the weather and their patron saint. The next afternoon the sunlit skies turned black and it began to rain and blow. Winter had come.

"I went back to Athens and rode slowly up the coast of Greece to Thessaloniki—and then on east toward Turkey. I wanted to get outside Christendom for Christmas—just to see what it was like.

"I spent Christmas Eve in a little bar in Istanbul sipping wine and eating olives—

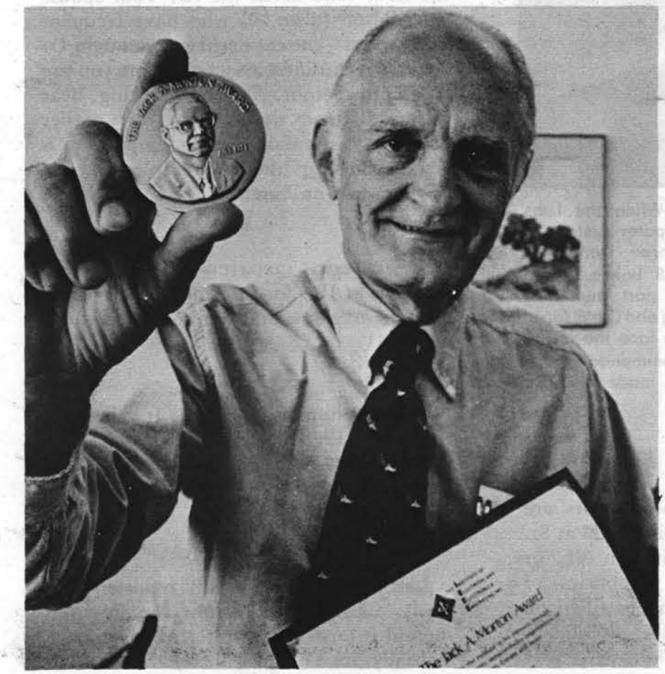


IN 1961, KEN MILLER (3153) toured Europe and the Med—and spent Christmas out of Christendom in Istanbul, Turkey.

which seemed pretty biblical. There were half a dozen Turkish troops there who spent the evening telling me stories about the Korean War.

"The inn where I stayed that night was full of young people from England and Australia, from New Zealand and France, and from the northern countries. There were Pakistanis and Indians there, too.

"Christmas in Istanbul was unmarked and uneventful. I saw a decorated tree in a downtown department store window. No one gave it a glance. The only special observance was at the inn where the pilgrims made a halfhearted attempt to sing carols. They had to give it up, though. They couldn't find a common language. All of us were pilgrims wandering the world, in-between other times and other places."



IEEE AWARD — President Sparks last week accepted IEEE's prestigious Jack A. Morton Award at a ceremony in Washington D. C. The award, sponsored by twenty semiconductor organizations in Europe, Japan and this country, carries this citation: "For contributions to solid state device technology and the management of research and development." Describing Mr. Sparks' background, the presentation notes his work at Bell Labs: "Under his direction much of the early work on solid state diffusion was done. These techniques now underlie the entire transistor and integrated circuit industry."



Don Bill Chuck Russell Norma John



BIDS ARE GETTING BIGGER—When the Labs asked for bids on a new computer system to replace the present 1108, three companies responded—with a total of 48 boxes of bid material. Now comes the hard part, and Dolly Dollahon (3714) from Purchasing and Craig Jones (2647) from the Computer area face the job of coordinating evaluation. A recommendation for the contract award should be made by April 1978.

Need luminarias? The boy Scouts are selling them, \$1.50/dozen picked up at St. Paul's Church, 9500 Constitution NE, or \$1.75/dozen delivered in quantities of 3-dozen or more. Orders will be filled on Dec. 17 and 24. To order: 296-6970, 299-4127, 298-3276, 296-7457.

Take Note

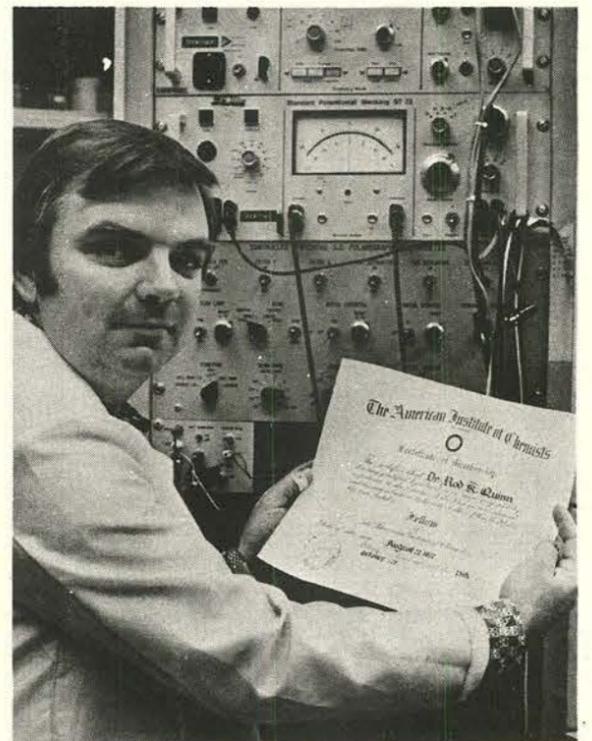
Attention MTS's: Today is the last day for enrollment in an In-Hours Technical Course (INTEC) for the spring '78 semester. For a copy of the catalog and more information, contact Jean Gore, 4-1047.

Back in August LAB NEWS reported that ID cards for non-employees were in the works, and the *Weekly Bulletin* for Dec. 8 carries details about actually getting the ID's. Who needs the ID? Your spouse or children (over 10) who have frequent Base access—the car decal isn't enough. Or a friend or business associate whom you are willing to sponsor. About sponsoring, bear in mind these words from our earlier article: "Essentially, the employee is responsible for the non-employee's behavior while on base."

New Mexico taxpayers wishing to call the Feds at IRS for information about tax matters may now do so on a new number: 243-8641.

Another number is 4-5903. It belongs to Security's Fran Armijo, and she's the person you call to report a traffic light hangup or other traffic problem, either on Base or off.

Last issue we mistakenly reported that C. A. Carlton (8122) runs the Environmental Information Center at Livermore. Actually, it's Carlton "Scotty" Scott.



ROD QUINN of Explosive Materials Division 2516 was recently named a Fellow in the American Institute of Chemists. At Sandia he has been engaged in materials research for 10 years and has published more than 40 technical articles in various journals.



U.S. Court of Appeals Judge Irving Kaufman, presenting the majority decision in a major libel suit, said the only issue for the jury to decide was whether the information had been published with malicious intent or reckless disregard of the truth. "Sifting, analyzing and shaping the material is part and parcel of the editorial process," he said. "The media is not a conduit which receives information and spews it forth. It is the active exercise of human judgement that transforms the raw data of reportage into a finished product—and the Supreme Court cases which grant protection to the editor so shaping the news are unequivocal."

Fun & Games

Sandia Bikers—If you get a flat tire while at work, a supply of cold patches is available at two locations: Tom Mayer (1247) in Bldg. 880, room C-26, and LAB NEWS office in Bldg. 814. Tom also has an assortment of bike tools purchased with SBA funds.

* * *

Fitness For Women—A few openings remain in the Sandia Recreation Assn.'s fitness class for women. The 8-week, twice-a-week sessions start Jan. 10 and run from 5 to 6 p.m. on Tuesdays and Thursdays. Present plan is to conduct the classes at the Base gym. The \$10 fee covers cost of the instructor and instructional material. Call Bob Giersberg (C-Club Rec Manager) on 265-6791 if you're interested.

* * *

Raquetball anyone?—This game has taken off like gangbusters but suffers one stifling flaw: no courts. The military generally preempt Base courts, and those in the city are mostly private. So Bob Giersberg (C-Club Rec Manager) would like to negotiate an agreement with the private courts under which members of the Sandia Rec Assn. could schedule court time for a fee. Bob needs info, however, on just how many Sandians might be interested in that kind of arrangement; call him on 265-6791.

* * *

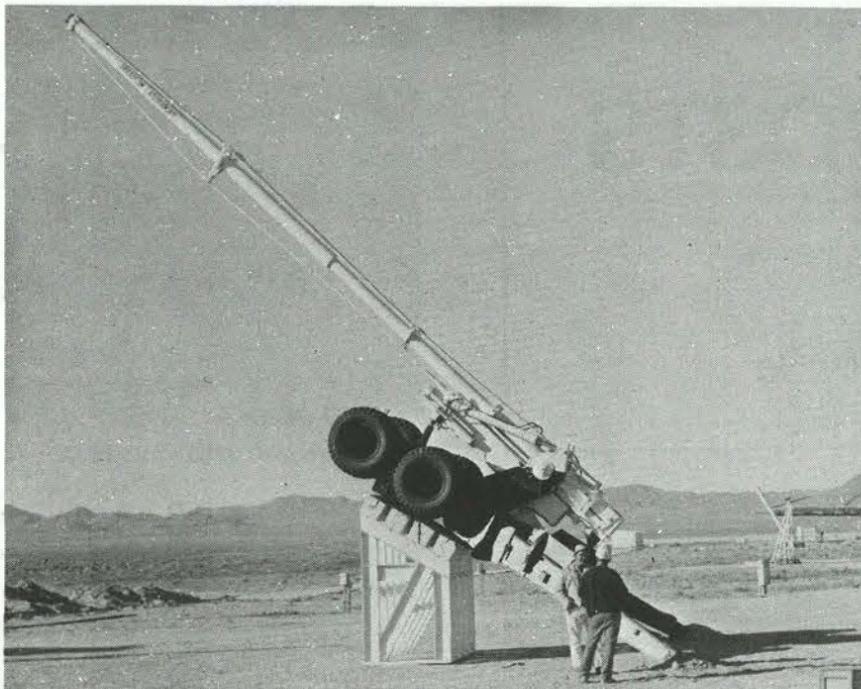
For athletes and would-be athletes—When Ralph LaForge from Lovelace-Bataan Medical Center discussed exercise and physiology at Sandia colloquia, he played to full houses both times. Now Ralph is wondering if Sandians would be interested in his 6-session course entitled "Exercise Training in Adults—Physiological Response, Methods and Safety." Subjects covered include metabolic and cardiovascular response to training, methods and practical aspects of exercise training, common misconceptions regarding exercise, diet and nutrition, orthopedic considerations, and more. Ralph sees this as an after-hours arrangement, scheduled according to optimum convenience of everybody. A nominal fee would cover his services and cost of books and hand-outs. If you might be interested, send your name, org. and phone number through the company mail to "Exercise Course," LAB NEWS; this is not a commitment, only an expression of interest.

Taking a Holiday Break

Next issue of the LAB NEWS will be published Jan. 6. Deadline for classified ads for that issue is noon, Dec. 22.



What color is your diet? A University of Nebraska study reports that color and appetite are definitely linked. Fast food places use hot orange and red, because those colors stimulate our appetites and encourage us to eat up and get out in a hurry. To subdue your appetite, the study suggests you paint your kitchen blue or green.



Research Projectile

High Altitude Gun Fired at TTR

A series of high altitude gun firings was recently conducted at Tonopah Test Range for the Ballistic Research Laboratory (BRL), Aberdeen Proving Grounds, Maryland. The tests are part of a development program for a new high altitude research projectile and recovery system.

The dart-like projectiles were fired from a smooth bore 5-inch gun with a special extended length barrel measuring 9.1 metres (40.5 ft.). Projectiles similar to these have been fired by BRL as part of Project HARP (High Altitude Research Project) using 5-inch, 7-inch and 16-inch guns. The projectile is 63.5mm in diameter, 1100mm long and weighs 10 kg. In the gun, pressure was maintained by a sabot around the projectile which separated from the projectile as it left the gun.

Muzzle velocities up to 1615 metres/sec were obtained. The projectiles reached apogees of 70-80 kilometres (about 50 miles) in about two minutes. Near apogee a small expeller charge deployed a metallized, two-metre-square wind-sensing parachute. This parachute was tracked down to about 7500 metres altitude to insure that the parachute did not become a hazard to commercial air traffic in the airways near TTR. This descent took about 1½ hours. Total time of fall was about three hours.

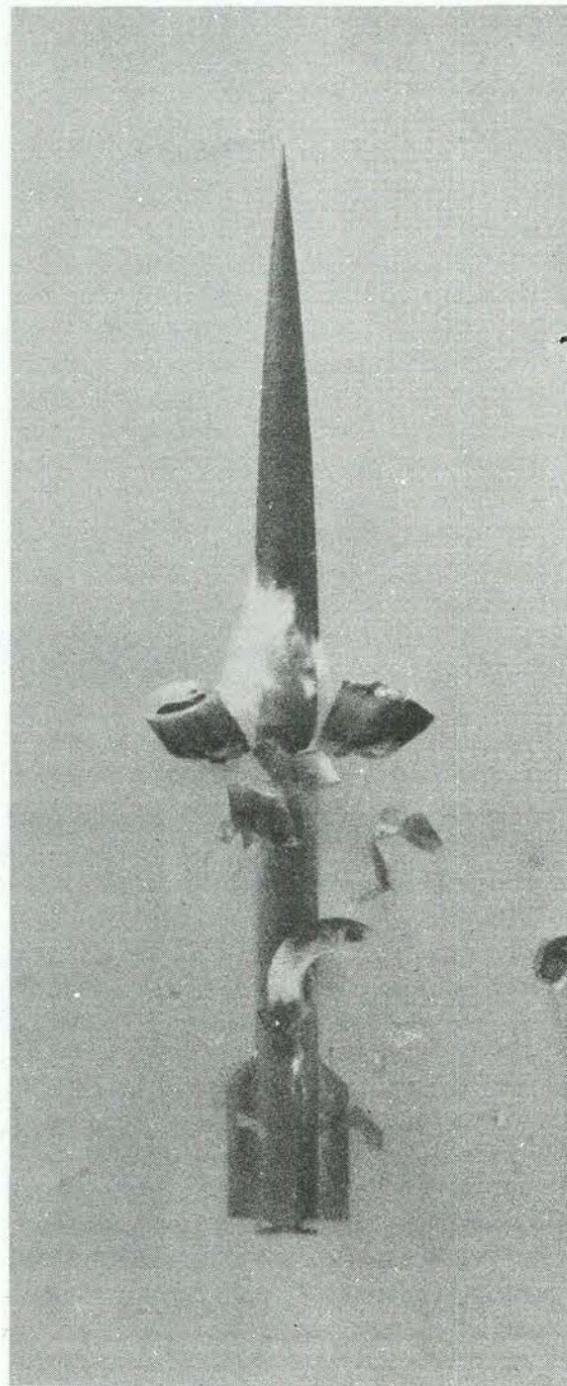
BRL uses Tonopah Test Range for these test series under a reimbursable contract. Sandia provides data acquisition radar, tracking cameras and image motion photography. Most of this data is provided in real time.

Eighteen more firings are scheduled in January.

Harol Rarrick (9421) is test project manager; Wayne Lathrop (9473), test director. Members of the gun crew included Bob Simms, Jack Windsor and Fred Snyder (all 9473).

(Ed. note: During WWI the Germans bombarded Paris from a distance of 76 miles, using a massive cannon dubbed Big Bertha. The gun fired a 265-lb. projectile which attained a height of 24 miles. Muzzle velocity was 5000 feet per second. Accuracy was limited, and the barrel had

FIVE-INCH GUN with its 40 ft. long barrel was used to fire dart-like projectiles to an altitude of 50 miles in recent firings at Tonopah Test Range. Barrel was raised to 87° for the shots. Gun crew members included Bob Simms (left) and Fred Snyder (both 9473).



HIGH ALTITUDE research projectile was photographed by an image motion camera as it left muzzle. Photo shows sabot separating from the unit. Velocity of projectile at this point was 4946 ft. per second.

to be replaced after 30 rounds. All things considered, Big Bertha was a remarkable achievement for its time. Primary purpose of developing a gun-fired high altitude projectile is economy—they're less expensive than rockets.)

MILEPOSTS

LAB NEWS

DECEMBER 1977



Jacob Aragon - 3430 25



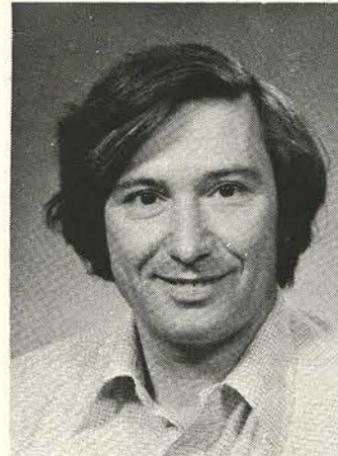
Lee Ten Haken - 2112 15



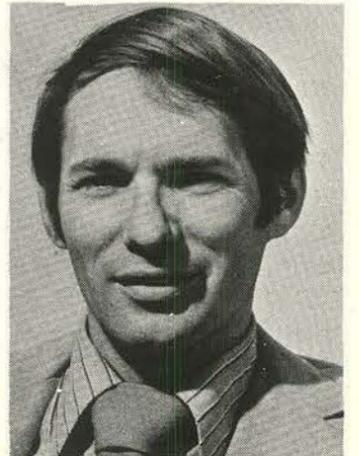
Luther Martinez - 9524 25



Floyd McIver - 5155 25



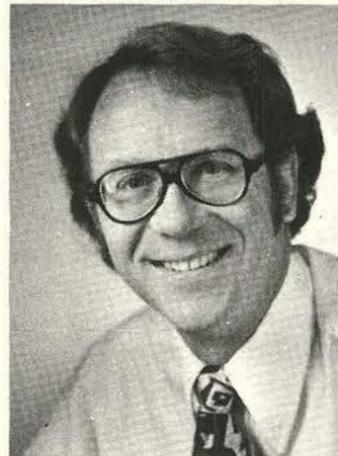
Eugene Neau - 5245 15



Ed Graham - 2112 10



Eugene Chavez - 9343 25



Gerry Williams - 8323 20



Paul Leonard - 3421 20



Horace Montoya - 9561 30



Neith Pollard - 9354 25



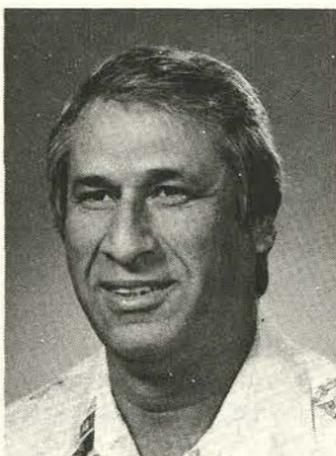
Robert Scalf - 9563 20



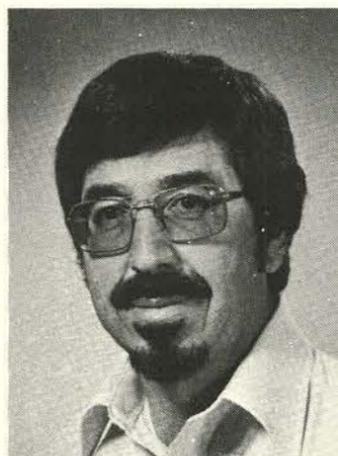
Penny Heidrich - 3411 15



Corry McDonald - 9636 30



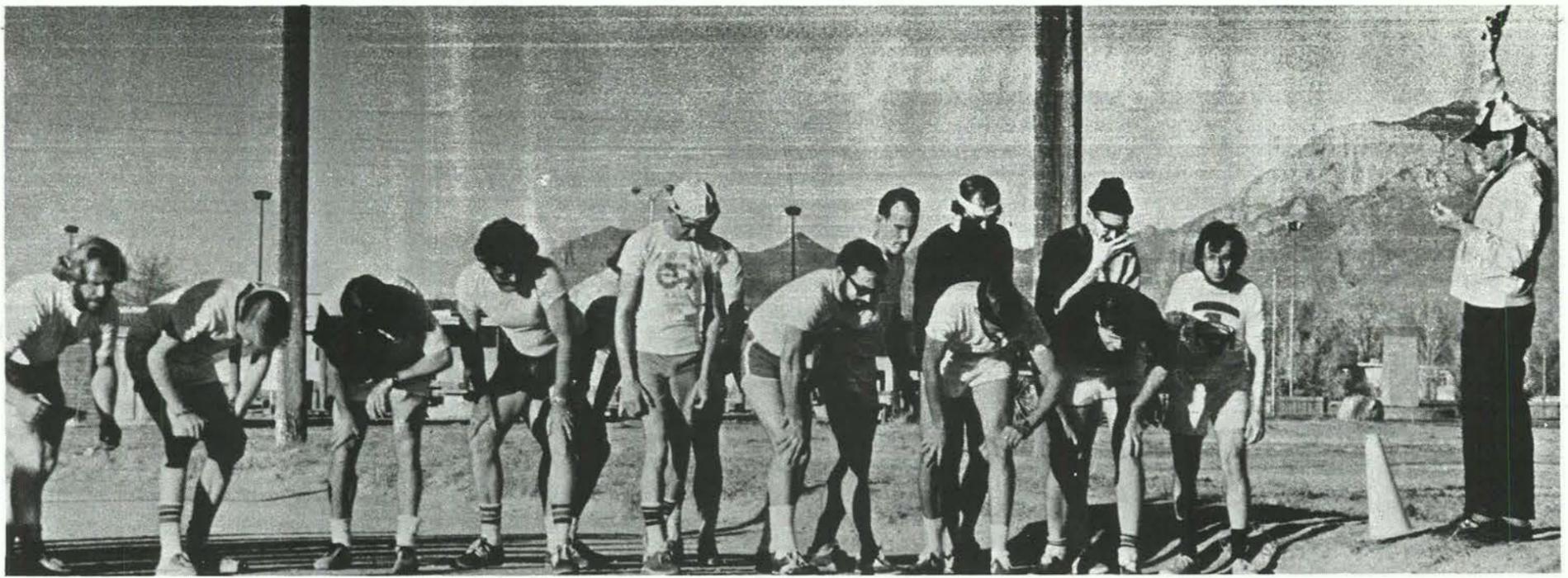
Joe Costales - 3411 25



Edward Coca - 2355 20



Russell Maxwell - 2165 25



A LOST CONTACT LENS?—Well, no. It's the start of the Dept. 5240 First Annual Classic Mile, organized and characterized by John Freeman as "a heartfelt response to the LAB NEWS physical fitness campaign." The brilliance and elan

of their performance so stimulated the 5240 crew that they are now looking for fresh meat. Challengers should contact John. (P.S.—Paul Miller, 5244, took this event with a 5:21.)

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 ERDA 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

TRASH BAGS, city-approved, \$4, South Hwy. 14 Project. LAB NEWS office, Bldg. 814.

TENDER FOOT CAMPER SHELL for long wide bed, 3 ft. high w/running lights, \$300 firm, call after 7:00 p.m., Armijo, 268-7645.

GULBRANSEN SPINET piano; Heywood/Wakefield blonde dining set w/4 chairs; buffet; 7-ft couch; girl's 20" bike. Kerns, 255-4222.

TWO WALNUT step tables, \$25, Gatto, 256-0642.

GLASS TUMBLERS, set of 8, English, hand-blown, fire-polished, better than Waterford, \$60; home thermostat, G.E. Model 3AHT10B1A4, \$5, Stevens, 299-6086.

DOUBLE-OVEN, continuous-clean gas range, smoked glass, copper tone, \$200; Double hide-a-bed, Herculon, \$110. Olson, 268-2227.

RUGER 44 CARBINE, \$130; Remington 1100-12 Ga., \$180; T/C Hawkins 50 Cal. Percussion, \$145; Rem Rep cap & ball 44, \$65. Dain, 881-0639.

FIREPLACE, free-standing, comes with ash drawer, installed firebrick, grate, screens, and pipe for 8' ceiling, \$96 firm. Roady, 1-832-4767.

HAM RIG, Heath HW-8 transceiver fully assembled and used less than 10 times, \$130. Meikle, 299-4640.

FREE STANDING fireplace screen, \$20; andirons, \$10, both for \$25; chrome front bumper for Scout II, \$25. Brooks, 299-1884.

SIBERIAN HUSKY adult red/white male, 55 lbs., 22" (standard size), will negotiate. Lambert, 293-8825.

HAMSTER, free, under 1 year old, includes cage, food and cage litter. Garcia, 883-2982.

RECLINER, \$40; electronic air cleaner, \$75; walnut end table, \$40; Ludwig drum, \$35; Hoover vacuums, \$25. Westmark, 296-0198.

HOSPITAL BED, free, needs cleaning, painting and small repairs. Stuart, 299-9190.

WINCHESTER M52, Lyman peep sight, sling, case, glove. Dean, 299-3281.

80,000 BTUH day and night vertical home furnace, \$85. Palmer, 883-3660.

SEWING MACHINE, Sears Zig-Zag w/ cabinet, \$175; Sears manual slide projector with 24 trays, \$45. Singleton, 299-1613, evenings.

FIREPLACE SCREEN, brass finish w/ pull chains, bolt-in type, approx. size 35" wide, 24" high, \$20 or best offer. Plummer, 296-4327.

BASS GUITAR, electric w/case, 2 pick-ups, 4 controls, matching amplifier with 3 inputs and tremolo foot switch, \$95. Bassett, 898-1840.

TIRE CHAINS, 700 X 13, \$10; planter cart, \$6. Moyer, 881-3879.

PUPPIES (Afgan hounds), 6 wks old, ready for Christmas. Montoya, 299-5829.

AMPLIFIER for microphones, 100 watts, UPL 100T used in band for P.A. system, will drive speakers, \$100. Griego, 821-8447.

DODGE HUBCAPS, \$5; locking Barracrafter ski rack, \$35. Hopper, 292-3059.

LARGE GYM-DANDY jungle gym, \$35; large capacity, Sears dry shop vac. with casters, all attachments, \$20. Aeschliman, 281-1227.

TOASTER, Toastmaster 2-slice, \$6. Korak, 296-1165.

PIANO, Wurlitzer Spinet, \$550. Flesner, 265-2136.

WOODEN SHUTTERS, 8 w/hardware, 1 1/2" x 16"; 2 shutters, 12" x 26", \$10; hanging light fixture, black wrought iron, \$15. Buswell, 293-3078.

SHIRLEY TEMPLE (large) doll, original, with doll cradle, \$35; other old dolls, \$3 and \$15. Smitha, 881-1001.

BEDROOM SET, solid oak (ranch finish), desk, sgl. bed, dresser, chair (cushioned) \$300. Roberts, 255-9527.

FIREPLACE SCREEN, polished brass, 25" H x 49" W, \$23. Chavez, 298-1649.

MOTOROLA STEREO; B&W T.V.; '75 Honda, x75 cc, misc. car accessories. Trollinger, 268-3414.

STEREO SPEAKERS, new Heath, 8" woofer, 3" tweeter, 21" x 12" x 10" \$20 each. Shannon, 256-7618.

GERMAN SHEPHERD PUPPIES, 1 male, 1 female, weaned. Mother registered, \$35 each. Wright, 281-5828 or 299-5396.

COMPACT REFRIGERATOR w/brown door for office, dorm or bar; Ocate sleeping bag. Southwick, 281-3782.

PRESTOLITE TORCH system w/large tank and 4 tips, \$55; portable 12 in. B&W T.V. w/stand, works but needs repair, \$5; windcharger, 8 ft. prop & 20 ft. tower, \$125. Alvis, 298-3906.

GAS RANGE, M.W., \$45; GE refr. 2-door, copper tone, frost guard, \$95. Liguori, 256-3613.

TV, 19", RCA B&W w/stand, \$135; Magnavox 3-speed mono. floor/table model, \$25. Brinegar, 299-7887.

CONCHO BELT, \$275. Marder, 268-9643 after 5.

PUPPY AKC Welsh Terrier, show dog, pet price, breeder-owner. O'Neal, 298-2859.

ROUND KITCHEN TABLE, 6 swivel chairs, \$75; brown/white couch 102" long, new foam in cushions, \$125. Denton, 821-4488.

AQUARIA 20 and 10 gal. complete set-ups with fish, stand, and misc., \$150. Damrau, 881-4576.

MINIATURE TWIN LENS Rollei with case, \$100. Laskar, 299-1024.

ZOOM LENS, 90-230 Soligor, \$75; super 8 movie projector, \$25; 2x tele-extender, \$10. Schwartz, 294-1113.

HELIARC OUTFIT, \$80; shop vac, \$18; Vega shop manual, \$7. Norris, 877-6415.

VAN SEAT, std. height, from Dodge van, \$25; drafting instruments, K&E

set, \$7.50; ping pong table, needs some repair, \$5.50. Alvino, 255-6339.

8mm CAMERA, Sears model C-122, zoom lens, best offer. Paylor, 266-8527.

HAMMOND ORGAN E100, full pedals, built-in rhythm, 2 keyboard, early American styling. Below blue book, \$1500. Henderson, 298-6125.

KING BED FRAME or twin frame; couch; chair; recliner; kitchen table w/chairs; dresser; chest of drawers. Shoaf, 296-6166.

NIKON FTN Photomic camera, meter & shutter recently calibrated, body only, \$225. Laval, 898-9112.

MICROWAVE OVEN, Sears, 60-minute digital timer, infinite power settings, 90-625 watts, under service contract, \$350. Atkins, 298-5762.

23" MOTOROLA B&W console TV, \$60. Richardson, 877-2731.

WORLD BOOK ENCYCLOPEDIAS including 7 year books thru '75 and Cyclo-teacher, \$135; bookcase headboard w/bed frame, walnut veneer, \$45. Benson, 299-3315.

LARGE TRUNK, compartment inside, \$40; wet bar, maple, top opening, 2 doors front; aeriator. Long, 294-5153.

LUMINARIA SALE, Scout Troop 165, St. Paul's Methodist Church, 9500 Constitution, \$1.50/dozen picked up; \$5.25/three dozen delivered. Burnett, 296-6970.

GARAGE SALE, extra long sgl. bed; stroller; jewelry; kitchen items; clothes, sizes 12-14; misc. gifts. Meidal, 520 California S.E.

TRAILER HITCHES, three different types, one 14-inch, two 15-inch, two 16-inch; 5-hole tire wheels. Houghton, 299-3386.

SANDIA PEAK season pass for tram and chairlift. Reduced price. Peet, 294-1250.

BINOCULARS, 7 x 35, \$10. Esch, 292-0754.

SX-70 camera, \$90. Westman, 881-0471.

7 PIECE DINETTE SET, formica top table; chairs avocado green, Naugahyde upholstery, \$100. Montoya, 881-6898.

SNOW TIRES for truck, mounted on rims, fits Chev. truck size 700 x 15, 6 ply. Mora, 881-2150.

PENTAX SPOTMATIC with 35mm/105mm lenses; miniature Minolta w/strobe; Polaroid SX-70; 90 pwr. telescope w/tripod; chandelier; rug; table lamp. Brodie, 292-2810.

BOYS SKI BOOTS, Raichle, size 6, \$12; ski suit, size 12, \$4. Pruett, 898-9352.

HO GAUGE TRAIN set mounted on 4 x 6 plywood; Daisy air rifle; Tiffany style hanging lamp. Meyer, 821-0123.

HYGAIN 3 CB model 2683X 40 channel, SWR/PWR meter, ANL/NB, brand new contest prize, \$219 list, sell for \$125. Pardo, 299-7214.

MINIATURE DACHSHUNDS, AKC registered, red males and females, will be 6 weeks old on Dec. 21, \$140 each. Abbott, 298-2039.

TRANSPORTATION

71 BISCAYNE CHEVY, 4-door sedan, \$800. Johnson, 298-7020.

'61 WILLYS, station wagon. Percival, 299-0535.

WANTED

BICYCLE, ladies 5-speed, 26", small frame; Kodak carousel projector, Aeschliman, 281-1227.

'66 CHEVELLE SS396, 4-spd, headers, Torker manifold, Holley 4-BBL, mags, Hurst linkage, more, \$1250. Barnard, 831-4114, evenings.

'62 CADILLAC sedan, DeVille, all power and air, six tires and wheels, \$450. Brooks, 299-1884.

'76 OMEGA BROUGHAM, 4-dr., V-8, 5-spd., AC, PS, PB, 14,000 miles, 22 mpg, below book, \$3550. Keck, 294-2887.

BICYCLE, men's 10-speed Chiorda, Italian, campy derailleurs, serrated rims, toe clips, centre-pull brakes, etc., \$60. Pritchard, 293-5297.

'66 FORD Country Squire wagon, 390 CID V8, AC, yellow, \$375. Longcope, 821-8423.

'73 CHEVELLE MALIBU, 4-door, FAC, AT, PB, PS, 350 V8, Clement, 296-3764 after 6.

MECHANIC'S SPECIAL: '70 Opel Kadett station wagon body, interior OK, needs engine, transmission repair, best offer. Wilde, 293-2652.

'68 SKYLARK, PS, AC, V-8, \$800 or best offer; Yamaha 250 DT-1-MX, 1500 miles, \$350. Coughenour, 298-2539.

'69 CHEVELLE SS 396, AT, PS, PB, air, white vinyl over orange, \$1500. Shaw, 296-2531.

BICYCLE, new, 26" Free Spirit, 10-speed, chain, ridden 3 times, \$60 or best offer. Simpson, 299-0119 after 6.

'71 DATSUN 510 w/AC, new paint, \$800. Matthews, 869-2370.

'73 PINTO station wagon, radial tires, AC, heater, standard shift, low mileage, \$1900. Goss, 865-9220.

'75 CAMARO, white, AT, PS, PB, air. Norris, 877-6415.

SUZUKI 90cc motorcycle, rims, tires, handle bars, muffler, good for parts, \$30. Roth, 864-4080 (Belen).

'71 CHATEAU TRAVELER 2 1/2 travel trailer, self contained, sleeps 6, \$3200. Hamilton, 869-2718.

19' MINI-MOTOR HOME, GMC mobile traveler, low mileage, cruise control top A/C, front A/C, AM/FM 8 track, PS, PB, \$7500. Westman, 881-0471.

'66 CHEVROLET CHEVELLE 6 cylinder, automatic, radio and heater, 2-dr. sedan, \$350. Padilla, 877-2116, after 5:30.

BICYCLE, 10-speed, needs new tires, \$50. Easterly, 881-1973.

KAWASAKI 175 cc, helmet and bumper carriers included, \$275; '73 Winnebago Brave, generator plant, headers, AM/FM tape, \$8000. Baack, 296-2312.

VOLVO 1800ES sportscar, racing green, less than 50,000 miles. Concours condition. Cockelreas, 256-7570.

'72 JEEP WAGONEER, fully loaded w/options, new tires, towing equipped, \$3700. Cover, 881-3860.

'74 FORD 1/2 ton pickup, 4 x 4, power steering, 4-speed, auxiliary tanks, with or without insulated camper shell. Causey, 294-3893.

'76 BMW 2002, low mileage, AM/FM 8 track. Ward, 256-0574.

'71 CHATEAU Traveler, travel trailer, self-contained. \$3200. Hamilton, 869-2718.

BOAT, 16'-18', outboard motor, trailer or boat trailer only or 18-25HP outboard motor. Hueter, 242-1620.

13" WHEEL RIM for Pinto. Watterberg, 294-6759.

SHOP MANUAL for '47 thru '54 Chevy trucks. Also need 235 6 cyl. engine. Armijo, 268-7645 after 7.

LARGE REFRIGERATOR. Sutton, 298-0001.

SHOP MANUAL for '67 Cadillac. Dunn, 298-4185.

BABY SITTER for 6-year-old (1st grader), 3:15 p.m. to 5:30 p.m. Osuna Elementary area. Plummer, 296-4327.

CHILDREN'S SLEDS. Zanner, 281-5570.

USED EXERCYCLE. Oswalt, 299-5629.

GILBERT ERECTOR SETS, size 7 thru 12 such as made in 40's and '50's. Brower, 298-2254, after 6.

SEWING MACHINE, used Bernina, Viking or top of the line Brother in good condition. McClure, 265-6084.

SINGLE SHOT 20 ga. shotgun or 22 rifle, name brand. Boverie, 255-1071.

FOR RENT

3-BDR HOME, 1 bath, NE Heights, available Jan. 1, \$300 plus deposit. Bennett, 296-8041.

3-BDR, 2 bath, stove, refrigerator, dishwasher, A/C, carpeted, SE Hts. near Base. Milesosky, 255-8904.

NEW UNFURNISHED 1-bdr, and furnished efficiency units, NE Hts., refrigerated A/C, carpeted, no pets. Liguori, 256-3613.

APARTMENT, 2-bdr unfurnished, dishwasher, drapes, laundry facilities, clean, NE Hts. near Lomas and Chelwood, no pets, \$210. Wiczler, 296-4496.

3-BDR, den, built-ins, etc., Eldorado High School district, \$325/mo + utilities, \$150 deposit. Chavez, 298-0674.

REAL ESTATE

3-BDR, den, office, LR, DR, 1800 sq. ft., far NE Hts. with view, landscaping, other extras. Large down, assume 7.6% mort. Wetherholt, 299-5736.

3-BDR, Mossman brick home, 1 1/2 bath, 1/2 block to Sandia bus. Harrison, 881-7938.

4-BDR, 1-1/2 bath, family rm. w/fp & wet bar, covered patio, 2-car garage, landscaped, extras, over 1900 sq. ft., 3 yrs. old, mid 50's. 1629 Robert Dale NE. Sheffield, 296-1736.

LOST AND FOUND

LOST—5 keys on chrome ring; 4 keys on round ring w/Army can opener; black bifocal glasses w/clear frames & black paint on bottom; dark rimmed bifocal safety glasses w/green lens in black plastic case.

FOUND—check stubs dtd 9/6/77 through 11/4/77; black and tan coat button; brown tobacco pouch w/tobacco. **LOST AND FOUND**, Bldg. 832, 264-6245.

Santa at Club Tomorrow

KIDS CHRISTMAS PARTY starts at 10 tomorrow for youngsters under 12. The Albuquerque Boys' Choir, Ron and Mary Kay Day with puppets and Santa Claus himself will entertain. It's free to member parents and kids, but members only, please.

LOBO BUSES leave the Club at 6:55 p.m. for all home games (except for the Christmas tournament Dec. 29-30). Fare is 75 cents for members; \$1.25 for guests. Lucky ticket holders win free drinks at the Club after the game.

SINGLES will party at the Club Wednesday, Dec. 21, in the El Dorado Room. A goodie-spread, eggnog, mistletoe, and music by Yolanda and Levy are included in the \$3.50 tab (non-members \$4).

TRAVEL DIRECTOR Ed Neidel (2166) announces several new travel packages including one for Jamaica starting April 30. Trip includes airfare, lodging at the Jack Tar Hotel in Ocho Rios for seven days and nights on the beach. Cost is \$429 from Albuquerque. Attend the pre-trip meeting at the Club at 7:30 p.m. on Jan. 4 for the full scoop.

Disneyland—this trip planned during the Easter school vacation March 23-26 and includes Disneyland, Universal Studios and Marineland.

Israel—16 days starting March 13. A number of options are available from \$795 to \$1259 from Los Angeles.

Hawaii—Mid-April with open options. Air Fare from Albuquerque to Honolulu for about \$270.

Mediterranean Cruise—From Athens to Venice with visits at the Greek Islands, Alexandria, Cairo, Jerusalem and Dubrovnic. Airfare from Dallas, deluxe cruise ship passage, accommodations and meals. Depart June 23 for \$1699.

CORONADO WOLFPACK travels by charter bus to El Paso Jan. 21 to attend the Lobo-UTEP game, returns the next day. Lodging, game ticket, cocktails and breakfast included in the \$51 (dbl. occ.) or \$65 (single). Non-Wolfpackers pay \$10 extra. Deposit due Jan. 7. Call Joe Ruggles, 268-4003, or John Dean, 296-3264.

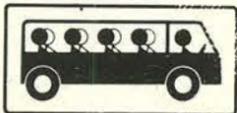
THE CLUB will close at 6 p.m. Dec. 24 until noon Dec. 31 when Happy Hour prices will prevail until 6 p.m. The New Year's party starts at 8 p.m., dancing at 8:30. The Club will be closed again Jan. 1 and 2, reopen Jan. 3.



PUPPETEERS Ron and Mary Kay Day present a special kids' Christmas show tomorrow morning starting at 10 at the Club. Bring your youngsters under 12. The Albuquerque Boys' Choir will sing and Santa Claus will pass out goodies.



NEW YEAR'S PARTY tickets are still available. Pick them up (\$11 per member couple, \$15 guest couple) at the Club office today or tomorrow. Sue Lyon (3531) reminds you that there will be dancing upstairs and downstairs plus champagne and breakfast.



Bus Notes

City bus riders will need only one dime to pay for an off-peak ride on any city bus the week before Christmas. The "Dime-Time" program begins Friday the 16th and continues through Saturday, Dec. 24, between 9 a.m. and 3:30 p.m. All fares will be a dime during this period. Regular fares will be charged before 9 a.m. and after 3:30 p.m. The concept of Dime-Time, successfully used in other cities, is to provide low-cost transportation to people who use the buses and to those who wish to avoid driving in the holiday traffic.

The Christmas shopper's free shuttle bus between the Coronado and Winrock Shopping Centers begins daily operation for the week before Christmas. Hours of operation are 10 a.m. to 6:30 p.m. except on Sunday, when the hours are 12 noon to 6 p.m. Shuttle stops are north of Penney's in Winrock and at the southeast entrance to Coronado near the Broadway store.



Safety in numbers.

Take stock in America.
Buy U.S. Savings Bonds.