

ON THE SUNNY SIDE — Albuquerque Journal for Jan. 23 carried Labs release on Sandia's solar energy pilot project to provide electricity, space heating, air conditioning, and hot water for Bldg. 832. About 10,000 square feet of solar collectors will be needed to generate needed energy. Recent AEC commitment of

\$400,000 will get project going. Target completion date is June 1975. Here Bob Stromberg, supervisor of Energy Systems Division 4736, and President Sparks examine prototype collector.

What It Will Be

ERDA



LAB NEWS

VOL. 26, NO. 3

FEBRUARY 1, 1974

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

"Sandia Labs, a prime contractor to ERDA" is as unverified as it is unfamiliar — as yet. But according to Don Shuster (4700), the succession of AEC by ERDA (Energy Research and Development Administration) and NEC (Nuclear Energy Commission) or some variant thereof is a very real possibility.

The bill creating ERDA/NEC has passed the House and is currently being considered by the Joint Committee on Atomic Energy. It may face modification in the Senate, but the primary goal of the bill is likely to remain. That is, to create an agency — ERDA — responsible for total energy development, both short and long term.

NEC, on the other hand, would take on the regulating and licensing functions of the AEC. Such areas as reactor safety and waste management, current Sandia projects, would come under the aegis of NEC. But the major segment of the current AEC (including its contractors) would become the nucleus of ERDA.

Joining AEC/ERDA would be the Office of Coal Research and some Bureau of Mines agencies, both from the Department of the Interior. Also becoming a part of ERDA would be the Environmental Protection Agency's force to study stationary source emissions and alternatives to internal combustion power systems. Finally, work in solar and geothermal energy development would be shifted to ERDA from the National Science Foundation.

ERDA, then, would oversee comprehensive programs of energy

development. Ideally, the various programs "will operate under unified leadership, benefit from the concentration of ERDA's scientific and technical capabilities, and serve as the base for a swift expansion of federal R&D efforts into all promising energy technologies," states Roy Ash, Director of the Office of Management and Budget.

Dixy Lee Ray, AEC Chairperson, adds, "Without such consolidation of various energy programs it would be extremely difficult to develop to their full potential the variety of fuel sources — fossil, nuclear, solar, geothermal, hydro, and others — required to meet our growing energy needs. . . . If these resources are to be used in the best possible way, there must be central planning and coordination of all energy research and development efforts. The creation of ERDA will help to focus responsibility for the government's diverse activities in energy research.

She continues: "ERDA would be formed by bringing together some of our nation's best talent in research and development. The Atomic Energy Commission would bring to the new agency its extensive experience in technical management, a resource that would

(Continued on Page Four)



SENATOR JOSEPH MONTOYA is credited with obtaining release of \$400,000 to launch Sandia's solar energy pilot project. Senator Montoya, shown here with Pres. Sparks during a recent visit to Sandia, is a member of the Joint Committee on Atomic Energy and has been instrumental in advancing various New Mexico projects associated with the energy development.

Credit Union Reporter

Reelected to the board of directors of the Credit Union at the Jan. 24 annual meeting were Willy Garcia (3321), Clarence Sandy (9533) and Joe Maldonado (7513).

Earl Simonson (4122) was reelected president of the board; Clarence Sandy was named vice president; Joe Miller (4125), secretary, and Bill Bristol, treasurer. Other board members are Bill Olheiser (retired), Alan Pope (5600), Donald Wagner (8212), Ralph Hampy (2431), and Karl Waibel (4143).

Winners of the two television sets given away during the annual meeting were Ludwig Eversgerd (retired) and Raymond Wilkinson (9342).

Credit Union Statements

Many questions have arisen about the year-end Credit Union statements mailed recently. Most concern the amount of interest paid or earned last year, information necessary for income tax reporting.

The Credit Union switched to a new computer system on Nov. 9, 1973, and the white statement you received reported all your 1973 transactions to *that* date. On the white form, interest earned is labeled "Div. Paid to Date This Year." This is the figure you report on your income tax form as "interest earned."

In addition to the white statement, you received one or more blue statements. These tell you the interest charges for the period Nov. 12 to Dec. 31, 1973. One blue statement was issued for *each* of your loans.

To figure your income tax "interest paid" deduction, add the amount shown on the white statement as "Int. Paid to Date This Year" with the amounts shown on *each* of the blue statements as "QTD int/FIN CHG." If you did not receive your statements or have any questions, call the Credit Union.

Speaking of Taxes

IRS advises taxpayers to file early. The sooner you file, the sooner you get your refund (if you have one coming). Also, the IRS says, use the name-and-address label that the IRS sent you on the tax return that you file. If you have any changes, make them right on the label. And if someone else prepares

your return, make sure they use the name and address label.

You have an opportunity via your tax form to contribute to the 1976 presidential election campaign fund. This option appears as line 8 on both 1040A and 1040 forms. To contribute \$1 to the campaign, check this box. On a joint return, husband and wife may contribute \$1 each. You may contribute another dollar from your 1972 taxes if you haven't already done so. Another box appears on your tax form offering this option. Contributing to the campaign fund neither increases your tax nor reduces any refund. Contributions cannot be earmarked for any political party; they will be distributed on a nonpartisan basis to all eligible candidates.

Social Security Tax Hiked

Employees earning more than \$10,800 a year will pay more Social Security tax in 1974 than they did last year. Under a new Social Security bill signed into law by President Nixon on Jan. 3, the 5.85 annual percentage remains the same but the wage base has been increased from \$10,800 to \$13,200.

The maximum Social Security tax paid last year was \$631.80 on \$10,800 in salary. This year the maximum is \$772.20 on \$13,200 in salary.

Employees earning \$10,800 or less pay the same tax they did last year.

Sympathy

To John Hall (7543) on the death of his sister, Jan. 17.

To Al Sehmer (9412) on the death of his father in Milwaukee, Jan. 15.

Variable Annuity Unit Value

February	1.531
January	1.550
Average 1973	1.752

Personnel to Have New Director

ROBERT EDELMAN, Personnel and Labor Relations Division, Western Electric headquarters, New York City, has been appointed Sandia's Director of Personnel, 4200, effective March 1.

Mr. Edelman started his career as an electrical engineer at Sandia Labs in 1951. In 1952 he went on active duty with the Air Force, serving as a second lieutenant with the Special Weapons Group at Sandia Base until August 1953. Following his release from active service, he was self employed as a general contractor until 1959 when he joined Western Electric's engineering staff, with assignments in Chicago and Columbus, Ohio. From July 1962 until June 1964, he was assigned to the engineering research group at Princeton and while there participated in the company's first Lehigh University Master's Degree Program. In June 1964 he moved to WE headquarters in New York City as a senior engineer in information systems engineering.

He advanced to department chief of operations research and systems development

Events Calendar

Feb. 1-28 — Southwest Arts & Crafts Showing, Chamber of Commerce.

Feb. 1-3, 5-7 — Albuquerque Little Theater presents "Oh Daddy, Dear Daddy," 242-4750.

Feb. 1-2 — Jaycee's Invitational Track Meet, Tingley Coliseum.

Feb. 1-3 — Old Town Studio presents Agatha Christie's "Ten Little Indians," 8 p.m.

Feb. 1-3, 7-10 — "Play Strindberg," Experimental Theater, 8:15 p.m., UNM.

Feb. 2-3 — "Wind in the Willows," Albuquerque Children's Theatre, 1:30 and 3:30 p.m., Popejoy Hall.

Feb. 2 — Buffalo and other dances, San Felipe Pueblo.

Feb. 2 — Ski Touring Club, to Truchas Amphitheater, up to 28 miles, call Doug on 296-1023.

Feb. 4 — Rio Grande Chapter of Ass'n. for Computing Machinery, all day meeting, LASL, Physics Auditorium, 9 to 5.

Feb. 4 — ASUNM Lecture, Jane Kessler discusses her work with disturbed children, 8 p.m., KIVA.

Feb. 7 — Stuttgart Chamber Orchestra, Popejoy Hall, 277-3121.

Feb. 9 — Ski Touring Club, Valle Grande, Gulf Mart, 7:30 a.m.

Feb. 9 — Albuquerque Symphony Orchestra Concert with Nicanor Zabaleta, harpist, 8:15 p.m., Popejoy Hall.

Feb. 12-13 — Antique Show, Convention Center.

Feb. 14 — "Two Gentlemen of Verona," musical comedy, 8:15 p.m., Popejoy Hall.

Feb. 14 — YWCA Travelogue "Amazon Adventure," 7:45 p.m., Downtown YWCA, 4th & Lead.

Feb. 15 — Audubon Wildlife Film, "Australia — Then and Now," 7:30 p.m., Popejoy Hall.

Feb. 15 — Navajo Indian Rug Auction, 7 p.m., Crownpoint School, Crownpoint, N.M.

Feb. 15-17 — N.M. Sport Show, Tingley Coliseum.

Through Feb. 15 — Museum of Albuquerque; artifacts donated by Albuquerque Historical Society — costumes, photographs, Indian materials, tools, Spanish Colonial items.

LAB NEWS

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SANDIA LABORATORIES

An Equal Opportunity Employer

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LIVERMORE, CALIFORNIA
TONOPAH, NEVADA

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&
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Bruce Haskinson writes
as does Norma Taylor while
Bill Laskar takes/makes pictures

&
In Livermore Lorena Schneider does all

Ted Gold Earns PhD Degree

Ted Gold (8361) has been awarded his PhD degree in applied science from the University of California at Davis/Livermore. Course work was completed under Sandia's Educational Aids Program. His thesis: "Dynamic Programming Methods for Curve and Edge Detection in Noisy Pictures."



Ted joined Sandia in Albuquerque in July 1961 and in August 1963 transferred to Livermore's preliminary systems design organization. In May 1969, he was promoted to his present position as supervisor of Systems Studies Division.

He received a BS in electrical engineering from Rensselaer Polytechnic Institute in 1961. After joining Sandia, he earned an MS, also in EE, from the University of New Mexico through the TDP Program.

Ted's wife Sydell, a former Sandian, one-upped him by about six months. She received her PhD in mathematics from the University of California at Berkeley last June.

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LIVERMORE LABORATORIES

FEBRUARY 1, 1974

LIVERMORE NEWS

New SLL Warehouse Being Built

Construction of a new warehouse (Bldg. 927) is progressing at Sandia/Livermore, with occupancy expected to take place this month. The Don L. Barrett Construction Company of Livermore was low bidder for the construction contract at \$84,000.

Located east of the technical area near existing warehouse facilities in Bldg. 916, the 60-foot-wide, 120-foot-long building occupies about 7200 square feet. It replaced the storage building at Camp Parks which SLL has been using.

Of prefabricated steel construction, the building requires minimum lighting and no heat. An automatic sprinkler system is being installed for fire protection.

Although the new building has 6000 square feet less floor area than the Camp Parks building, its 20-foot interior height will

provide 70 percent of the storage volume of Camp Parks.

Project engineer for the new warehouse is Bill Thompson of Plant Engineering Division 8254.

Authors

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Sympathy

To Bob Strout (8181) on the death of his wife in Livermore, Jan. 8.

To Bob Gallagher (8333) on the death of his father in Boston, Mass., Dec. 28.

Four Deuces Mean Help



Marge Mederios
Safety



Carol Duncan
LLL



Emergency
2222



Sgt. Bill Morgan
Security



Jane McClure
Medical

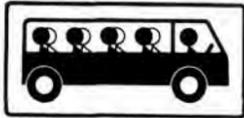
Ever wonder what happens when the emergency number 2222 is dialed?

Livermore's hotline ties Security, Medical and Safety together, and a direct line connects Security and the LLL fire station. Within seconds after dialing 2222 the caller hears the Security communicator and the Medical clerk respond and states the nature and location of the emergency. Then things really start to happen.

Let's say the caller reports an accident in Bldg. 973. The communicator immediately calls LLL for an ambulance, if needed; a security inspector quickly opens the gate for its access; the nurse grabs her medical bag and heads for the exit where a security inspector is waiting, ready to drive her to the accident location. Safety representatives, having monitored the call, are heading for the scene. Within minutes, the injured person has received treatment or is on the way to a medical facility.

Just to make sure everything will go all right if a real emergency occurs, a test of the system is conducted every week.

Remember, if you have to dial 2222, stay calm and give the nature and location of the emergency to the people on the line. Help will soon be on the way.



Bus Notes

Two new bus routes are now in operation. One serves the Far South Valley, the other (called Mountain Bus No. 2) serves Highways 44 and 66. Routes and schedules are shown below. Both are in a sort of probation period; they will be made permanent only if ridership expands soon. So if you live in one of the two areas, now is your chance to demonstrate support for bus service. If you have suggestions on improving either route to make it more convenient for more people, call the honcho — Far South Valley: Dave Shank (1522) at X 2186; Mountain No. 2: Bob Lucas (9322) at X 7970.

Far South Valley (50¢)

6:55 Los Padillas and Coors
 6:57 Romero's Conoco on Coors
 7:00 Mickey's Dairy on Coors
 7:03 Coors and Barcelona
 7:06 Barcelona Elementary School
 7:08 Barcelona and Highway 85
 7:11 Camino del Valle and Highway 85
 7:14 Muniz and Highway 85
 7:17 Le and Highway 85
 7:21 Jerry's Market on Highway 85

Gate 1

Building 839

Gate 10

Evening:

4:36 Gate 1

Building 839

Gate 10

Mountain Bus No. 2 (60¢)

6:50 San Antonito/Frost Road
 6:53 Entrance Sandia Knolls
 6:56 Frost Road/Highway 44 Junction
 6:59 Highway 44/Old 66 Junction
 7:08 Sedillo Hill, Woody's Hy-point
 7:12 Los Pinos
 7:17 Zamora Road, Guterrez Canyon
 7:19 West End Rincon Loop
 7:23 S-10/14 and Highway 66

Gate 1

Building 839

Gate 6

Evening:

4:36 Gate 6

Building 839

Gate 1

Both busses connect with the remote area shuttles at Building 839.

Good news for Corrales/Paradise Hills residents — Tom Helweg of Mountain Bus Company has announced that a route serving those areas should start by mid-month. All those who responded to the recent survey will get precise info on route, schedule, cost, and parking within a week or so. Parking space near the Paradise Hills/Coors intersection is critical — running the bus all the way into Paradise Hills would cost an extra 15 minutes. If you have any connections with any of the facilities near the intersection where people could park, contact Alan Beattie (9352) at X 8937.

Negotiations continue on both the Far East and near South Valley routes. Hang in there.



THE VAN adVANTage is demonstrated by these Sandians from the Southeast Heights. They get front-door to Area 1 gate service morning and evening. Rich Ciccarello (the bearded one) is the owner of Albuquerque Limousine Service and the driver. For more info on vans as well as buses and car pools, dial 4-RIDE. (4-7433).

When the Transit Company gets around to inaugurating their new regular route up and down Wyoming, Sandia Special No. 1 will shift over to come in on Moon from Candelaria. That's the choice of the majority of the area residents who responded to the recent poll.

Another overheard on an overloaded (30-40 standing) bus, Number 4: "All right everybody, introduce yourself to the person behind you — and *move back*."

Phoning about buses? Dial 4-RIDE (4-7433).



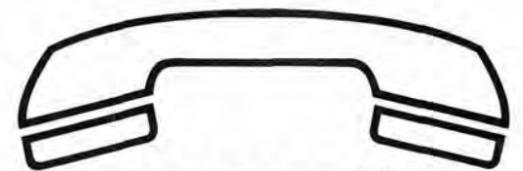
Car Pool Notes

By Feb. 5, responses to the current Transportation and Car Pool Survey should be returned to Div. 4116 for computer input. Within a week or so, those who indicated an interest in car pooling will receive a listing of their neighbors who indicated a similar interest.

For Sandians in many areas, car pools are the only feasible alternative to driving alone; it would take over 120 full-size buses to haul every Sandian back and forth to work.

So consider some of the advantages of car pooling: fewer dollars for gasoline, less air pollution, less traffic congestion, better parking at Sandia (reserved slots are still available through Security), maybe even sociability.

Phoning about car pools? Dial 4-RIDE (4-7433).



commuting
information
DIAL 4-RIDE



Continued from Page One

ERDA

help launch ERDA quickly. The network of national laboratories created by AEC would provide a valuable technical base for the new agency."

"If ERDA passes without substantial modification," says Shuster, "Sandia would expect to have major responsibilities in many ERDA programs. We are already pursuing a number of energy programs. In nuclear weapons work we have an outstanding record, and we're coming up fast with fusion (laser and electron beam) and with solar energy, both of which now have AEC dollars behind them. And we've submitted proposals dealing with other ERDA programs, too, but they are part of the FY 75 package."

Don is optimistic about the possibility of new directions in the Labs' mission. "Energy R&D has a hungry market. It's a long term effort that will take the kind of concentrated effort and proven systems approach that Sandia can provide. The country needs both nuclear and non-nuclear work, and we're going to help meet that need."

Probably through ERDA. •bh

Energy Saving Steps Successful

Last June President Nixon gave the word: cut energy consumption by seven percent.

At Sandia Labs a Plant Engineering task force under Harry Pastorius (7540) went to work and, comparing the four months from September to December '73 vs '72, is now able to report:

- a reduction of 9.6% in usage of steam plant fuel, the equivalent of 7000 barrels of oil
- a reduction of 13% in electrical usage, a savings of 4,200,000 kilowatt hours
- a reduction of 15% in vehicle mileage, a savings of 135,000 miles.

These savings were realized after a number of steps — some obvious, some not so obvious — were taken. They include the reduction or shutting down of:

- heating and air conditioning after hours
- street and fence lighting levels
- hallway lighting levels
- remote Tech Area and warehouse lighting levels
- air compressors after hours.

Hot water temperatures were dropped 20 degrees (140° to 120°), custodians were put on day shifts, and major modifications were made to make steam plant operations more efficient.

Harry notes, "We're still looking. We recognize that a laboratory operation sometimes calls for 24-hour operation. But we're still on the prowl and looking. If you've got any bright ideas, give us a call."



JOE MAEZ, gesturing, talks about education and occupations with two young men at the Southwest Valley Youth Development Center. Joe and Jerry Silva (left) are both electronic technicians in Dept. 7110 and they, along with some 10 other Sandians, visited the Center to counsel high school seniors about their futures. Bob Garcia, (right), manager of Employee Relations Dept. 4230, listens to the discussions.

Authors

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J.M. Peek (5211) and J. Cooper (Univ. of Colo.), "Satellites to Lyman-Alpha Due to Protons," Vol. 179, No. 3, Part 1, THE ASTROPHYSICAL JOURNAL.

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PSYCHO-CYCLIST, as seen by motorists driving to work. If you must bike to work before dawn, equip self and bike with enough lights, reflectors, and fluorescence to insure that you're very, very visible from front, rear, and sides.

The Chili Line — By Rail from Santa Fe to Antonito

Once upon a time it was possible for a resident of Santa Fe to undertake a trip north to Taos by a combination of rail and stage, passing on the way a splendid countryside of canyon, river, and mesa. Our traveler would board a railroad coach in Santa Fe on the narrow gauge Chili Line around 10 in the morning. The steam-drawn train would rattle north to the point where the present-day highway to Los Alamos crosses the Rio Grande — Otowi Bridge — and continue northward through the town of Espanola and into Embudo.

Embudo lies some 20 miles out of Espanola, and if you drive to Taos you see it hard by the west bank of the river — a collection of stone covered buildings, a still-standing railroad water tower, and a rickety bridge that some claim can be driven over. Indeed, before you come upon Embudo, you will see the abandoned roadbed of the Chili Line running parallel to the Rio Grande.

After Embudo came the exciting part of the train ride. The train climbed out of this deep river canyon up to the mesa above on a stretch called Barranca Hill. In 7-1/2 miles the elevation gain was 1128 feet and the grade was so steep — 4% — that two engines were needed. (Going down took a certain resolve.) Arriving at Barranca Station about mid-afternoon, the traveler boarded a four-horse, nine-passenger stage coach which took him back across the river and on into Taos. Time elapsed: about nine hours. The year: 1910.

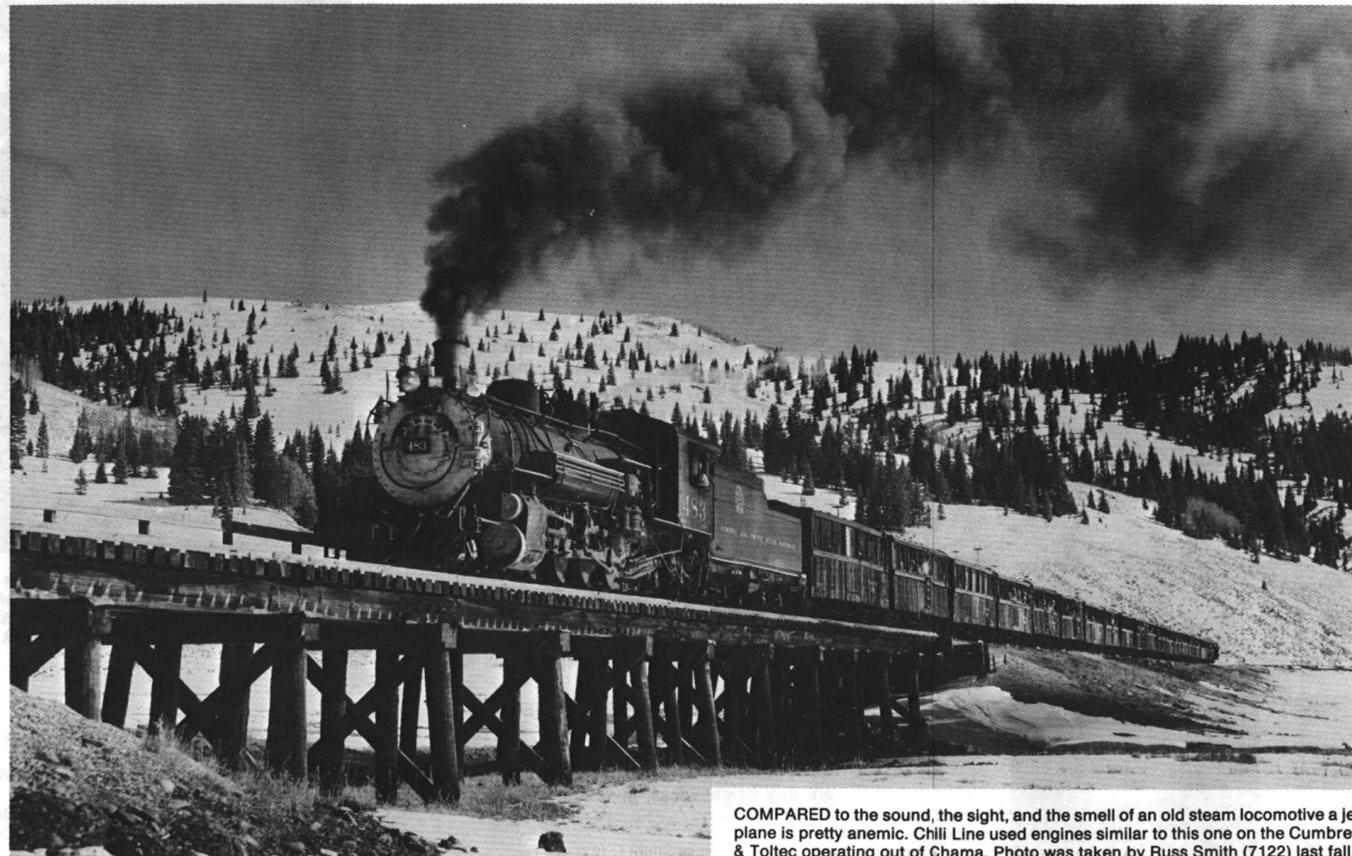
The Chili Line, whose 125 miles of track ran from Santa Fe to Antonito, just over the state line in Colorado, had a relatively short and not particularly solvent lifetime, from 1887 to 1941. Like the present day narrow gaugers operating out of Durango and Chama, the railroad was a branch of the D&RGW, which instituted the operation with high hopes for financial return. Lumber and mining in areas served by the line seemed to offer rich potential. In its early days, the line was actually a combination of two railroads — the Texas, Santa Fe and Northern on the Santa Fe-Espanola link, and the D&RGW from Espanola north. But TSF & N foundered early in the game and D&RGW was master of the road from the late '90's on.

A passenger wishing to cover the entire route near the turn of the century would follow this timetable:

Lv Santa Fe	9:10	Lv Espanola	11:05
Jacona	9:43	Chamita	11:20
White Rock Canyon	10:15	Alcalde	11:38
Rio Grande	10:25	Embudo	12:23
San Ildefonso	10:32	Barranca	1:05
Ar Espanola	10:48	Caliente	1:40
		Servilleta	2:30
		Tres Piedras	3:05
		No Agua	3:30
		Volcano	4:05
		Palmilla	4:30
		Ar Antonito	5:10

Passenger service ran daily, except Sunday, and early photos show that the "consist" usually included a couple of passenger cars plus a baggage car.

Freight operations were more remunerative, though they never approached bonanza proportions. Lumber was moved in considerable quantities from sites near Tres Piedras and west of Taos Junction. Minerals such as quartzite and mica were carried, and the Espanola bottom lands produced a large apple crop that was shipped out on the Chili Line. It isn't clear whether the Line actually freighted any chili.



COMPARED to the sound, the sight, and the smell of an old steam locomotive a jet plane is pretty anemic. Chili Line used engines similar to this one on the Cumbres & Toltec operating out of Chama. Photo was taken by Russ Smith (7122) last fall.

One researcher, John Gjevre, who has written the definitive work on this railroad*, notes that "Ski trains were scheduled from Taos Junction to Cumbres Pass in 1939 and 1940." But a familiar problem, lack of snow, caused cancellation. Gjevre has another interesting note for you watchers of the late, late movie. Two movies were made on the Chili Line — "Texas Ranger," a 1938 epic with Jack Oakie, Fred MacMurray and Jean Parker; and the somewhat more ambitious "The Light That Failed," with Ronald Coleman, Walter Houston and Ida Lupino. In this the Rio Grande was briefly dammed to make it look like the Nile while the train itself

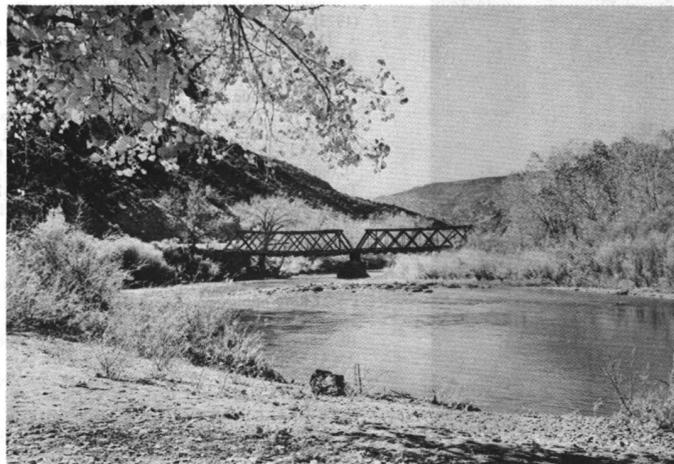
was sheathed to make it look like an armored train.

The Embudo Station along the Rio Grande is perhaps the outstanding remnant of the Chili Line. When we visited it recently, its new owner — a small woman with red hair who had spent many years with United Press — talked enthusiastically of her plans to refurbish Embudo Station, making of it a museum/lodge. The veneer of fist-size stones overlaying the surface of the several buildings was the rather singular achievement of the former station master, Henry Wallace. Henry moved to New Mexico in 1912 for reasons of health, became station master at

Embudo, lived there until 1934, and apparently had much time on his hands.

For the usual reasons, the Chili Line railroad shut down in 1941. Too bad — the two steam locomotives chugging up Barranca Hill must have been a colorful sight. If you're sentimental, you can still see a Chili Line locomotive at, of all places, Knott's Berry Farm in California; there's another at the Colorado Railroad Museum in Golden. •js

*Chili Line, *The Narrow Rail Trail to Santa Fe*, John A. Gjevre, *Rio Grande Sun Press*, 1969



ACROSS the river lies the Embudo Station house, one of the dozen or so stops on the narrow gauge Chili Line that ran from Santa Fe to Antonito. New owner stands



in doorway, plans to refurbish station. Stone veneer is work of early station master.

FUN & GAMES

Judo Class — Les Baumann (9550) reports that John Gowan, a captain in the Air Force and possessor of a black belt, would like to start a judo class at the gym if enough people sign up — like 15 or so. Classes would be held once a week at 5 p.m., last an hour, and would be held on either Thursday or Friday depending on the preference of the class. Ten bucks to sign up and \$1/month fee. Call Les at 299-9493 or see him at the gym after work if you are interested.

Sandia Bicycle Ass'n. — If there's one thing apparent, it is that bicyclists are not very apparent during the pre-dawn darkness, reflectors, vest, lights and all. Principal hazard: the overtaking vehicle. Next time you drive in to work make your own evaluation of the visibility of that cyclist ahead. It would seem especially prudent for the early morning cyclist to avoid streets with traffic — stay on residential streets as much as possible. One other alternative: don't ride until the sun begins to shine a little earlier.

LAB NEWS has received an intriguing ad. "Wanted — Persons interested in bicycle tour of New Zealand in early 1975." That's all — no name or return address.

We've also received, courtesy Bob Pace (2316), a supply of brochures describing the Hagen "All Speed Bicycle Transmission." It describes an ingenious chain wheel arrangement which, instead of stepping from one gear ratio to the next as we do with the present derailleur system, gives the rider an "all speed drive . . . infinitely and continuously variable." Call us (ext. 1053) if you want a copy.

If your 10-speed is acting up, plan to attend the Velo Sport Bike Club's maintenance seminar on Feb. 13, 8:30 p.m., hospitality room of First National Bank at Central and San Mateo. You don't have to be a member to attend.

Take Note

The Sandians, an organization of wives of employees, will meet Monday, Feb. 4, at 7:30 p.m. at the home of Ann Brown, 7209 Cariveau NE. Guest speaker will be Dezi Frauenglass, director of the Sivananda Yoga Center. The group is seeking new members. If you would like to attend the meeting, call Mary Thompson, 296-2235.

Quo vadis, Sandias? From a Forest Service announcement: "The Cibola National Forest has scheduled three meetings for the purpose of discussing and inviting comment on the Draft Environmental Statement on the Sandia Land Use Plan." The three:

Feb. 7, 7 p.m., Bernalillo High School Auditorium

Feb. 8, 7 p.m., Cochiti/Taos Rooms, Albuquerque Convention Center

Feb. 14, 7 p.m., Roosevelt/Montoya School, Tijeras

A copy of the Statement is available in the LAB NEWS office.

Sandia Chess Club — This Monday night, the 4th, Warren Miller (9415) will take on up to 25 other players, simultaneously, and will chew gum besides, at the Coronado Club starting at 7:30. If you win you get a prize; if you lose — well, you'll have lots of company.

River Runners — Last year at this time Mark Percival (2411) suggested we run a note in LAB NEWS to round up, hopefully, 20 or so people to engage a boat to run the Grand Canyon of the Colorado. Well, 90 people signed up and three expeditions were mounted. This year the Coronado Club (and Mark) have in mind the same trip — 310 miles of river from Lee's Ferry to Temple Bar on Lake Mead, eight days at a group rate of \$325 per person. Cost includes bus transportation to and from Albuquerque. Departure date is July 2 or July 8 (two expeditions). The trip is not limited to Club members nor to Labs employees. Call the Coronado Club, 265-6791, for further information.

Sandia Labs Bowlers — Singles, Doubles and Four-Member Team Handicap Tournament will be held at Holiday Bowl on Feb. 9 and 10. Team Event will be rolled on Saturday and Singles & Doubles on Sunday. Submit entries to Dora Montoya (1544) or Leo Bressan (9532).

Sandia Golf Association — Sign up with SGA during their current membership drive. Association fee is \$5/year, and membership is free to retired Sandians. Member benefits include affiliation with the Albuquerque Golf Association, the New Mexico State Golf Association and USGA. Handicaps are computed twice monthly, using the USGA system, and are recognized and accepted at any USGA affiliated event.

SGA sponsors tournaments and evening and weekend leagues. New members will receive an SGA patch with the thunderbird emblem and a copy of the official "Rules of Golf" book. Interested persons who were not '73 SGA members should contact Tom Philbin (7614) for information.

Sandia Tennis Ass'n. — John Walter (2326) reports that tennis ladder play will resume on Feb. 16, both doubles and singles. A new ladder is being set up for 1974. Call John on ext. 7390 for details.

Sandia Runners Ass'n. — SRA Chairman Jim Harrison (4731) sets a good example. He runs to work every morning — 5 or so miles. And then he runs home at night. Mrs. Harrison complains that his eyes have taken on that far-away look.

Road Runners have scheduled these events this Sunday, the 3rd, at Burton Park (Carlisle and Kathryn SE): 1:30 - Men's Run for Your Life, 1/2 mile; 1:45 - Men's Intermediate, 3 miles; 2:25 - Men's Novice, 4 miles; 2:50 - Women's Run for Your Life, 1/2 mile; 2:55 - Men's Open, 2 miles; 3:10 - Women's Open, 1-1/2 miles. All runners and would-be runners are welcome.



Larry Garrison — 4142



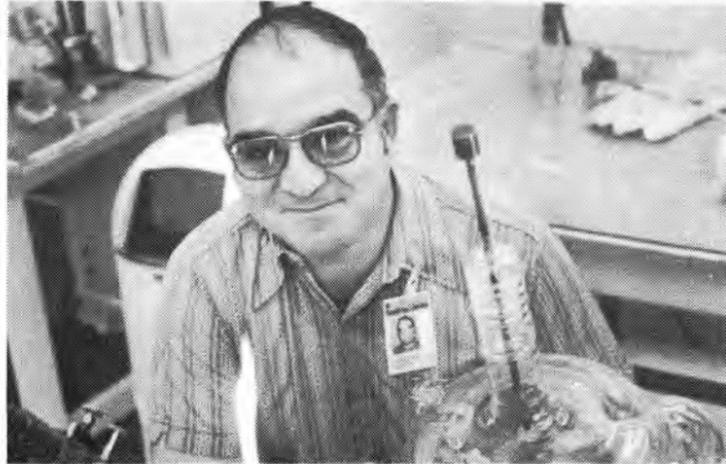
Willard Schmidt — 1537 15

MILEPOSTS

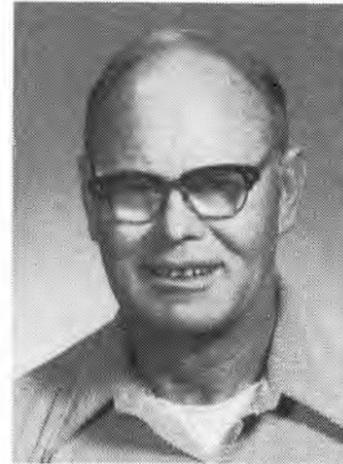
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Albert Clamp — 9523 25



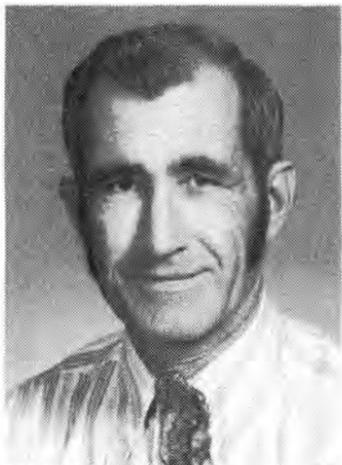
Ronald Snidow — 7121 15



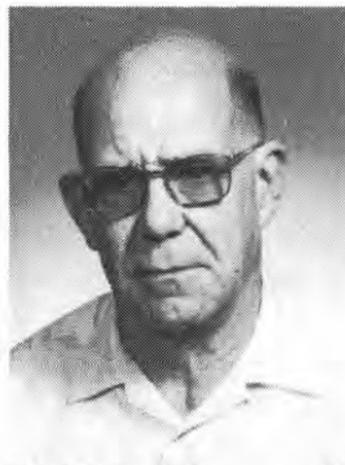
Harrel Killebrew — 7512 25



Elsie Wilkins — 5120 10



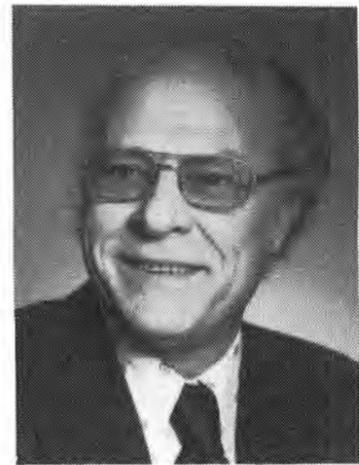
Alan Bolles — 1252 25



Bill Walker — 2344 25



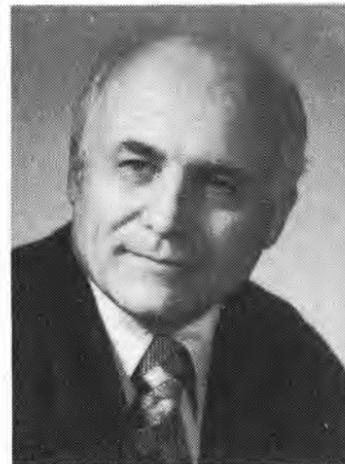
Jess Hodges — 6021 20



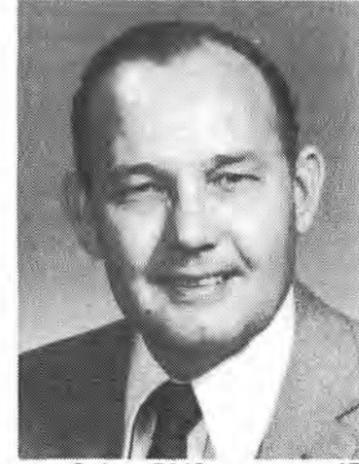
Ken Helmstadter — 8152 20



Marveta Davis — 4154 10



Earle Paxton — 8266 20



Ken Goin — 5642 15



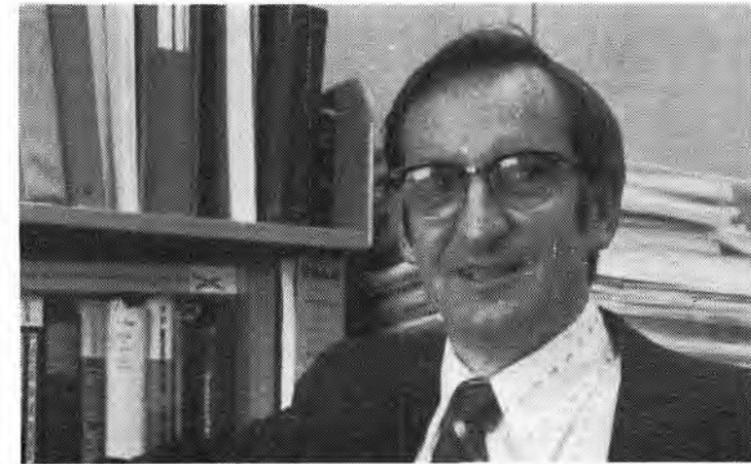
Hermenes Baca — 7513 10



Trudy Martin — 8161 15



Charles Romero — 8421 15



Stanley Meyer — 1542 10



Frank Fuentes — 7221 10



Royce Bewley — 7145 15



Pat Childers — 8261 10



Rudy Cavitt — 8431 10



Sherwood Duliere — 5525 15



Carl Hullinger — 7221 10



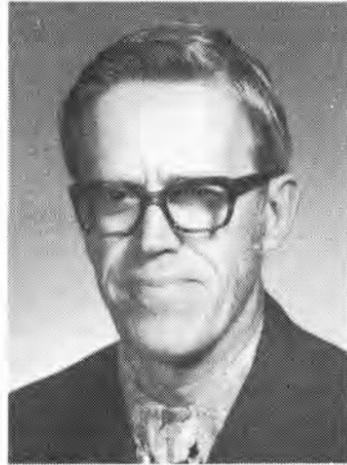
Felix Padilla — 7554 25



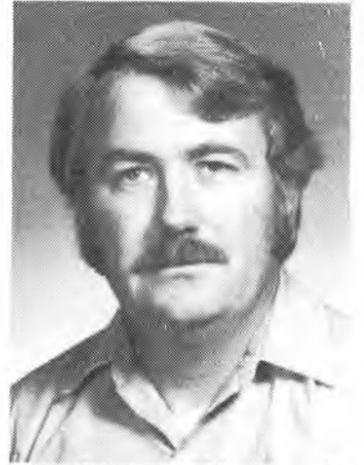
Tom Cordova — 2631 10



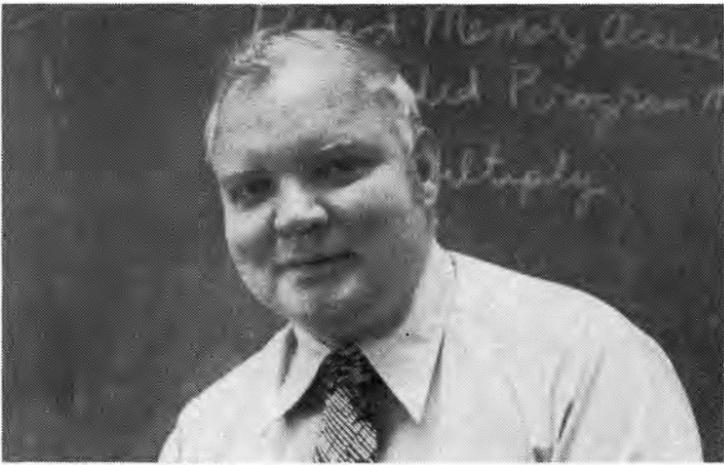
Paula Asturias — 4256 15



Charles Maase — 9536 20



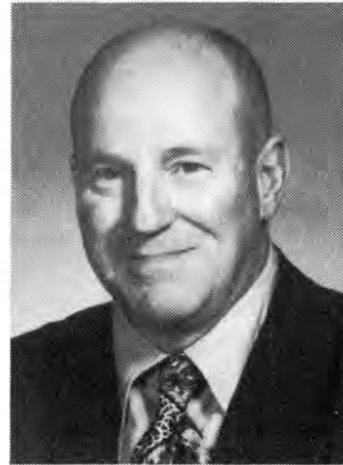
Henry Street — 5314 10



James Jacobs — 2322 15



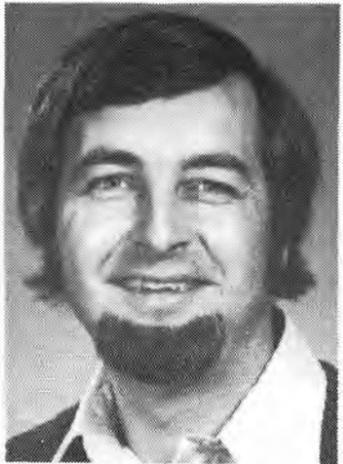
C. A. Davidson — 1522 20



William Meahl — 9343 20



Myrtle Patterson — 7631 20



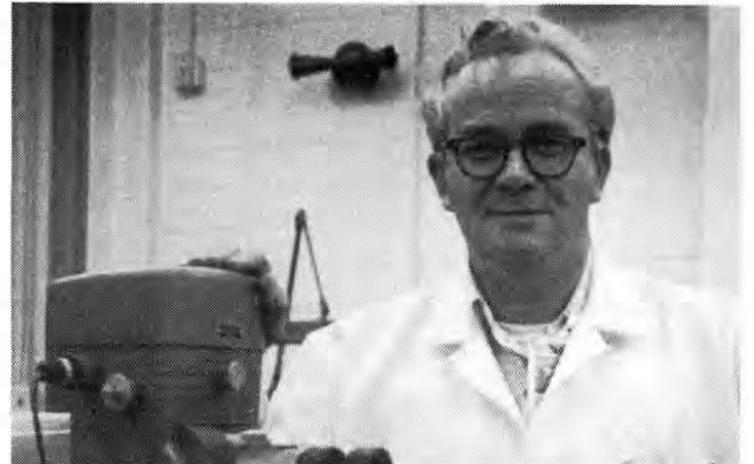
Robert Prew — 2134 10



Tom Morgan — 4251 10



Ruth Saffle — 7510 10



John Newton — 7146 15

feed *li*back

To get a response to your comments and questions about Sandia Labs, complete a Feedback form (available near bulletin boards) and return it to the Feedback administrator. The substance of questions and responses of wide interest is published in LAB NEWS.

Q. Recently the Coronado Club raised prices on drinks. I recognize that the cost of nearly everything has gone up, but the increase in prices on drinks at the Club appears to be greater than any increase in costs in general. For example, a highball during Happy Hour was 25¢. Now it's 35¢, a whopping 40% increase! Other drinks have been affected similarly. Why the drastic jump in prices?

A. The reason for the price rise in drinks at the Club is obvious — rising costs. Both costs of goods sold and labor rates have increased significantly over the years. In over 10 years, we've not had a single liquor price rise that has been passed on to the membership with one exception. Can beer was raised five cents last summer when it was determined that the Club was losing money on each sale. In the past, we've been able to maintain the price line by reducing other costs, tightening controls, and improving efficiency. You eventually reach a point, however, at which further action of this type simply cannot compensate for additional costs. The present prices were set at a level that we think we can maintain for the foreseeable future. In any event, a price comparison with other clubs in the Albuquerque area will indicate that the Coronado Club is still a bargain.

—Max Newsom, President
Board of Directors

Q. We accumulate copies of Aviation Week and other technical publications. Any suggestions on what to do with them?

A. We have an arrangement with the Albuquerque Public Schools whereby our used but current technical and trade publications are delivered to them for use by students. Community Relations Division, 3163, in Bldg. 610, is the collection point for magazines of this type. They may be sent through company mail in small quantities, but bulk quantities should be boxed and delivered to Bldg. 610. Joe Laval is the contact.

—K.A. Smith - 3100

Q. Why not offer some financial incentive to employees for getting to work in buses, car pools, by bikes and the like?

A. The question is really this: should we pay employees to do what their consciences and logic tell them is the proper thing to do? The suggested "incentive" goes beyond a company's responsibility in the matter. We try to make car pooling convenient and attractive to employees, e.g. reserved parking spaces, but in the final analysis what they are doing is a part of being private citizens. By comparison, we make it possible for employees to buy Savings Bonds conveniently, and encourage them to do so, but we do not pay them to participate.

—K. A. Smith - 3100

Q. Since the city is short of buses, why can't Sandia buses be made available to bring employees to work?

A. Sandia buses cannot be used because it is not legal to use Government vehicles for other than official business. Sandia only has four buses and they are considerably smaller than the city buses. Negotiations are underway with the city to provide more buses or to permit private bus companies to provide needed bus service.

—R. E. Hopper - 7500

Q. A suggestion: how about some means for a Sandia bus rider to identify himself so that a car driver could pick him up — a plastic thunderbird badge for instance? When I do drive I make it a point to look for Sandians who are waiting for a bus. Others would too if identification were easier.

Q. Why can't we have a few pay phones in Tech Area I?

A. We can, and arrangements are being made to install pay phones in Bldgs. 880, 892, 836 and 840. If practicable, the two pay phones in Bldg. 800 will be placed in booths to provide privacy. The use of government billing codes for personal phone calls is a violation of the law, but employees may place personal long distance calls from their business phones provided they instruct the operator to charge their home phone number. If there are questions on use, please call Jim Porter on ext. 7640.

—L. E. Hollingsworth - 2600

Q. If an individual, while vested, terminates and leaves money in the retirement plan, are the provisions the same as if he had remained employed, e.g. can he take the option of reduced benefit at age 60-65?

Is any action pending which would allow retirement after 25 or 30 years service?

Has any consideration been given to a reduced work day for individuals after they have

served 25-30 years or have reached a certain age, 55-65 (at reduced pay of course)? Would not such a plan warrant consideration over layoffs of the type we've had in the past?

A.

1. An individual must retire *directly* from employment with the Laboratories to be entitled to the retirement plan's more favorable non-actuarially reduced early retirement benefits. A vested terminated employee who draws a retirement income prior to age 65 would receive an actuarially-reduced annuity. An actuarial reduction would reduce the individual's accrued retirement income approximately 5% to 6% for each year payments commence prior to age 65.
2. We have reviewed the so-called "30 and out" concept for Sandia and have not adopted it at this time because of the few employees who would be beneficially affected now or in the near future. Sandia has, however, recently changed its retirement plan to provide non-actuarially reduced early retirement benefits to employees age 55 but less than 60 with 20 or more years of service.
3. Several plans to provide for reduced work schedules for older, long service employees have been reviewed in the past. Due to various problems with labor laws, benefit programs and manpower placement, these programs have not been adopted.

—D. S. Tarbox - 4200

Q. A suggestion: to ease the gasoline problem, why not establish a pick-up point for specific areas of the city, so that a driver could pick up riders? Signs at the pick-up point would tell the driver which area the rider is headed for.

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AEC Commissioner William Kriegsman, left, visited Labs last week for briefings on programs. He is shown here with VP Al Narath (5000), center, and Don Shuster, Director of Advanced Planning and Analysis (4700).

Speakers

T.F. Marker (6010), "The Invention Process," Rio Grande High School Career Day, Nov. 7.

H.C. Monteith (9344), "Psychology and Happiness in Human Relations," Rio Grande High School Career Day, Nov. 7.

A.D. Swain (1642), "Psychology as a Career," Jefferson Jr. High English class, Nov. 19.

W.B. Murfin (4762), "Energy Alternatives," Community School, Dec. 12.

C.S. Johnson (9421), "The Amazing Mystery of the UFO," Kennedy Jr. High School science class, Dec. 13.

M.J. Landry (2441), "Lasers," Albuquerque Science Teachers Assn., Dec. 13.

G.P. Steck (5122), W.J. Zimmer and R.E. Williams (both UNM), "Estimation of Parameters of Ageing Functions," 1974 Reliability and Maintainability Symposium, Jan. 29-31, Los Angeles.

L.F. Shampine (5121), "Error Control in Codes for Ordinary Differential Equations," The Institute for Fluid Dynamics and Applied Mathematics, Jan. 21-22, University of Maryland.

F.G. Blottner (5643), "Variable Grid Scheme Applied to Turbulent Boundary Layers," Three-Dimensional Boundary Layers and Boundary Regions Conference, Jan. 28, Newport News, Va.

R.D. Bland, G.J. Kominiak and D.M. Mattox (all 5834), "Effect of Ion Bombardment During Deposition on Thick Metal and Ceramic Deposits"; Mattox and R.R. Sowell (both 5834), "High Absorptivity Solar Absorbing Coatings," Conference on Structure-Property Relationships in Thick Film and Bulk Coatings, Jan. 28-30, San Francisco.

T.R. Guess (5847) and B.L. Butler (5843), "Thermal Shock Modeling of Carbon Fiber/Carbon Matrix Composites"; A.E. Hodapp, Jr. (5625), "Effects of Unsymmetrical Stability Derivative Characteristics on Reentry Vehicle Trim Angle Behavior"; B.M. Bulmer (5628), "A Study of Base Pressure in Laminar Hypersonic Flow: Reentry Flight Experiments"; L.G. Rainhart (7122) and D.A. Northrop (5843), "Carbon Fiber/Flake Thermal Insulation for Carbon-Carbon



THE MAN ON TOP of vending machines is Jim Schultz, C-Club manager. His employer, Szabo Food Service, recently signed a new contract with Sandia which provides for a number of full food service vending centers throughout the Labs. These will make meals, not just snacks, available for easy half-hour dining. First machines should be open for business in four to six weeks.

Composite Ablative Shells," AIAA 12th Aerospace Sciences Meeting, Jan. 30-Feb. 1, Washington, D.C.

J.M. Hueter (3131), "Behavioral Science in Management," Industrial College of the Armed Forces, Jan. 14-15, Albuquerque.

D.A. Dahlgren (4762), "Deterrence, Arms Control, and Technology," Univ. of Albuquerque, Jan. 14.

Sympathy

To Paul Percy (5132) on the death of his mother in Kentucky, Dec. 31.

To Frank Fox (7553) on the death of his mother in Galena, Ill., Jan. 17.

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.
 A maximum of 125 ads will be accepted for each issue.

RULES

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

MISCELLANEOUS

CRAFTSMAN lathe, 26" with motor and tools, \$60; wetsuit, \$40; metal skis, 205cm, \$35. Davenport, 255-3523.

SEARS frostless refrigerator, bottom freezer, \$150; camper for pickup, icebox, stove & water tank, \$395. Lackey, 898-5175.

COLONIAL floor lamp, solid brass, \$20; antique doll buggy, \$10; boudoir set, \$6.50; 3 steel patio chairs, \$2.50 ea. Smitha, 266-9977.

CROSLY RADIO & phono combination, console, walnut, best offer. Kent, 256-1221.

TWO chairs, brown nylon upholstery, \$35 & \$25. Hubbard, 299-7818.

TV, 21" B&W GE, 10 yrs. old, \$25. Kohut, 298-0695.

GUITAR, 3/4 size, case, \$50. Norwood, 262-0073.

SLIDE PROJECTOR, Bell & Howell, 500 watt, w/remote control, complete w/21 slide trays, \$55. Lawrence, 296-3058.

DRAPERIES, custom made, 102" w x 88" long, aqua/blue/green taffeta w/matching double

spread, \$50. Campbell, 299-8071.

FIREWOOD, seasoned pine, \$50/cord, delivered & stacked. Larsen, 765-1217.

BABY BED, mattress & bumper guard, \$25. Peterson, 299-6473.

19" GE B&W port. TV w/stand. Austin, 298-2010 after 5.

TWO air conditioners, refrigerative window type, 110V and 220V, best offer. Kubiak, 265-6525.

DECORATOR SCREEN; bed & headboard; lamp; washing machine; elec. lawn mower; GE AM/FM radio; vacuum cleaner; floor polisher; misc. May, 299-2624.

ELEC. DRYER, Frigidaire, \$40, will deliver. Glass, 298-0842.

TRAILER for 3 motorcycles, heavy duty; guitar, 12-string made by Pimentel of Albq., w/matching carrying case. Dunn, 255-9213.

SKI RACK, trunk mounting, 4 pr., \$15. Claassen, 255-4347.

SKIS, Head H.R.P. 198cm, \$80; boots, Koflach competition, size 10 w/new foam job, \$70. Gallagher, 268-1988.

40" GE range, lg. self-clean oven plus small oven, 4 elements, griddle, time controls, avocado. Henderson, 299-1442.

FLAT BED TRAILER, 7-1/2' wide x 15' long, \$165. Pohl, 344-8503.

SKI BOOTS, man's sizes 10-1/2 & 11-1/2; Tyrol, plastic shell, \$15/pr.; wooden skis, 190cm, Voelkl Vail w/Cubco bindings. Reynolds, 256-3670.

REBAR: 3/8", 20' lengths, 330'; 4/8", 30' lengths, 225'; \$70 cash. Foesch, 296-6837.

SWING set, 3 swings, glider, slide, \$25; boy's bicycle, 26"

Western Auto, \$10, needs repair. Steward, 268-2786 after 5.

MINOLTA SR-3 camera system w/lenses and many accessories; Rollietflex twin lens reflex w/accessories. Burd, 294-6964.

TWO DAY LIFT tickets for two adults at Crested Butte, Colo., ski area, \$30 value for \$15. Champe, 299-0066.

MODEL 41 S&W 22 cal., \$100; will trade Indian jewelry for old guns or Indian items. Zaluga, 344-1564.

RUG, Karastan acrylan, 12'x12', off-white, w/pad, \$95; bicycle, Raleigh 10-sp., cost \$220, best offer. Schuch, 298-9924.

SAIL BOAT PLANS for 18' Seacat catamaran; plans for 16' Kitty Cat catamaran w/50 pieces of pre-cut plywood parts, best offer. Harris, 255-6577.

HEAD STANDARD 210 skis, Nevada bindings, Barrecreafter ski rack, size 12 boots. Edburn, 265-5184.

AKC Miniature Schnauzers, two left, 9 wks. old. Cyrus, 898-5006.

HIDE-A-BED; braided rug; red maple occasional tables & chairs; antique wing-back chair, needs upholstery. Miller, 255-1324.

USED WASHER, automatic, \$50. Mottern, 299-8817.

CRIB, firm foam mattress, \$20; Peterson high chair, \$7.50; Infanseat, \$7; creative playthings, crawligator & teething toys, \$7. Beard, 821-0309.

MAPLE dinette set, 5 pieces, \$80; old Royal std. typewriter w/stand, \$15. Grey, 299-7349.

PIANO, upright w/bench, \$275. O'Neal, 298-2859.

POOL TABLE, \$20; children's skis, Skitique, wooden 120cm

w/Cubco bindings, Koflach boots, size 4 w/Cubco plates & poles, set \$15. Tischhauser, 293-9768.

FLASHY registered Appaloosa gelding, shown extensively by youth, English, Western flat, reins, jumps, drives, good trail horse, \$800. Meyer, 898-5224.

LANGE PRO ski boots, 11M, \$45; Miller fiberglass skis, 205cm, used once, \$50; Miller metals, 210cm, \$20. Shunny, 265-1620.

TRANSPORTATION

'61 CHEV. pickup, one owner, make offer. Windshield for '70 Chevelle. Sanchez, 877-0326 after 5.

'69 PONTIAC Firebird, AT, PS, AC, 32,000 miles, vinyl top. Stiegler, 299-6763.

'72 FORD Chateau wagon, 12-pass. van, low mileage, will sell below NADA book value. Cooper, 869-2198.

'62 MERCURY Meteor, 221 cu. in. V8, AT, R&H, \$375. Crumley, 299-5293.

'70 BARRACUDA, new radials, 383 CID, AT, metallic orange, \$1400. Wood, 877-3903.

FOR RENT

3-BDR., 1-3/4 baths, NE Heights, no singles, references required, water paid, \$100 deposit, \$250/mo. Stovall, 298-0606 or 299-6080.

FURNISHED 2-bdr. apt., water & garbage paid, \$135/mo., \$80 damage deposit, no pets. Heidrich, 321 Pennsylvania NE, 268-1391 after 5.

2-BDR., brand new, carpeted throughout, appliances,

washer & dryer hook-up, near shopping, adults preferred, \$165 w/utilities paid. Towner NE. Duvall, 255-4678.

WANTED

'59 CHEVY 2-dr. HT Impala. Hindi, 299-8996.

CANNING JARS, new or used. Schmidt, 296-5631.

PHOTO ENLARGER for student, reasonably priced. Mason, 299-2836.

BASKETBALL backboard, goal, hardware, for pitch roof mounting. Blossom, 299-6709.

USED lightweight boat or luggage trailer or parts for one; also snowshoes. Leeman, 299-9149 after 5:30.

LOWBOY trailer, flatbed, big enough to haul Jeep. Falacy, 344-9548.

GUITAR TEACHER for 9 & 12 yr. old, far NE Heights, reasonable, teenager preferred. Mantelli, 298-2603.

LOST AND FOUND

LOST — Size 10 pink knitting needle, '69 Cadillac hubcap, silver screwback earring w/5 tear-drop beads, desk key on red tag, oblong gold tie tack w/brown agate, Rx safety glasses in pocket case, fur lined brown leather glove, black leather glove, 5 or 6 keys on ring w/initials G.L. **LOST AND FOUND**, tel. 264-3441, Bldg. 832.

FOUND — Rx glasses in black plastic case, triangular tie tack-American Motorcycle Ass'n., floral print glasses case. **LOST AND FOUND**, tel. 264-3441, Bldg. 832.

FRIDAY	SATURDAY
HAPPY HOUR BUFFET Mexican Food Adults \$2.25 Under 12 \$1.50 Dancing: Sol Chavez LOUNGE Denny	SOUL SESSION 8:30 - 12:30 Ernie & The Saints Members Free Guests \$1.00 Happy Hour Bar
HAPPY HOUR BUFFET Baked Ham Adults \$2.75 Under 12 \$1.65 Program: Spring Fashions (See Below) Dancing: The Prisoners LOUNGE Yolanda	FAMILY VAUDEVILLE Show: The Mime Experiment (See Below) Movie: Flight of the Doves 6 p.m. - Food available 7 p.m. - Show time Members Free



THAT'S THE SMILE guys get when they suggest a C-Club evening. Dave Norwood provides the stimulus, Julie (Ms. Norwood) the response.

Flair —

That's where they're from and what they have — the models for the Fashion Show on the 8th. Women's spring fashions from Marcy's Apparel, men's from Charles Williams. Rosario Ayres will coordinate the show.

Fantastic —

The Mime Experiment puts on a fine show — somewhere between Marcel Marceau and Red Skelton. It's amazing what they can say without words. Come see.

And —

The World's Most Traveled Man? Likely John Furbay of TWA who will share tales of

exotic places with Sanado members at 1:30 p.m. on Feb. 12.

And Travel —

A Las Vegas "Roll-Out" on Feb. 22-25 is open to both members and non-members. \$135 (double), four days, a couple of breakfasts, dinner show, etc. \$50 due now.

Call the Club for details.

And More Travel —

Down the Grand Canyon of the Colorado River in July. See the note under "Fun & Games", page 7.

MORE INFO — 265-6791.

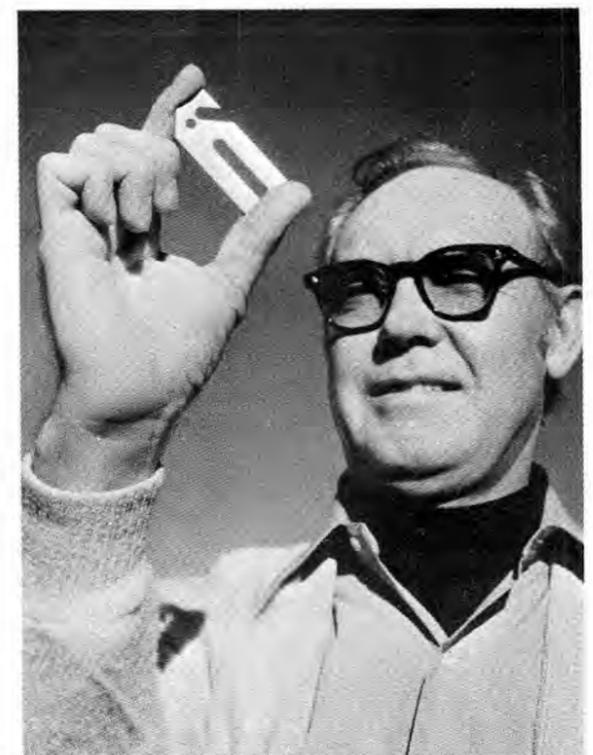


New Mexico Academy of Science Elects Dick Meyer '74 President

Dick Meyer of Chemical Technology Division 5824 is the newly-elected president of the New Mexico Academy of Science. For 60 years the Academy has been active in New Mexico, encouraging and supporting education and research in science and related fields.

Dick believes the coming months will be important for science in New Mexico because of the role that the State and organizations such as Sandia Labs will have in solving the nation's energy problems. "The Academy will be participating heavily in energy-related matters during 1974," he says. "We're working with the Governor's Energy Task Force preparing position papers on selected energy subjects. And speakers from the NMAS Visiting Scientist Program will emphasize the energy aspects of science and engineering in presentations made to high school students. Also, the papers presented last fall at our symposium on The Energy Crisis will be published in our Spring Bulletin." In addition, the spring meeting of the Academy will be devoted to a symposium on conversion to the metric system.

If you're interested in Academy activities give Dick a call on 4-8140.



SIMPLE, CLEVER, is this device held aloft by its deviser, Roy Hart (7515). Replacing the ballasts in overhead fluorescent fixtures used to be time consuming because the new ballast was usually different in size and mounting holes had to be drilled in the fixture — a problem when standing on a ladder while handling the drill and a long extension cord. Roy's device, which he calls a ballast washer, fits all replacement ballasts and enables quick installation with existing mounting holes.