

Commuting In The West
See Page 11



More Conservation Measures Now Being Considered

Even with the half hour lunch, dim-lit corridors, cooler buildings and restricted vehicle use from the Motor Pool, other changes now under consideration to conserve energy will affect the way it is with us who work at Sandia Laboratories.

Last week President Morgan Sparks sent a letter to the AEC outlining further measures which will cut down on energy consumption at the Labs. It was prepared by Don Shuster (4700), Sandia's energy coordinator, and contained suggestions from a number of Labs organizations.

The letter points out that the half hour lunch at Sandia will effect an estimated annual reduction of gasoline consumption by 261,000 gallons by virtually eliminating the number of private trips off base at lunch time.

The letter continues:

"A number of other schedule changes are being carefully analyzed as potential energy conservation moves. There are complex interactions among productivity, union contracts, wage and hour laws, and impact on related energy uses. Changes that are appropriate and effective will be implemented.

"1. In CY '74, scheduling Nov. 29 as a

non-work day allowing for a shutdown of plant facilities from Nov. 27 to Dec. 2.

"2. Shutting down operations during the Christmas season of 1974.

"3. Shifting the Laboratories work schedule from the current 8 a.m. to 4:30 p.m. schedule to 7 a.m. to 3:30 p.m. during the summer months (May 1 to Oct. 1).

"4. Going to some variation of a four day week for all employees. This change would present some particularly difficult problems for our type of operation."

Also mentioned is the fact that Tonopah Test Range is now working a four day week and that other plans are under consideration to conserve fuel on the commuter F-27 aircraft provided by the Labs for the Las Vegas/TTR trip.

In addition, the letter reports development of plans to reduce fuel consumption of government vehicles assigned to the Labs by 25%, or some 79,000 gallons of gasoline per year.

Another item is the creation of an "energy monitor" for each Sandia organization, "responsible for promotion of energy conservation measures within organization work areas as well as stimulation and collection of new energy saving ideas."

The letter concludes:

"The expected total annual savings of all conservation measures the Laboratories is considering is equivalent to 35,000 bbls of oil for heat, 13,620 megawatt hours of electricity, and 340,000 gallons of gasoline." •dg



LAB NEWS

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JANUARY 4, 1974

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

Afterthoughts

Nice Touch--Al Smailer (7510) reports that he was stopped at the Gibson Gate week before Christmas, half expected some hassle as the guard approached, only to be handed an envelope whose content was none other than a Christmas card signed by the two guards--Sgt. Ricardo Alvarez and Alc Greg Pitlock. Al was considerably disarmed.

The Cosmetic & The Real--Before the uproar over energy gets down to some reasonably frantic level, I suspect most of us will have had it up to here with preachments on the subject. The bulk of citizens will undoubtedly respond to those conservation messages that arise out of some genuine need. But please spare us the exhortations to take energy-saving steps whose effect is chiefly cosmetic: we do it because it looks good. The best and most recent example of this was the staggering amount of significance attached to Christmas lighting, whose total electrical drainage is so small as to make the matter absurd. Similarly electric tooth brushes and can openers, which are now getting bad press. There's a disservice done to the cause (and that's what it is) of energy conservation by lumping these tinsel economies in with those that are genuine--the message becomes diluted.

The '73 Outstanding Pain Words Awards--Many good candidates emerged or came to full flower in '73. The winners:

- 1) life style--"John and Mary have a nice life style."
- 2) viable--"We must develop viable alternatives." (Note: some exceptionally able speakers succeeded in bringing off what can only be regarded as a verbal coup, to wit "a viable life style.")
- 3) into--"He's into sociology" (or drugs, ballet dancing, comet watching, etc.)
- 4) energy crisis--"We've got an energy crisis."
- 5) chairperson--"Mary's the chairman, oops, chairperson."

"The man who is completely wise and virtuous has no need at all of glory, except so far as it disposes and eases his way of action by the greater trust that it procures him." Plutarch Lives

*js

Events Calendar

In the recent LAB NEWS survey Lynn Rigby (1642) suggested a "much expanded events calendar," one that would include meeting dates for professional societies, as well as the customary cultural events, sports events, etc. We think this is a good idea and,

for LAB NEWS" next issue, plan to include — in calendar format — events for the three or possibly four weeks subsequent to issue. Hopefully, readers would cut the calendar out of the paper and keep it at hand for ready reference. There's one crucial element in the success of such a calendar: professional society chairmen have to let us know the dates of their meetings. Call Gers Martinez of the LAB NEWS staff on ext. 7841 to give him this information; Gers will be coordinator of a master calendar maintained in this office.

Jan. 5 — Albuquerque Wildlife Federation film-lecture, 7:30 p.m., Popejoy Hall.

Jan. 6 — NM Mt. Club, snowshoe trip, San Pedro Parks, 5-10 miles, 7:30 a.m., Gulf Mart.

Jan. 12 — NM Mt. Club, snowshoe trip, Sandia Crest, 5-7 miles, 8 a.m., Eastdale.

Jan. 12-13 — NM Mt. Club, backpack, Lake Katherine, 10 miles; call Bob Kyrlock (296-1725) by Jan. 9 for reservations.

Jan. 14 — June Music Festival, Beaux Arts Trio, 8:15 p.m., Popejoy Hall.

Jan. 16 — Albuquerque Symphony Orchestra, 8:15 p.m., Popejoy Hall.

Two at Labs Named Fellows



and devices."

Cecil Land of Solid State Electronics Division 5113 was notified this week of his election as Fellow of the Institute of Electrical and Electronic Engineers, the highest honor the organization can bestow. His citation was for "contributions in ferroelectric materials

Cecil is the author of more than 30 technical papers. He holds six U.S. patents and 38 foreign patents in the ferroelectric field, particularly for devices utilizing the electrooptic properties of ferroelectric ceramics.

He joined Sandia Laboratories in January 1956 and worked originally in a weapons project group. He later transferred to advanced development in field testing and then into the research organization where he specialized in ferroelectrics.

Active in the Albuquerque Section of the IEEE, Cecil has served in most offices, including chairman of the local group. He is also a member of two national IEEE committees — Transducers and Resonators, and Ferroelectrics.

He holds memberships in the American Physical Society, Optical Society of America, Society for Information Display, American Ceramic Society, and National Society of Professional Engineers.

Later this month, Cecil will be honored at a meeting of the Albuquerque Section of IEEE and recognized at the national convention later in March.



Alan Swain of Systems Reliability Division 1642 was recently elected to the rank of Fellow in the Human Factors Society in recognition of "outstanding contributions to the field of human factors."

A certified psychologist in New Mexico and a certified reliability engineer by the American Society for Quality Control, Alan joined Sandia in February 1961. He earned BA, MA and PhD degrees in clinical, experimental and industrial psychology from Ohio State University. Prior to joining Sandia he taught at the University of New Mexico and was associated with the Psychological Corporation, the American Institutes for Research, and Dunlap and Associates, Inc.

He is the author of a textbook and more than 60 technical papers in various human factors areas.

At Sandia he co-developed a method for the quantitative prediction of human performance and its effects in man-machine systems.

Alan has lectured frequently in the U.S., Mexico and Europe on the application of human reliability and human factors techniques to industrial tasks. Last month he conducted a three-day workshop at the State University of New York at Buffalo where he serves as an advisor to the Department of Industrial Engineering.

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Editorial offices in Albuquerque, N.M.

Area 505 264-1053

ZIP 87115

In Livermore Area 415 455-2111

john shunny is editor
&
don graham ass't. editor

bruce hawkinson writes
as does norma taylor while
bill laskar takes/makes pictures

&
in livermore lorena schneider does all

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GLENDAM KAMPPINEN (8345), left, and Tonni Nunley (8363) are keeping them in stitches — not the staff, the parachutes. Seems that a group headed by Ray Rychnovsky (8363) is doing some parachute studies and minor modifications to the test chutes are sometimes needed. So they got a sewing machine to make changes quickly. From this angle, it looks more ballet skirt than chute.

Take Note

The Needs Assessment Steering Committee of the Livermore Valley unified school district is offering a series of community conferences in which residents can express their opinions about the school's educational program. Conferences have been scheduled at each of Livermore's 21 schools for Saturday, Jan. 12; Wednesday evening, Jan. 16; and Saturday, Jan. 19. Check with the school in your area or the local newspapers for specific times.

Sympathy

To Mike Gregory (8332) on the death of his father in Hollywood, Nov. 24.

To Don Richardson (8257) on the death of his mother-in-law in Livermore, Dec. 12.

Umiak II Makes the Long Haul to Canada

"We shoved off from the Alameda marina on a Friday evening about sunset, headed for Canada. Passing the Farallon Islands, there was a light northwesterly wind and we had to tack north," recalls Gunner Scholer (8163), skipper of Umiak II, a 43-foot fiber glass sloop.

Aboard, a six-man crew included Ed Cull (8163), Bill Robinson (8112), Gary Beeler (8363) and his father, and Gunner's son. "By dividing into three different watches — two men on each around the clock — we kept an eye out for wind, waves and strange objects," Gunner continues. "Fifty to 85 miles off shore the sailing was pretty smooth for the first days, but as we got up the Oregon coast the wind increased to around 35 knots."

Six and a half days after leaving San Francisco Bay, the Umiak II docked at Port Angeles across the strait from Vancouver Island. "Incidentally, that's considered really good time" comments Gunner. "We refilled our water tank and everyone aboard enjoyed a steak at a harbor restaurant. Then we headed for Widby Island in Puget Sound where Gary's parents have a summer home. Several of our wives joined us here for about two weeks of sailing and sightseeing in the beautiful San Juan Islands and in Sydney,



UMIAK II, at sea, enroute to Canada. Top right, chow time for skipper Gunner Scholer (8163). Below, Bill Robinson (8112) shoots the sun with sextant. During recent 2,500-mile trip, the crew generally sailed 50 to 85 miles off the coast using compass, celestial navigation, and radio direction finder.



Nanaimo and Victoria, Canada.

"On the return trip to the Bay Area, we made just one stop, at Coos Bay in Oregon, a most interesting harbor because of a sand bar at the entrance which creates large waves and currents. I was fascinated by the way the water boiled and swirled. The harbor is generally so difficult to enter that the Coast Guard has a boat standing by to assist."

Going up and back, Gunner says they were surprised at the numerous, large Russian trawlers they met. "They were like big freighters. On occasions we passed so close they'd stand on deck and take pictures of us, and we did likewise. Sometimes they'd wave and at night signal with lights, friendly like. We never saw them actually haul in fish but assume they somehow caught and processed the fish in what appeared to be a self-contained operation.

"We had no fishing gear along ourselves, but found up north you could have all the oysters and clams you could possibly use just by picking them up from the beaches. The oysters were particularly delicious when barbecued on the grill."

Gunner claims that very few people sail to Canada from California. "Even in sailing circles the trip is considered pretty rough.

Luckily, we had only a single mishap — Gary's father incurred what was discovered after the trip to be a broken rib when he swung out of his bunk during high seas and bumped his chest on a corner of the cabin.

"But then," he adds, "I enjoy sailing because of the challenge in fighting the elements. There's also the adventure and comradeship of a crew all dependent on each other. We worked as a team on the trip, 'round the clock."

Gunner first sailed as a youngster in Denmark, where he was national champion in an 18-footer three years in a row. As a result, he always wanted a boat again, but a bigger one. "Three years ago I bought this brand new sloop and named her Umiak, an Eskimo word meaning 'family boat.' Since then we've taken several long sailing vacations, the first year to San Diego and the following year to Mexico, in addition to sailing trips in the local area.

"Besides sailing north and south, I'd like to go west to Hawaii and east through the hundreds of miles in the Delta waterways. Guess I'll have to leave the long trips to the South Sea Islands, the Carribean, and Europe for retirement, though," he concludes.

4-Beam Laser Holds Promise

Sandia Laboratories scientists have begun the AEC's first multiple-beam laser experiments to obtain fundamental data relevant to production of energy by laser-induced controlled thermonuclear fusion.

The four-beam neodymium-glass laser now produces about 200 joules of energy (a joule is equivalent to one watt applied for one second) in bursts lasting two nanoseconds, subjecting deuterated polyethylene pellets 200 microns in diameter to a peak power of about 100 billion watts.

Output of the system will be scaled up gradually until a total energy of approximately 500 joules in a two nanosecond pulse is reached. Subnanosecond experiments will then begin, with pellets being irradiated with pulses lasting 200 to 500 picoseconds. Power of these pulses would approximate 1-trillion watts.

The laser system consists basically of a small neodymium glass laser. Its pulse is passed through four larger neodymium glass amplifiers, split into four beams and then passed through four more parallel amplifiers, with the beams finally terminating on the target pellet in an evacuated target chamber.

Early tests have dealt primarily with bringing the beams up to power, focusing them, insuring that they arrive at the pellet surface simultaneously, and testing instrumentation used to gather data.

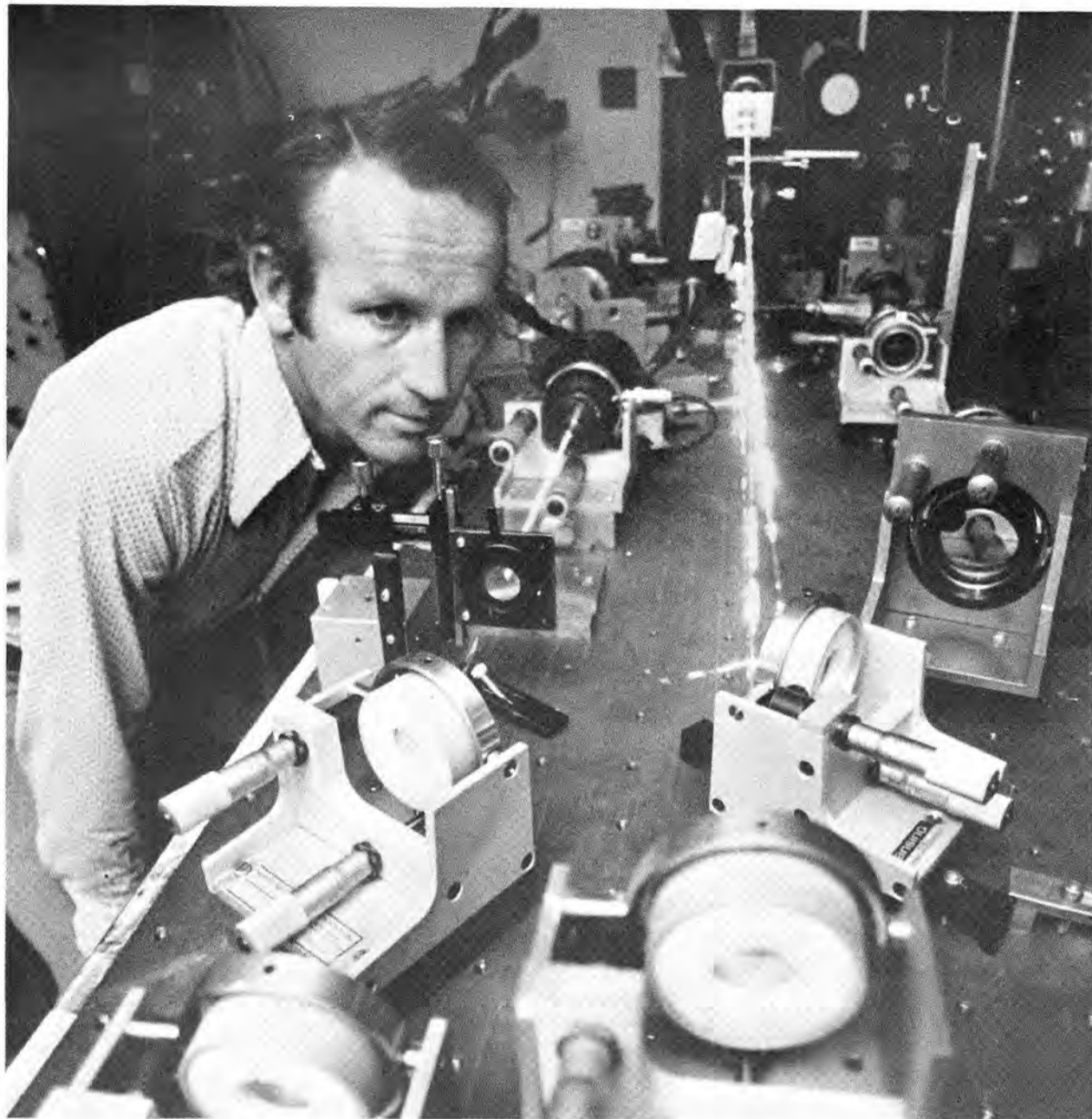
The new laser is being evaluated for its potential in the simulation of nuclear weapon effects through laser fusion; other fusion studies are planned as well.

In the fusion studies, the laser will be used principally to fill the data gap between 50 joules — an energy level where a number of U.S. and foreign researchers have been working for several years — and 1000 joules, a level which other AEC labs expect to achieve in the near future.

The laser is the first high energy system in the U.S. delivering more than two beams to a target although Russian experimenters have been operating a nine-beam laser in fusion experiments for several years. The Russian laser has a reported output of about 600 joules in a two nanosecond pulse.

The energy range at which the Sandia investigators will be working is of considerable interest because of the uncertainty about the reliability of present scaling laws. These laws are used in the extrapolation of data from present experiments with low power lasers to predict the performance of much higher energy lasers such as those required to attain fusion breakeven.

The four-beam laser system originated in Laser Development Division 5214 headed by Eric Jones. Jerry Brannon, Fred Franklin, Gene Hauser and John Lavasek did design and development work. Experiments are being conducted by the Laser Plasma Physics Division 5213 supervised by Jim Powell. Other members of this division working on the experiments are Gil Cano, Jerry Cuderman, Pete Palmer, Wayne Ebaugh, Dave Zagar and Fred Anderson.



ERIC JONES, supervisor of Laser Development Division 5215, using laser beam to align oscillator used to originate pulse in Sandia's four-beam laser system.



JIM POWELL (front) and Gil Cano of Laser Plasma Physics Division 5213 align pellet in target chamber of four-beam laser.



Bus Notes

The Transit Company plans a new regular route down Wyoming from Academy to the Base. It will be timed to arrive shortly before 8 each morning and to depart shortly after 4:30 each evening.

The new bus will allow our Special #1 to travel south from Candelaria on either Moon or Eubank and perhaps relieve some of the current overcrowding on Special #2 along Morris.

No date for the new route has yet been announced, but if you live in the Moon/Eubank area and have a preference as to which of those streets should be the new route for #1, please send your name, organization, phone, and preference (Moon or Eubank) to "#1 Bus," Div. 3162.

* * *

Alan Beattie (9352) has tabulated the response from the Corrales-to-Sandia-via-Coors bus survey. The number of prospective riders is borderline, but he has gone ahead with establishing likely stops and a tentative schedule. Next stop is to work with a private carrier willing to handle the new route. All who responded to the survey will be informed of the outcome.

* * *

Prospective bus riders in the Far East, Ridgecrest, and South Valley areas: don't give up hope yet. New Transit Company equipment? Private carriers? The Employee Transportation Committee hopes to have good news soon. •bh

Rent-A-Care?

"That's it; we'll rent a car when we get there and everything'll be great. Right?"

Not necessarily.

Renting a car for private use can lead to some very real pitfalls. Consider:

1. *The Tale of Tom Zmiejko (7614)*. Tom and friends rented a car in Philadelphia from a major agency for a private trip to Hazelton, Pa. They dropped the car off and paid the \$50 or so owed to the car rental guy — in cash (not a good idea) and got a receipt (a good idea). Guy apparently pocketed the \$50; bill for \$50 arrived a few weeks later. Tom had kept the receipt (a very good idea) so a series of letters and phone calls got the matter straightened out.

2. *The Saga of Will Smith (5113)*. Will didn't really trust the family car for a San Francisco/Seattle trip. So, for peace of mind, Will rented a car. He checked it out first; everything fine. But by Oregon a front tire was showing wear, so Will drove to the agency in Portland and pointed out that a tire really ought to have some tread along its edges. Portland agreed — "it's way out of alignment" — and offered a course of action — "drive it 'til it's bald and then put on the spare and ruin it too" — but no solution — "we don't fix or replace San Francisco cars."

The message: don't necessarily expect help from a local branch when your out-of-town rental turns into a klunker.

3. *Doug Drumheller (5163) and the Lemon*. With another Sandian, Doug rented a car in Philadelphia. It was a brand new car, but the trunk wouldn't open. Neither would the right-hand door. Oh well, it was late and stormy and the hotel wasn't far and one can slide across a seat once in a while. And one did.

Next day, they needed direction. So Doug pulled over to the right side so companion could ask for directions. Sorry, but window was absolutely unwilling to roll

down. So Doug drove across to the left side and found that his window actually rolled down. But not back up again. Brand new cars haven't excited Doug much since.

4. *Keith Mead (5323) and Stark Terror*. From Oakland to Hayward down the freeway went Keith, noticing that he had to turn up the volume on the radio perplexingly often. Until he was out of the lighted portion of the freeway, he didn't notice that the headlights weren't lighting much. And about then, in the middle lane of the freeway in the middle of the night, the car stopped. Cold. No radio, no cigarette lighter, no heater, no headlights, no starter. Worst of all, no emergency blinkers. It's decision time: sit in car and hope no one hits you, or run across lanes of traffic and hope no one hits you. Keith fingered his lucky Sandia Thunderbird charm. It worked. A car saw him just in time to stop behind him and, after a quick consultation, pushed him down the freeway to an off-ramp and safety. The problem? Non-functioning alternator and idiot light, and a battery can't go on forever.

* * * *

How to assure safety, peace of mind, mechanical reliability and a fair charge for goods and services rendered. "No way," says Sandy Borgrink. As supervisor of the Traffic Reservations Section 7331-2, she knows what can be known about rental rates, agencies, contracts, and vehicles. "Total assurance is impossible. But there are some ways to minimize financial, physical, and psychological disaster."

1. Remember that Sandians get a 20 percent discount from Hertz, Avis, National and Thrifty. To get it, you'll need a special card (Sandy loans them out) for Hertz, your Sandia identification card for the other three. The discount is good on standard and intermediate size cars, sometimes on compacts too.

2. Shop around. Check rates carefully. Be prepared to make decisions like: a) a \$16 a day, 16¢ a mile for intermediate with gasoline furnished and the 20 percent discount, versus b) an \$8 a day, 11¢ a mile compact car without gas or discount. Estimating the number of miles you plan to drive beforehand is wise. Then call the companies either locally (except for Thrifty) or nationally via WATS lines. Do it yourself; don't ask Traffic.

3. Take the optional collision damage insurance unless you're quite positive your own insurance would cover such damage and you're willing to pay whatever deductible would be involved.

4. Believe it or not, the counter girl in Punxsutawney, Pa., may never have heard of Sandia Labs. If you have a problem with your Sandia identification, have her refer to the discount index. Sandia is listed and it will give her the necessary instructions.

5. Don't be offended if you're asked for additional credit references. The agency is trusting you with a \$4000 car, and stolen rental cars are all too common. For the same reason, you won't get a better deal by paying cash — agencies prefer credit references, lots of them. Q clearances don't mean much



Hertz or National? National or Hertz?

either. If you do pay cash, get a receipt and hold on to it (reference Zmiejko above). Use a Hertz card, for example, as a credit reference with Avis if you like, but don't expect to pay one with the other's card.

6. If you're unfamiliar with the car you've rented, ask about its controls before you drive off. There's nothing more uncomfortable than an air conditioner you don't know how to shut off when it's snowing in Chicago, nothing more dangerous than windshield wipers you don't know how to turn on when it's raining in Kansas City.

7. If you suspect trouble, call the agency. Describe the problem, ask for instructions, and get the name of the person you're talking with (reference Smith above).

8. Oh, yes, read and be sure you understand the fine print on the back of the contract. No one does, of course, but no list of do's and don'ts is valid without this admonition. And it could be important — especially in regard to insurance. With some companies, insurance coverage varies depending on the state, or even the county, you're driving in.

9. Have a good time — somehow. •bh

Labs Payroll, Purchasing Figures Announced

Labs payroll for CY '73 was \$92.9 million at Albuquerque and \$14.6 million at Livermore. The figures represent a slight increase over CY '72. Salaries of 60 Sandians at Tonopah Test Range are included in the Albuquerque figures.

At year end, 6360 persons were on roll, including 870 at Livermore. The total is 800 less than at the end of CY '72.

Assets of AEC installations operated by Sandia totaled \$318 million. Purchases by Sandia in New Mexico in '73 amounted to approximately \$25.5 million. More than 99 per cent of the amount, or \$25.3 million, went to Albuquerque firms. Purchases from other AEC contractors are not included. Purchases in the state in CY '72 amounted to \$25.8 million.



That's what I said, Avis, someone stole the driveshaft.

Overview

Ion Implantation at Sandia

An ion is an atom minus one or more electrons. Accelerating ions across a large electrical voltage can propel them to speeds high enough to implant them into the near-surface region of a target, or host substance.

Five years ago ion implantation was seen as a promising method of building semiconductor devices. Today that promise is a reality; the theory works. Further development, new applications, perhaps solutions to problems with fusion reactors, lie ahead. And Sandia is pushing ahead with the R & D effort necessary for these new applications.

The ion implantation work at Albuquerque is concentrated in the Radiation and Device Physics Research Department 5110 under Fred Vook, specifically in Tom Picraux's Ion-Solid Interactions Division 5111 and in Erroll EerNisse's Ion Implantation Physics Division 5112. At Livermore, Walt Bauer's Physical Research Division 8334 is engaged in similar studies, with emphasis on helium implantations in metals.

Tom's group implants metals with various ions — those of other metals, or hydrogen, or helium, for example. Their primary tool has been the three Van de Graaff accelerators in Bldgs. 803 and 884; a new Lintott machine in Bldg. 884 gives them 100 to 1000 times more ion current for further studies.

Implanting metals allows study of two basic effects: 1) creating new alloys by loading a host with foreign atoms; or 2) doing controlled specific damage to a metal. Ion implantation lends itself well to both kinds of studies because, with the proper techniques, the precise number of atoms that become a part of the host material can be counted, which in turn allows quite positive quantitative analysis of the new alloy or the damaged specimen. Both alloying and damage modify a metal's equilibrium properties and thus change its state. As might be expected then, Sandia's experimental capability and its ability to calculate implantation effects theoretically, using mathematical simulation codes, are two of the reasons Sandia is at the forefront of ion implantation studies.

Ion implantation can create a surface region with special properties attainable no other way. For example, one of the most exciting new possibilities for implantation is that it can provide a layer which protects against corrosion and oxidation effects. Another area of high potential is the creation of new superconductors with higher superconducting to normal transition temperatures or critical current density capabilities. Fusion reactor materials studies should benefit too: ion implantation is being used to simulate the first wall surface radiation effects of fusion reactors, including blistering, sputtering, alloy stability, and void formation.

"5111's primary mission," says Tom, "remains new applications of ion beams including surface analysis and modification. Ion implantation is a proven technique for silicon; we're busy exploring a variety of new ways to apply it to metals."

* * * *

Erroll's 5112 people are using ion implantation to improve the properties of semiconductors and insulators. Originally, the group used ions to simulate neutron damage in semiconductor materials and



A GONIOMETER, containing a sample to be implanted with ions, is lowered into the working end of the Bldg. 803 accelerator by Jim Borders (5111). The device permits almost infinite adjustment of the angle of exposure. The sample itself is inside the cylinder to the right of the "803" on Jim's coveralls.

devices. In addition to studying ion implantation in silicon and germanium, compound semiconductors are also being studied. These materials are very useful in semiconductor light-emitting diodes and lasers used for communications or for precise land surveys. With 5112's skill at implanting ions in semiconductors, Erroll's people will support the ion implantation aspects of the planned semiconductor device lab in Jerry Hood's Department 2110. Department 5110 is already sharing with the 2110 staff its knowledge of how ion implantation and ion surface analysis can be used to provide improved semiconductor device performance.

More recently ion implantation in insulators (traditionally made of glass, a compound of silicon) led to discoveries by 5112 in the insulator field. Their accelerator in Bldg. 672 can now generate very high ion doses (called fluences), and a 28,000 magnet, currently being installed, will allow even higher fluences. These fluences can crystallize the surface of the glass. One advantage of crystallizing the surface is that it makes the insulator impervious to diffusion. Another is that the process of ion implantation can pre-stress, and thereby significantly strengthen, glass.

One current major thrust within the AEC

is to develop insulators that can withstand the environment inside a fusion reactor. LASL's theta pinch fusion device, for example, needs an extremely tough insulator with a very high resistance to radiation. Ion implantation experiments are being carried out by 5112 on a likely candidate for survival within the device.

Helium implantation is particularly applicable to fusion reactor studies and has been used in experiments by 5112 and 2413 to simulate the natural radioactive decay of tritium in metal tritides of interest to John Crawford's Vacuum Tube Department 2410. Walt Bauer's Division 8334 also is using helium implantation to simulate the temperature dependence of blistering and outgassing in proposed fusion reactor first wall materials.

The recent International Conference on Applications of Ion Beams to Metals sponsored by Sandia demonstrated the speed with which advances in ion implantation technology are being made, especially at Sandia and at Harwell in England. These advances may be one key to the success of fusion reactors as an energy source. Vook, Picraux, and EerNisse served as conference co-chairmen; seven papers were presented by Sandians. •bh

feed 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. Our minimum retirement age is 55 years. Other companies have determined actuarially that even earlier retirement will not adversely affect the viability of their retirement funds.

Could an actuarially-reduced earlier retirement be investigated at Sandia?

A. Sandia continually reviews its total benefit package in relation to the long term interests of both the employee and the Laboratories. This long term planning takes into consideration several factors:

1. The maintenance of a proper balance among the various individual benefit programs.

2. Continuing an appropriate relationship between compensation paid in the form of salary and that paid in the form of benefits.

3. The budgetary constraints of both the Laboratories and the employees.

Sandia recently changed the retirement plan to provide a very favorable nonactuarially reduced early retirement benefit to employees age 55 but less than 60 with 20 or more years of service. Prior to this change, individuals retiring at age 55 were subject to an actuarial reduction and received approximately 50% of their accrued annuity. Because of this large reduction few employees retired at age 55 prior to the recent change. It is not anticipated that retirement earlier than age 55 will be introduced.

—D. S. Tarbox - 4200

Q. Changes in salary policy seem to be held in secrecy. The only method of obtaining information is through the grapevine, often incorrect. Two specific questions:

a. During the voluntary layoff period, why

was the policy that no raises were to be given withheld from the staff? This could have affected the decision of some persons.

b. What happens to the raise date of persons receiving raises in the period January to June in the light of the new July to December raise period?

A. Salary administration practices are described in booklets appropriate to the staff member classification (MTS or MLS) or upon request from your supervisor. The changes made from time to time are announced since they cannot be implemented if held in secrecy. Information regarding your personal situation may be obtained from your supervisor.

The fact that salary increases were made during the "layoff" period demonstrates that there was not a "no raises were to be given" policy.

The rate review year was changed from May through April to the new period of July through December. Salary increases, determined on the basis of performance, have been adjusted commensurate with the shortened intervals. While most increases previously scheduled for the period January through April 1974 were "telescoped" to the period July through December 1973, some were extended and will be granted in July to December 1974 period.

—D. S. Tarbox - 4220

Q. Why can't Sandia arrange for college credit courses to be taught here at the Labs out-of-hours? We have many people who are eminently qualified as faculty . . . I'd like to work

toward an MS but the logistics of going to UNM are tough — I'd have to get another car.

A. The Labs offers the Educational Aids Program under which it is possible to take courses for credit, as well as the out-of-hours program, which meets a different set of needs.

The basic intent of the out-of-hours program is to offer courses tailored to Sandia applications — "problem centered" rather than "subject centered." The value of these courses is such that they are a significant factor in the promotion or recognition of employees.

If these courses had to meet accreditation standards, a whole string of constraints would decrease the program's overall value: number of class hours, academic background of instructor, prerequisites, subject matter coverage, attendance, etc. We believe the present arrangement provides a service that would be severely limited if the courses were accredited.

—K. A. Smith - 3100

Q. In days past, we had ID cards for dependents. In view of the tighter security on Base, wouldn't the ID cards be a good idea now?

A. Issuance of individual identification cards to SLA dependents would be a monumental clerical and administrative job for which we simply do not have the manpower. Also, we have noted that the present procedure for occasional visitors on Base is not particularly inconvenient and we are assured by the Air Force that there will be no hassles.

—L. J. Heilman - 9500

Decisions, Decisions, Decisions — 1974 Holidays

In '74 Sandians will again observe nine paid holidays, but this year you'll have a decision to make regarding one of the nine days. At the beginning of the year, you'll select a "designated holiday" from a listing of nine possible days:

Your birthday

Good Friday (April 12)

Rosh Hashanah (Tuesday, Sept. 17)

Yom Kippur (Thursday, Sept. 26)

Friday after Thanksgiving (Nov. 29)



"NO, YOU CANNOT have National Artichoke Day!"

Your service anniversary date
Columbus Day (Monday, Oct. 14)
Martin Luther King's birthday (Saturday, June 15)
California State Admissions Day (Livermore only, Monday, Sept. 9)
Veteran's Day in California (Livermore only, Nov. 11)
When the designated or regular holiday falls on Saturday, the preceding Friday is observed as the holiday; when either falls on Sunday, Monday is observed as the holiday.

Other holidays:

New Year's Day

Washington's Birthday (Monday, Feb. 18)

Memorial Day (Monday, May 27)

Independence Day (Thursday, July 4)

Labor Day (Monday, Sept. 2)

Veteran's Day (Monday, Oct. 28)

Thanksgiving Day (Thursday, Nov. 28)

Christmas Day (Wednesday, Dec. 25)

Veteran's Day (Albuquerque only, Monday, Oct. 28)

Thanksgiving Day (Thursday, Nov. 28)

Friday after Thanksgiving (Livermore only, Nov. 29)

In addition, when Dec. 24 falls within a work week (as it does this year) employees are granted four hours holiday time.



"IF AN EMPLOYEE, through error or oversight, works on his 'designated holiday,' he forfeits that portion of his 'designated holiday' which he worked." (SLI 4500)



Maynard B. Sanders — 7324



Billy Duggin — 9321

MILEPOSTS

LAB NEWS January 1974



Bill Snyder — 5320



Richard Gorman — 8344



Francis Graham — 4121



Paul Benson — 1247



James Greenwoll — 8183



Donald Greenwoll — 9474



Bob Matthews — 3153



Joe Genoni — 8256



Lloyd S. Nelson — 5326



Connie Visbeck — 8155



Bruce Nevin — 8183



Frank Petrini — 8421



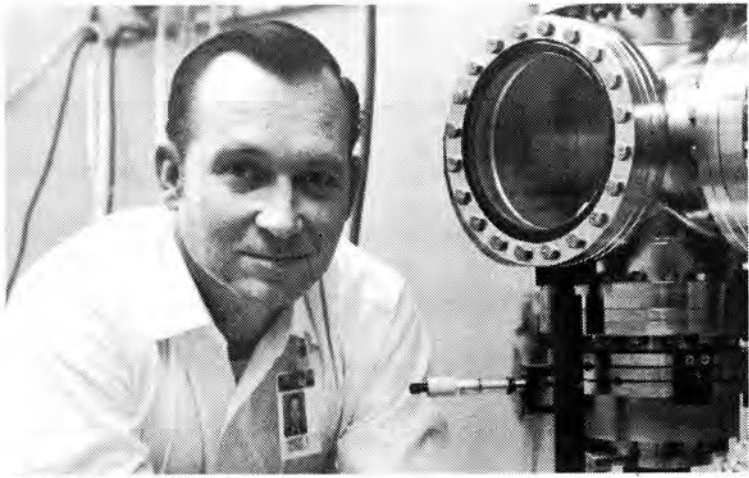
Hilda Hedberg — 3150



Tom Takahashi — 8413

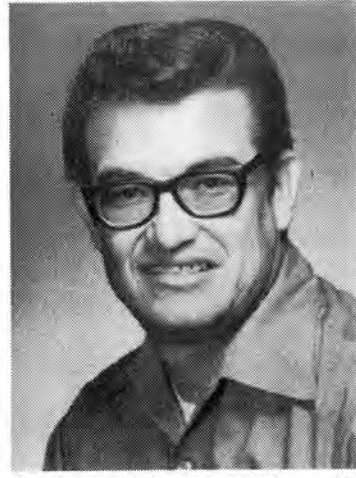


Joe Pitti — 7222



Robert Cuthrell - 5526

10



Guillermo Griego - 7554

10



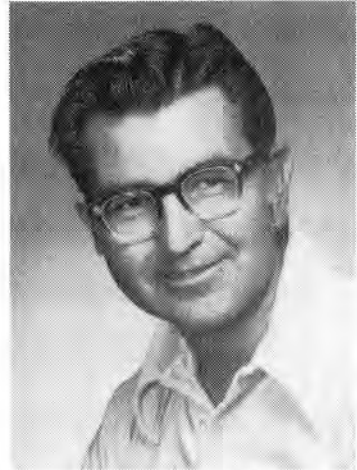
Harold Malmquist - 8257

15



Roy Boyd - 7512

25



Jimmy Thompson - 7518

15



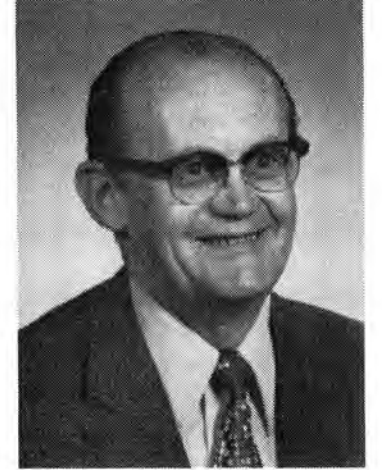
Mike Kmatz - 9331

10



Wayne Trump - 3131

10



Tom Earp - 9313

25



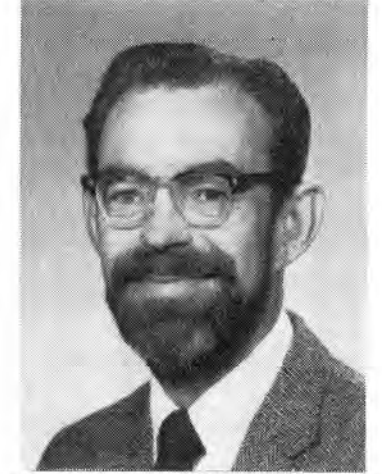
Jim Young - 2324

15



Hap Stoller - 5310

10



Al Chabai - 5166

20



Herb Anderson - 1643

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Coralyn McGregor - 8266

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William Sodja - 9313

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Len Mahuron - 2645

25



Carl Csinjinni - 1124

25



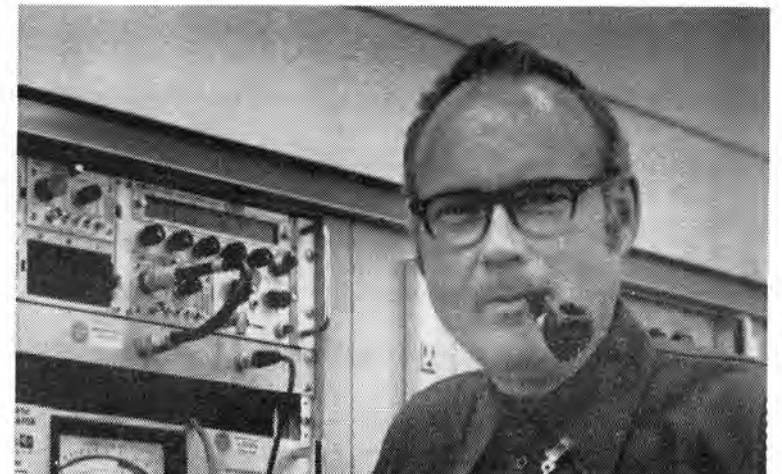
Art Key - 2633

10



Juan Perea - 7133

25



Martel Boyer - 2126

15

Death

Jim Jones, manager of Special Assignment Department 9560, died on Dec. 23 following a lengthy illness. He was 55. He had been employed at the Labs since March 1946.



Survivors include three sons and two daughters.

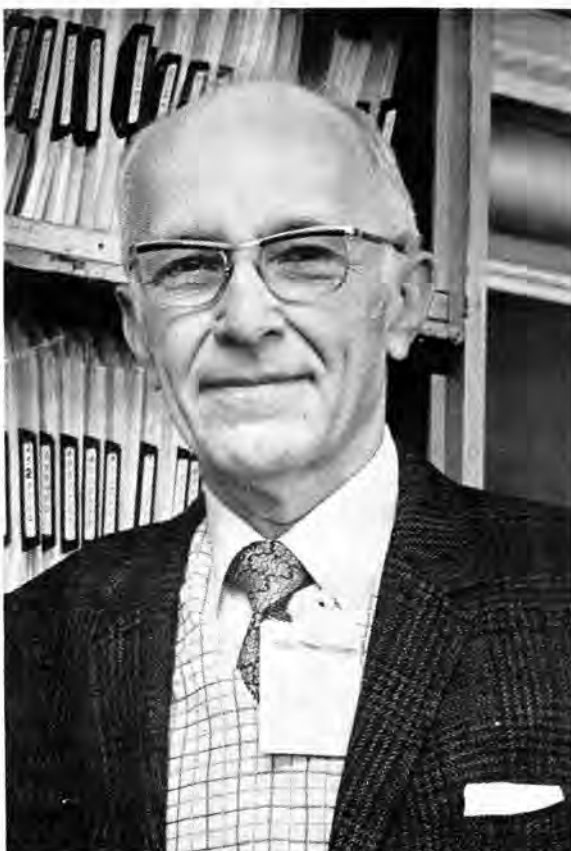
Variable Annuity Unit Value

January 1974	1.550
December 1973	1.750
Average 1973	1.752

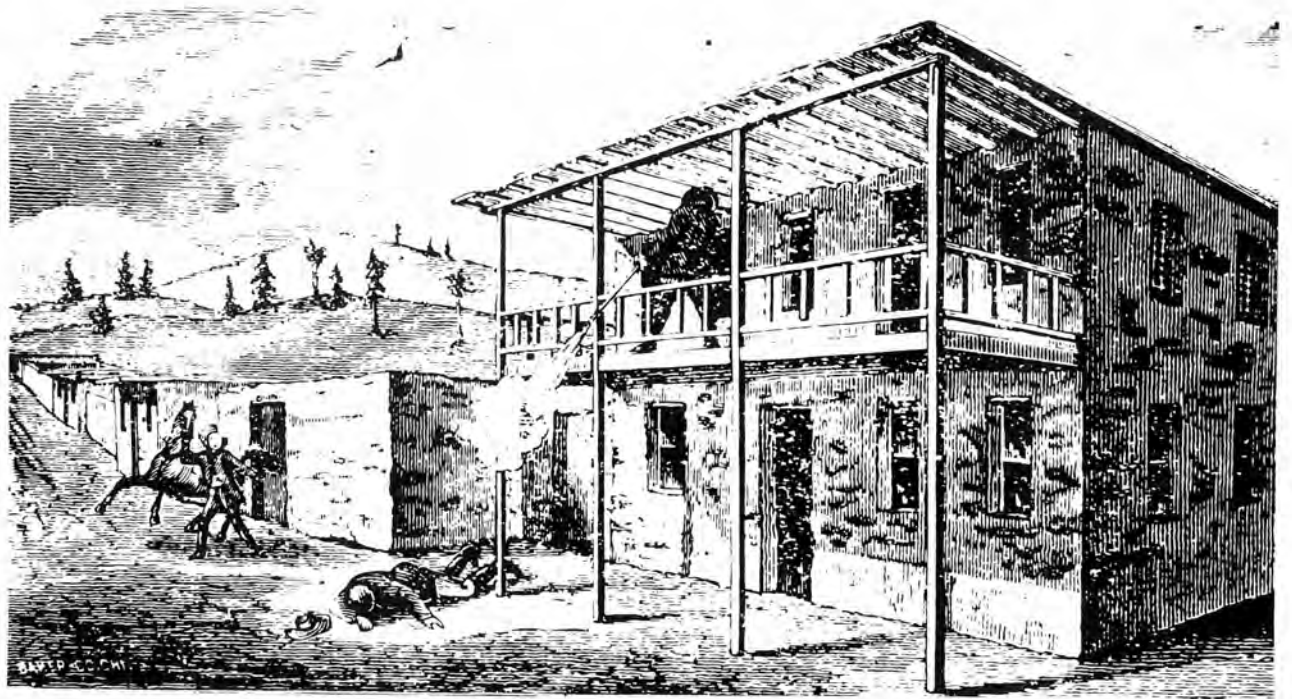


LET'S CONSERVE — Most Sandians have figured how that light switch on their office wall works. But sometimes there isn't a visible light switch and this is what you look for then — a circuit breaker. It's generally in the neighborhood and, when you leave at night, you can turn off your lights by flipping the switches on the circuit breaker.

Retiring



Willard Scranton (5612)



BILLY THE KID escaped from the Lincoln County jail in the courthouse on April 28, 1881. He shot one guard on the stairs, grabbed a shotgun and shot the second guard in the street. He found a horse and rode into legend.

Vista New Mexico

Another Billy The Kid Story

There are a lot of Billy the Kid stories. If you go over to Ft. Sumner you can see his grave and some oldtimer will probably sell you a button from the shirt that Billy wore on the day Pat Garrett shot him. And the oldtimer will tell you how Billy killed 20 or 23 Texans during the Lincoln County war, generally raised hell all over the state and was just a poor misunderstood kid caught up in the events of his time and place.

Sam Baca, a security inspector at Sandia for 23 years, grew up on the Circle Cross ranch in the Sacramento Mountains near the village of La Luz, just north of Alamogordo. His great-grandfather, Saturnino Baca, lost an arm in the sheep/cattle conflict of Lincoln County, and his grandfather, Bonifacio, was the Kid's attorney at one time. Bonifacio, a graduate of Notre Dame, was also a cattleman in Lincoln County.

On the day in 1881 that Billy escaped from the jail in Lincoln, Bonifacio's horse — packed with provisions — happened to be tied up in front of the courthouse. So Billy took the horse for his escape. A couple of weeks later, Billy held up a stage and sent the horse back to Bonifacio via the stage driver.

According to Sam, who got the word from his grandfather, local Hispanos were glad to help Billy. They would hide him, feed him, and then chase him away because Billy invariably got fresh with their daughters.

"But their point was," Sam says, "that any guy who could shoot that many landgrabbing Texans couldn't be all bad. He

was very useful to the Hispanos. The fact is we had some race relation problems in those days too."

Sam doesn't remember old Saturnino who died at the age of 94 in 1925, but Saturnino is called the "Father of Lincoln County." A captain of the First New Mexico Volunteers in the Civil War, he was decorated for heroism during the battle of Valverde, the first battle of the Civil War fought in New Mexico. After the conflict Saturnino served in the Territorial Legislature and introduced the bill that created Lincoln County from the eastern half of what was then Socorro County.

The incident that cost him his arm occurred while Saturnino was defending his valley ranch in Lincoln against shepherders who were driving their stock across his land. After sharp words with several groups, he was ambushed in a tent one night at the entrance to the valley and rode 15 miles with a shattered elbow to the doctor.

It wasn't the first time he had been shot at, nor the last — just the only time he was seriously wounded. Saturnino also served with Kit Carson in the Indian wars, and there were a few shooting incidents when he was sheriff of Lincoln County. Besides the office of sheriff, he served as a judge, a county commissioner and a representative in the legislature.

Many versions of the Lincoln County war are told. There was violence in the area from 1869 until the death of the Kid on July 14, 1881. It was more than conflict between sheepmen and cattlemen. It was more than a personal feud. At stake was the lucrative government contract for supplying beef to the US Army and political control of the territory.

Sam says his grandfather didn't particularly like Billy the Kid; notwithstanding, Bonifacio told Sam many tales about the outlaw.

"From the stories, I sort of feel I know him too," Sam says, "and I don't like him either. It was a bad time in the 1880's, but feelings were quieted by the time I grew up on the ranch. Nowadays Lincoln County has made a tourist thing out of its bloody history." • dg



SAM BACA (9550) — "Grandpa didn't like the Kid."

Speakers

W. Herrmann (5160), "On the Evaluation of Constitutive Equations from Experiment," Society of Engineering Science, Nov. 5-7, Raleigh, N.C.

S.H. Neff (7124), "An Optimal Tracking System for Controlling Numerically Controlled Machine Tools," East Central Tool & Mfg. Exposition & Engineering Conference, Nov. 6-8, Cincinnati, Ohio.

L.F. Shampine (5121), "Roundoff Errors in Differential Equation Solvers," Univ. of British Columbia, Nov. 8-9, Vancouver, B.C.; and "Concentration Dependent Diffusion," Simon Fraser University, Nov. 8-9, Vancouver, B.C.

G.P. Steck (5122), "Some Thoughts on Pattern Classification by Attributes," Pattern Recognition Symposium SMU, Nov. 9, Dallas, Texas.

D.C. Williams (5315), "Error-Control Criteria and Integrator Performance," and "Interpolatory Gauss Quadrature Algorithms for Ordinary Differential Equations," Numerical Analysis Special Interest Groups meeting, Nov. 13-15, SLL.

L.C. Bartel (5151), "Magnetic Properties of the Hubbard Hamiltonian Including the Resonance-Broadening Terms"; H.T. Weaver and R.K. Quinn (both 5154), "NMR and Susceptibility Studies of Pt-Rh Alloys"; P.M. Richards (5132), "Field Dependence on Magnetization in Random FCC Ferromagnets"; J.P. Van Dyke and W.J. Camp (both 5151), "High-Temperature Series Expansions for Classical Systems"; L.R. Edwards and I.J. Fritz (both 5132), "Effects of Pressure on the Magnetic Ordering in Cr-Fe," 19th Conference on Magnetism and Magnetic Materials, Nov. 13-16, Boston, Mass.

J.M. McKenzie (2115) and J.L. Witt (2412), "Low Noise JFET with Integral Reset Diode," Nuclear Science Symposium, Nov. 14-16, San Francisco.

R.L. Fox (5643), "Multipoint Distribution Analysis of Turbulence in Fluids," University of Delaware, Nov. 15, Newark.

P.R. Owens (7615), "Meeting the Challenges in Pension Plan Improvement," Southwestern regional meeting of NSPE, Oct. 11-13, New Orleans.

G.W. Kuswa and D.W. Swain (both 5242), "Ion Acceleration by e-beams in Gas Gradients," APS meeting, Oct. 31-Nov. 3, Philadelphia.

P.M. Richards (5132), "Magnetic Resonance Studies of One-Dimensional Magnetic Systems," Univ. of Kansas seminar, Nov. 9, Lawrence; and "Magnetization of a Random Ferromagnet," seminar at City College, City Univ. of New York, Nov. 12, New York.

R.I. Ewing (1112), "A Time-of-Flight Neutron Spectrometer Using Track-Etch Techniques"; J.R. Banister and D.M. Ellett (both 1150), "Rio Blanco Observations of Pore Pressure Enhancement"; T.A. Sellers (1239) and J.M. deMontmollin (1230A), "A System for Communication with Commercial Special Nuclear Material Shipments," American Nuclear Society Winter Meetings, Nov. 11-16, San Francisco.

E.S. Roth (5712), "The Changing Environment and Needs of the Manufacturing, Construction and Service Industries in the 70's and the 80's," Sixth Annual Convention of the National Association of Industrial Technology, Oct. 17-19, Denver.



COMMUTING IN THE WEST — Dick Wayne (9334) rides Van's Chief (Appaloosa) to his job in Area III from his home in the South Valley. Chief, fully insured against liability, reduces the 17-mile auto trip to about 10 miles by cutting directly across the mesa. The chaps serve two functions: protection against the brush — and the early morning cold — on the mesa. Chief is tethered near the Area next to plenty of alfalfa and water. Dick rides to work to keep Chief, his breaking horse, in shape — and to reduce his gasoline expenses. And he likes riding horses.

S.T. Picraux (5111), "Ion-Solid Interactions Research," EE Department, California Institute of Technology, Nov. 5, Pasadena.

G. Steck (5122), W.J. Zimmer and R.E. Williams (UNM), "Estimation of Parameters in Acceleration Models"; I. Hall (1643), "One Sided Tolerance Limits for an Extreme Value Distribution Based on Censored Samples"; R.G. Easterling (1643), "Further Results Concerning Goodness of Fit," and "On the Design of Sensitivity Tests"; J. Ellefson (9525), "An Optimum Sampling Scheme"; M.R. Scott (2642), "A Review and a Preview of Several Methods for the Numerical Solution of Two-Point Boundary-Value Problems"; R.E. Jones (2642), "C. H. Reinsch's Smoothing Spline Routine"; H.A. Watts (2642) and L.F. Shampine (5121), "Runge-Kutta ODE Code with Global Error Assessment"; M.K. Gordon (2642) and L.F. Shampine (5121), "Final Report on Integrators DE and Step," Numerical Analysis Special Interest Groups, Nov. 13-15, SLL.



Car Pool Notes

The Employee Transportation Committee's Phil Thacher (9532) is working with the people in Personnel Management Systems Development Division 4116 to adapt for Sandia use a computerized car pool matching program developed by the Federal Highway Administration in Washington. Phil reports that he hopes to begin the data gathering phase by mid-month and to furnish each employee with a list of potential car poolers in his or her neighborhood by Feb. 1. But, he adds, don't call him — he'll contact you as soon as possible.

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

PFaff auto. sewing machine, model 360 port. open arm w/carrying case, \$150. Wilson, 299-8864 after 5.
WIREHAired DACHSHUNDS, miniatures & standards for show and/or breeding, or just a pet. Simon, 898-3275.
BRASS: .308 match, 2¢ ea., can be easily reformed to .243. Ristine, 298-8383.
LUDWIG snare drum w/case & stand, \$50; 2 G78-14 glas belted, studded snow tires, 5000 miles, \$15 ea. Leisher, 281-5258.

STUDENT clarinet, case, music stand, \$50; roll-away bed, single, \$10; single bedspread, gold, \$5; dbl. bedspread, pink, \$10. Schuster, 255-5970.

THREE WE 594A tweeters, 2 w/DC power supplies; Lansing lens; 5 Bozak B-199 woofers. Harrison, 299-2154.

GM infant car carrier, \$10; windup baby swing, \$5; infant seat, \$1.50. Caskey, 294-3218.

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

FIREWOOD, mixed, \$50/cord delivered; for 5 plus tons, \$40/ton; leave name & phone no. Russell, 265-5943.

KLH MODEL 20, am/fm, phono stereo system, speakers, almost new, \$325; Akai M8, complete professional tape recorder, used less than 30 hrs., \$200. Shipman, 255-2523.

SEARS typewriter, 12" carriage, case, \$30; Polaroid 110a land camera, range-finder, light meter, case, \$35. Re, 298-0290.

SONY TAPE RECORDER, new recording head, \$25. Lewis,

296-7896.
ENLARGER LENS, 75 mm Omegar f4.5 to f32. Denney, 268-0004.

JAPANESE sewing cabinet, \$18; old doll buggy, \$10; Sunbeam hairdryer, \$7; Sunbeam mixmaster, \$7; gold plated sword. Smitha, 266-9977.

TAOS LIFT TICKETS, good anytime this season, \$6.50 ea. Shinkle, 299-8486.

TRANSPORTATION

'69 CHEV. Custom Impala 2-dr. HT, 350 V8, PS, AC, AT, radial tires, new brakes, new starter, \$1300 or best offer. Duvall, 299-8744.

GIRL'S BIKE, 24" Schwinn, balloon tires for safety, \$15. Philbin, 266-4942.

TWO 4HP dirt minibikes, 2 helmets, bumper carrier, \$250. Cooper, 268-0992.

'65 MUSTANG, AT, PB, PS, 6-cyl., \$575. Garcia, 247-9014.

'64 OLDS Cutlass 2-dr., 4-spd., \$350. Puccini, 255-0568 or 281-5706.

'71 YAMAHA 360 Enduro, low mileage. Shull, 265-6286.

'66 FORD pickup F-100, 6-cyl., 17 mpg, 3-spd., clutch needs work, new tires, \$750. Martin, 869-2049.

'73 YAMAHA 350 street bike, about 5000 miles, no spills, \$700. Wentz, 298-2630.

26" 3-SPD. MEN/BOY'S English bicycle, used by cautious adult for about 1 yr., \$35. Klecotka, 821-1466.

'66 DODGE 3/4 ton pickup, V8, AT, aux. gas tanks, \$850. Isidoro, 877-4440.

Schaefer, 281-3271.
JOIN a car pool from vicinity of Third & Santa Fe. S.W. Chavez, 242-9140.

SERVICE MANUALS for '68, '69 VW squareback. Merritt, 299-1482.

PORTABLE motor-generator, about 1250 watt; wood lathe; fireplace tools. Hansche, 281-5350.

SWAN 117XC power supply. Richardson, 268-7843.

26" LADIES BIKE, 3-spd. Stump, 898-2546.

LOST AND FOUND

LOST — Ladies rust color gloves, silver pyramid shape earring, man's Bulova wristwatch, silver dangle earring. LOST AND FOUND, tel. 264-3441, Bldg. 832.

FOUND — Rx glasses w/grey frames in black case, black knit gloves, green & black knitted scarf, Rx glasses w/clip-on sunshades, silver filigree pin. LOST AND FOUND, tel. 264-2441, Bldg. 832.

REAL ESTATE

WILL SELL COCHITI property for my equity, lot has appreciated approx. 15% since purchase. McMaster, 296-7881.

WANTED

HUMIDIFIER, plenum installation type. Ristine, 298-8383.
SKI EQPT. FOR 5 & 7-yr.-olds; partner for U3 Barbary hunt.

SAINTS • SINBAD • C-CLUB • BANK DICK • VEAL CORDON BLEU • VAUDEVILLE

FRIDAY	SATURDAY
4 HAPPY HOUR BUFFET VEAL CORDON BLEU ADULTS \$2.50 UNDER 12 \$1.50 PRISONERS LOUNGE Denny	5 FAMILY VAUDEVILLE Show: <i>Danny O'Day</i> Movie: <i>7th Voyage of Sinbad</i> 6:00 Food Available 7:00 Show Time FREE TO MEMBERS
11 HAPPY HOUR BUFFET FRIED CHICKEN ADULTS \$2.10 UNDER 12 \$1.35 SAINTS LOUNGE Yolanda	12 8:30 - 12:00 SOUL SESSION ONE MILE AHEAD FREE TO MEMBERS

And —

Jan. 16, W.C. Fields in *The Bank Dick* plus Laurel & Hardy and Betty Boop, 7:30 p.m.

And Travel —

Sign up for Hong Kong by Jan. 25. Attend the Hong Kong slide show Jan. 22 (7:30 p.m.) Post-Mazatlan trip slide show, Jan. 15 (7:30). MORE INFO — 265-6791.

IT'S MAGIC — for Charley Salazar (7144) and Irene Chavez (4154). It's Magic for all of us at the Club tomorrow night in the person of Danny O'Day, Magician.



BETTY BOOP • LAUREL & HARDY • CHICKEN • ONE MILE AHEAD • HONG KONG

Congratulations

To Mr. and Mrs. Bill Abel (2334), a daughter Ann Elizabeth, Dec. 11.

Take Note

For persons concerned with arthritis, Dr. Mossman of Medical recommends an arthritis patient education program to be held at the Bernalillo County Medical Center, Jan. 10, 17, and 24, classroom 1, from 7 to 8:30 p.m. on each date. The sessions deal with the various types of rheumatic diseases, drugs, physical therapy, body mechanics, and self help devices. If you plan to attend, please call 265-1546 before Jan. 8 to enroll.

* * *

An estimate from AEC for calendar year '74 indicates \$1.5 to \$2.0 million will be spent on "additions to buildings and remodeling" at Sandia Laboratories.

* * *

The Out-of-Hours Course Catalog for spring is now available in the yellow boxes near the gates. With the shift to half-hour classes, the number of meetings per week depends to some extent on the instructor, who will announce the schedule at the first class meeting. Or you can call the instructor listed for information.

Sympathy

To Bernie Kayate (9532) on the death of his mother-in-law at Laguna, Dec. 17.
 To Wamon Cope (7222-2) on the death of his sister in Oklahoma, Dec. 13.
 To Gene Igel (2441) on the death of his father-in-law in Albuquerque, Dec. 3.
 To Ed Austin (1531) on the death of his father in Rome, Ga., Dec. 17.

CU Bulletin Board

The Credit Union will sponsor an eight-week federal income tax course starting Jan. 14. Instructor is George Arnot (5642). The class will meet Mondays from 7 to 9 p.m. at the Coronado Club. Cost is \$10 which includes the textbook. Sign up at the Credit Union.

* * * *

It's reported that in San Antonio and elsewhere auto thieves are enjoying considerable success with a new caper. A thief will respond to your advertisement about a car for sale, come to your door and request, naturally enough, a trial run. If you elect not to go along, he simply fails to return and here's the clincher: no law is being broken. You not only gave him permission to drive the car, but also handed him the ignition key. Moral: take a ride.

Recreation Notes

FUN & GAMES

Table Tennis — Paul Longmire (1511), Dale Breeding (1123), Ray Perry (7144) and Joe Romero (7515) made up the championship team in the recently completed fall team tournament of the Sandia Labs Table Tennis Association. A playoff between two divisions, made up of seven teams each, determined the winning teams. Finishing in second place were team members Ernie Sandoval (7144), George Staller (2441), Gene Aronson (2642) and Ted Montoya (7121).

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