

Jones, Claassen Fill VP Slots

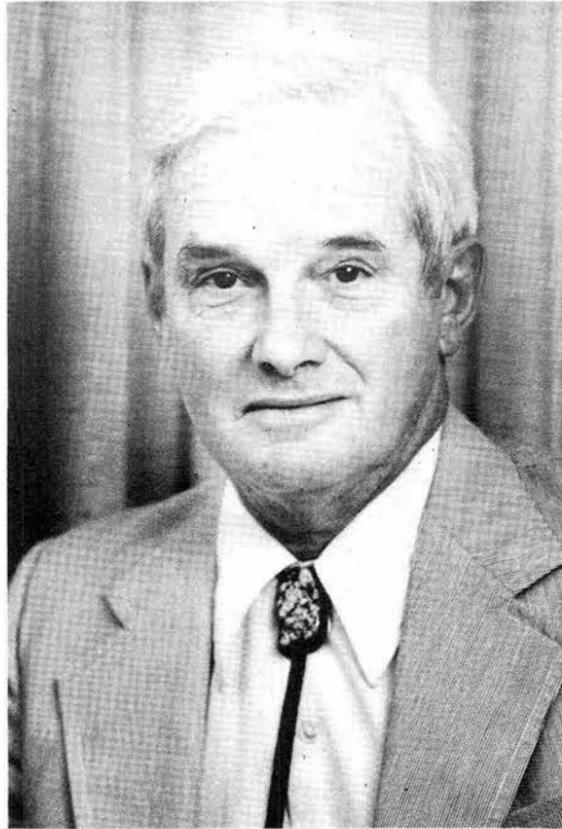
Two new vice-presidents were named last week by Sandia's Board of Directors. Dick Claassen, currently director of Materials and Process Sciences 5800, will become vice-president responsible for systems development, operations, applied research, engineering, and combustion sciences at Livermore, effective June 15.

Orval Jones, currently director of Engineering Sciences 5500, will become vice-president responsible for field engineering, weapons analysis, development testing, and quality assurance and process/fabrication labs, also effective June 15.

Claassen joined Sandia in 1951 and became manager of the Physical Sciences Research Department in 1957 and director of Physical Research in 1960. In 1968 he was named director of Electronic Components and assumed his current position in 1975. Before coming to Sandia, Claassen was a research assistant with the Manhattan Engineer District. He earned a PhD in physics from the University of Minnesota in 1950. He and his wife Ruth have three grown children.

Jones came to Sandia in 1961 and was named supervisor of Shock Wave Physics Research Division in 1964. He was promoted to manager of Physical Research

[Continued on Page Two]



Dick Claassen

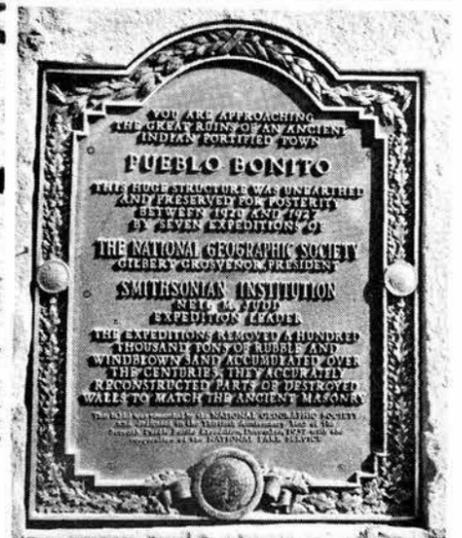


Orval Jones



PUEBLO BONITO, "the pretty village," is the largest of Chaco Canyon's ruins, with some 600 rooms and 33 kivas. Volunteers from the Labs spent a weekend at Chaco last

month making latex molds of architectural details for the Maxwell Museum. Story on Page Six.



Antojitos

On Reorganizations and Ancient Romans--Let's see, all of 5000 (plus 4200) becomes 1000, all of 1000 (except 1700) becomes 7000, and all of 4000 (except 4200 and plus 1700) becomes 9000. Galt becomes 1000, Fowler becomes 9000, Jones is the new head of 7000, and Claassen is the new head of 8000. 2000, 3000, 6000, and 8000 remain unchanged. A few comments: 1) Congratulations to Jones and Claassen (as well as to exec VP Narath, to whom 1000, 2000, and 3000 will report, and to exec VP Cook, to whom 7000, 8000, and 9000 will report). 2) Requiescat in pace, 4000 and 5000; you were good numbers and you'll probably be resurrected sometime down the line. And 3) We would like to lay to rest a hoary bit of apocrypha, dated 210 B.C. and ascribed to Patronius Arbiter, that usually surfaces on walls and hallways at such times:

We trained hard--but it seemed that every time we were beginning to form up new teams we would be reorganized. I was to learn later in life that we tend to meet any new situation by reorganizing; and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization.

Even if such a writer existed and even if he wrote the above (we have failed to find hard data for either theory--8000 Xerox copies of the same bit of office grafitti are not hard data), it is simply untrue that all reorganizations are wrong. As needs, missions, focuses, and funding shift, so must organizations.

Most of the people affected will simply have to remember to use a new organization number (and try to reeducate their correspondents--and LAB NEWS writers--to use it). It is true, doubtless, that such groups as the Mail Room, the locator and phonebook people, and the accounting organizations are facing what Arbiter predicted--confusion, inefficiency, and demoralization. With them we sympathize.

* * *

T-Shirt Grafitti--I AM A SCIENTIST. (But I have to use computers to be taken seriously.) ●BH

Continued from Page One

New Vice-Presidents Named

Department in 1968 and was named director of Solid State Sciences Research in 1971 and director of Nuclear Security Systems in 1974. In 1977 he became director of Nuclear Waste and Environmental Programs and assumed his current position in 1978. Before joining Sandia he held positions with Hughes Aircraft and the Hydrodynamics Lab at the California Institute of Technology, where he earned a PhD in mechanical engineering in 1961.

He and his wife Pauline have three college-age children and live in northeast Albuquerque.



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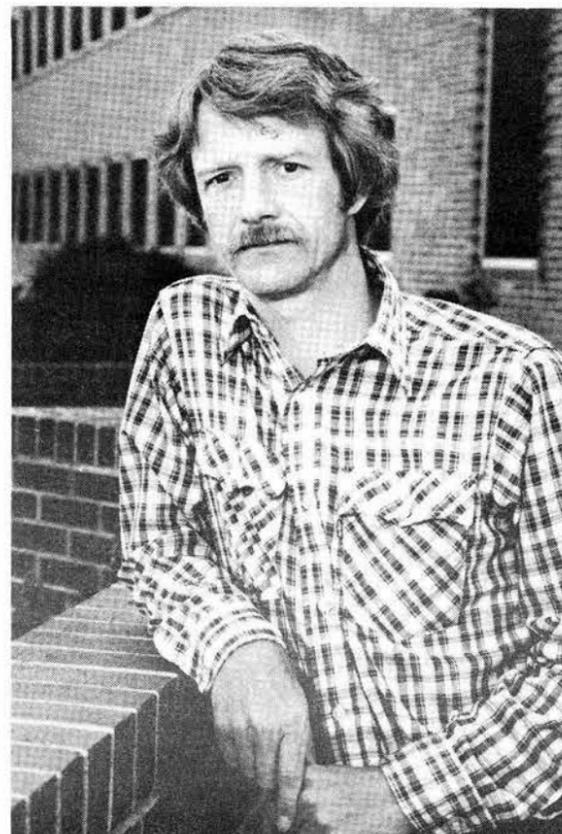
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Supervisory Appointment



MIKE CALLAHAN to supervisor of Exploratory Radar Development Division 2345, effective June 1.

Mike joined the Labs in February 1976 as a member of the radar signal analysis group. More recently, he has been with the Exploratory Systems Division 5622 where he worked on applications for SITAN (Sandia Inertial Terrain-Aided Navigation). Mike spent seven years with the AEC working on the design of nuclear surface ship refueling equipment. He left AEC to attend graduate school. He received his BS, MS, and PhD—all in physics—from the University of Utah.

His favorite leisure activities are backpacking and rafting. Mike and his wife Mary have two children and live in NE Albuquerque.

Events Calendar

June 12—NM Symphony Orchestra Outdoor Pops Concert, First Plaza, refreshments, cabaret format will highlight music from Broadway and guitar selections; Ruben Romero, The Company, and Phil Lenk's Trio will augment the orchestra, 842-8565.

June 13—San Antonio Feast Day, corn dance, Sandia Pueblo, 867-2876.

June 14—Polish Folk Dance Workshop, International Folk Dance Club, Heights Community Center, 6:45 p.m., 293-5343.

June 14—National Radio Theater, KUNM 90.1 FM, 10 p.m.: "The Outcast of Poker Flats"; *June 21*—"The Emperor Jones"; *June 28*—The Underground Golf Course."

June 16, 23, 30—Guided tours, Old Cienega Museum, Rancho de las Golon-

drinas, 10 a.m., for required reservations call 471-2261.

June 18-20—Father's Day Health & Fitness Fair, all day, Coronado Center.

June 19—NM Junior Olympics Championship, University Stadium, 268-9330.

June 21—The Performance Ballet Co., 8:15 p.m., Keller Hall, UNM, 277-4402.

June 25-27—Annual NM Arts & Crafts Fair, State Fairgrounds, 884-9043.

Through July 25—"Busy Body," comedy, Barn Dinner Theatre, 281-3338.

Sympathy

To Maria Lake (2144) on the death of her father in Amarillo, May 22.

To Richard Davis (9325) on the death of his wife, June 4.

Wide Spectrum of Viewpoints

A conference on the issues confronting the NATO Alliance with an emphasis on the European view was hosted recently at Sandia Livermore with 125 participants from the three DOE nuclear weapons labs, DOE headquarters, and four European countries.

Organizer Rob Rinne (8320) said the object of the meetings was "to identify the different perspectives by which the alliance can be viewed, emphasizing there isn't just an American or European perspective but, rather, a wide spectrum of viewpoints, each of which influences the alliance direction."

Co-chairing the sessions with Rinne was Laurence Martin, vice chancellor at the University of Newcastle-upon-Tyne in England. Main speakers included Pierre Hassner, senior research associate at the Center for International Study and Research, National Foundation for Political Science, Paris, whose topic was "Political Trends in Europe and the Future of the Alliance"; Johan Jorgen Holst, director of the Norwegian Institute of International Affairs, Oslo, whose subject was "NATO and the Wider World: Strategic Interests and Domestic Constraints"; Uwe Nerlich, director of research for the Foundation of Science and Politics in Munich, with the topic "Soviet Strategy and the Problems of Allied Responses"; and Robert Osgood, Christian Herter professor of American Foreign Policy at the School of Advanced International Studies, Johns Hopkins University, Washington, D.C., who spoke on "NATO and the Soviet Union in U.S. Policy."

After-dinner talks were delivered by Ted Gold, currently deputy assistant to the Secretary of Defense, whose topic was "Chemical Warfare: Views from a Former Nuclear Weapons Analyst" and Andy Lieber (5610) who spoke on "Soviet Reactions to Western Initiatives." Lieber's talk was a summary of a recent seminar he hosted on Soviet perceptions and responses to Western initiatives.

Rinne said there was a fairly broad consensus among the speakers that the problems confronting the NATO alliance are different from those in previous years. Today's "crises" differ primarily because the economic, social, and military balance has changed from 10 or 20 years ago. "With the economic prosperity in the West, the expectations of the people are much greater now. On the other hand, the tremendous efforts the Soviets have dedicated to increasing and modernizing their forces means that for defense the situation is also entirely different from in the past.

"People are really looking at the butter versus guns issues much more closely now," Rinne said. He went on to say that, in spite of the arms buildup, Europeans do not view the Soviet Union as the threat they once did. This is also true in the U.S. Recent polls show that both Americans and Europeans think that a war with the



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NATO CONFERENCE PARTICIPANTS (l to r) included co-chairman Laurence Martin, Al Narath (4000), Rob Rinne (8320) and Ted Gold, DoD.

Soviets is less likely than in the past. Yet, people on both sides of the Atlantic believe a nuclear confrontation of some kind is more likely now than 10 years ago. The conference participants noted that while Europeans don't really see the Soviet Union making a surprise attack, Europeans fear that through an accident or super-power confrontation they could be drawn into a nuclear conflict and become a nuclear battlefield.

The guest lecturers pointed out that the current wave of anti-nuclear movements is in response to a combination of the bellicose statements by the Reagan administration, an increased awareness of nuclear weapons, and cuts in social programs combined with calls for increased weapon expenditures. It was emphasized that these protests do not represent a new direction in European views and the public opinion polls taken over the last 10 years show constant support for NATO and the presence of the U.S. nuclear deterrent.

Another topic of discussion was the Long Range Theater Nuclear Forces (LRTNF) and, in particular, the basing of ground-launched cruise missiles and Pershing II missiles in Europe starting next year. The consensus was that these new systems are definitely needed and should be visible to provide a counterbalance to the Warsaw Pact forces.

Rinne felt that the conference successfully met its objective. "It further enhanced the awareness within the Department of Energy and the weapons laboratories of the different perspectives on European defense. The information brought out in the lectures and seminars

should aid in the development of arms control positions and assist in guiding technology programs and systems studies conducted within the laboratories."

Travelers Roll Over Bad Company

The Sandia Livermore Mixed Handicap Bowling League ended its season in May with a rolloff for first place between the Sandia teams Bad Company and Travelers. Winning the rolloff was Travelers, composed of team captain Whitey Sorensen (8463), Marilyn Sorensen, Gil Esquibel (8463), Shirley Esquibel, Ray Gott (8315), Les Jones (8463), and Barbara Jones. The Bad Company includes team captain Dennis Fritto of Butler Services, Martha Campiotti (8413), Ollie Rohrback (8413), John Smith (8132), Steve Schwegel (8271), Patti Hong, and Don Dominguez.

Individual awards for the season went to Patty Hong and John Carson for high scratch series; Shirley Carson and Paul Dominguez took high scratch game; Helen Potthoff, John Smith, and Don Dominguez won with high handicap series; Maryann Christensen and Phil Zablocki (8465) were the high handicap game winners. Sweeper awards were presented to Millie Creager and Steve Wain (both with Wells Fargo Guard Services at Sandia) for first place; other winners include Eva Leong (8264), Marilyn Sorensen, Karen Quock (8261), LaVonne Pickens (8213), Ed Christensen (8444), Stan Pickens (8161), Gil Esquibel, Jerry Williams (8272), John Smith, and Phil Zablocki.

Manmade Earthquakes Studied

The Weapons Test Seismic Investigation is one of a series of activities managed by Nevada Nuclear Waste Storage Investigations Projects Department 4760 under Dick Lynch to support DOE's Nevada Nuclear Waste Storage Investigation Program. Its purpose is to assure that ground motion from underground weapons tests would not damage a nuclear waste repository if one were to be built at NTS.

Ground Motion and Seismic Division 1111 has responsibility for the seismic program, and Luke Vortman is principal investigator. Jimmie Lee (Field Instrumentation Division 1124) is in charge of gathering this crucial data from 22 seismic stations operated at the Nevada Test Site.

"Our objective is to predict ground motion caused by underground nuclear weapons tests," says Luke. "We're interested in how depth affects ground motion. We've found that ground motion tends to decrease the deeper you get, but it still varies considerably, depending on geologic features of the site where measurements are made.

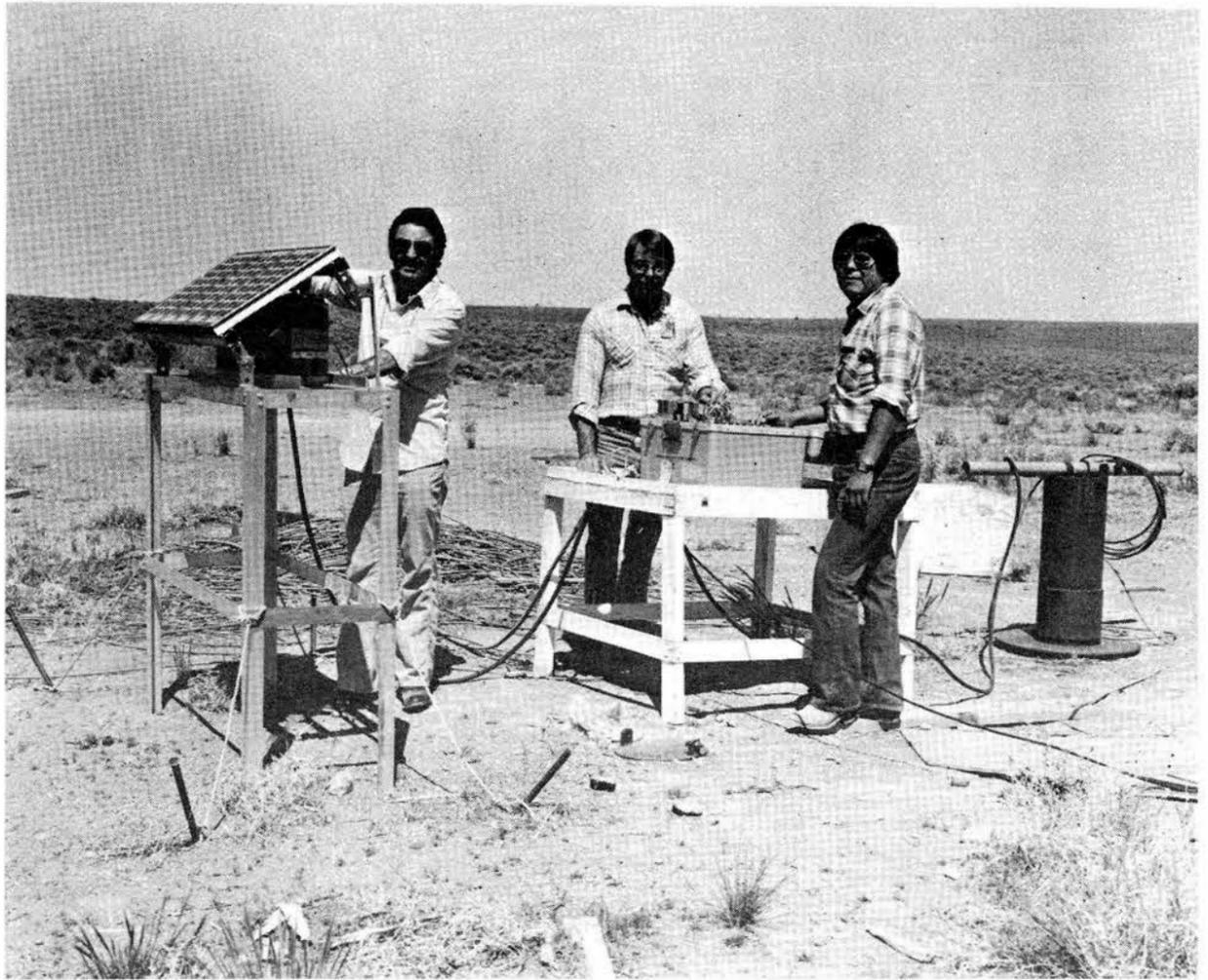
"We operate 12 seismic measuring stations in the central portion of NTS and 10 in the southwest quadrant. At each station there's a canister containing three accelerometers that are orthogonally oriented—that is, vertically, radially, and tangentially with respect to the source. A few seconds after an underground nuclear test, the station receives the seismic signal. The data in this signal are multiplexed and transmitted by radio to a recording facility atop a mountain called The Monastery or to another facility in Jackass Flats. There the data are recorded on magnetic tapes."

Luke explains that prediction equations are based on the measurement point's distance from the detonation and the energy produced by the explosion. The intensity of ground motion depends on the energy coupling at the source (detonation point), the geology along the transmission path, and the geology at the point of measurement.

"For example," Luke says, "at Climax Stock, one of our measurement stations, there's a granite intrusion so strong that the top and bottom move together. At Rainier Mesa, another seismic station site, the top moves a great deal more than the bottom, in part because of topographic effects resulting from the shape of the mesa.

"In May, we made our first measurement at 1850 feet below the surface at Yucca Mountain. This is the site that's being considered for a waste repository—prior measurements here had all been made at the surface."

The magnetic tapes are digitized at Sandia Livermore by Louise Converse (8411) and sent to Albuquerque by tape shipment or high-speed data links. All data processing and analysis is done by Jerry



ON THE NORTH SIDE of Timber Mountain, Larry Morales (left) of EG&G and Cliff Lucas (1123) help Jimmie Lee (1124, center) check out this seismic station at NTS. One set of seismic gages is buried just below the ground, and a second set is 2500 feet under the surface in a well, the top of which is the steel casing behind Cliff. Some stations are so remote that they must be serviced by helicopter.

Long (1111), Jimmy Pearcey and Lori Castle (both EG&G), and Ken Sabisch and Millie Elrick (both Dikewood). Sam Stearns (1111) developed the data processing technique.

"We exchange data with the U.S. Geologic Survey, which is looking into earthquake activity," says Luke, "and there are similarities in motion between earthquakes and ground motion induced by underground nuclear explosions. We do the same with the Air Force Weapons

Lab—it wants data on ground motion asymmetries from underground nuclear detonations.

"Our data are not only useful for siting underground waste storage facilities, but also for siting underground reactors. Recently, 15 Japanese engineers visited Sandia—they were very interested in our work because there's a shortage of surface building area in Japan and they're looking seriously at underground siting of nuclear reactors."

Fun & Games

Photos taken at the recent Corporate Cup event will be on display through the rest of this month at the Coronado Club.

* * *

Gentlemen (and ladies), start your stretching exercises. Tomorrow is the "Run for Recycling Fund Run" at Kit Carson Park. It's a five-mile event and runs \$5 per runner, including the T-shirt. Awards will be presented to first- and second-place winners in each of five age and two sex categories. The race begins at 8 a.m. Be there early to register.

* * *

The second whitewater rafting trip of the season is Sunday, June 20. The full-day trip through the Taos Box is limited to six. For \$50, participants can sit back and let experienced river runner Bob Parker do the work. For those unfamiliar with New Mexico whitewater, this section of the Rio Grande offers all the thrills and excitement you could ask for. Call Recreation Manager Tom Lenz at 266-7557 for more

info. (The recreation program is subsidizing this trip to keeps costs low.)



Little love is lost on dentists in this country, notwithstanding a recent Gallup poll in which they were rated higher than all but clergymen and pharmacists in terms of honesty and ethical standards . . . Most people would probably be surprised to learn that dentists are sometimes as afraid of their patients as their patients are of them. Some dentists brood for hours before appointments with especially hostile people. Even dentists who might not otherwise be fearful will often pick up unconsciously on the moods of their patients.

—David Owen in Harper's

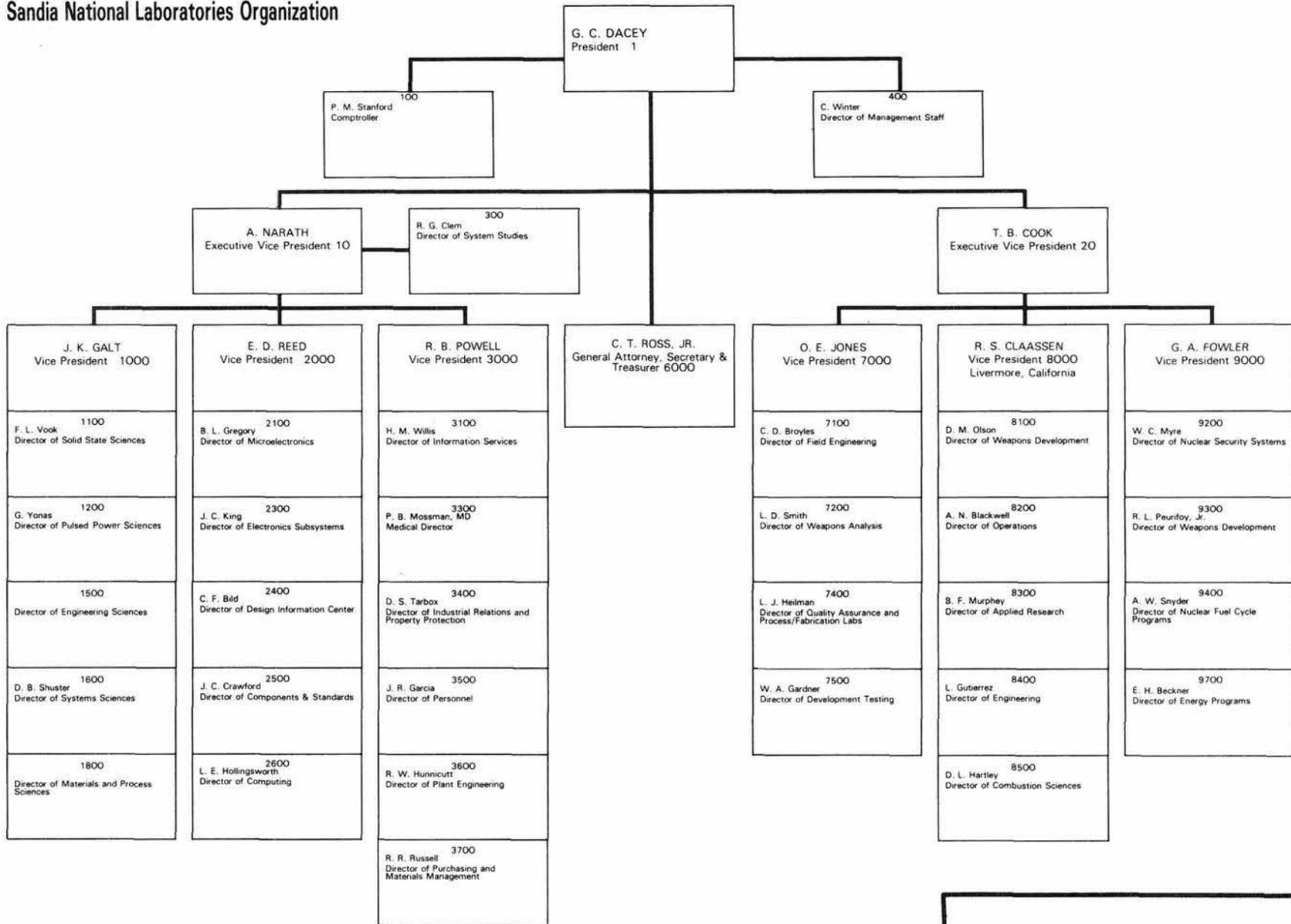


Death

Mike Norris of Applied Mathematics Department 5640 died May 28 after a long illness. He was 63.

He had worked at the Labs since July 1953. Survivors include his widow and three sons.

Sandia National Laboratories Organization



Tech Reports to Latin America

Sun Shines in Spanish

Jack Jackson (4764) recently published a SAND report. Ordinarily this is not a hot news item. What distinguishes Jack's report is that it's on solar power and it's in Spanish—one of the very few Sandia publications in a language other than English. The title is *Alternativas de Energía: Un Sumario del Programa de Sandia (Energy Alternatives: A Summary of Sandia's Program)*, SAND80-1881.

"It's more useful when transmitting information to other countries to do it in their language," says Jack. "Although it's true that many scientists and engineers in Latin America know English, there are still many others who don't or lack sufficient fluency. By distributing these reports in Spanish selectively throughout Latin America, the information is disseminated rapidly to government agencies, universities, and engineering firms. Our reports will help demonstrate U.S. progress in the solar field—they'll show Latin Americans that we have the solar technology and perhaps make them more receptive to American business and products."

Jack points out that solar power is appropriate in many countries that do not have centralized energy sources. Utility grid networks do not exist in many nations or encompass only industrialized areas in the vicinity of major cities. Extending power lines to small communities in remote areas would be both difficult and expensive.

"That's where solar power comes in," says Jack. "Sandia has worked with pilot solar projects in an Indian reservation at Schuchuli, Arizona, and three villages near Riyadh, Saudi Arabia. A flat-plate photovoltaic array provides all the electricity needed by the Schuchuli villagers, while point-focus Fresnel lens concentrators provide much of the electricity for the Saudi villages. Sandia is also a consultant on the experimental solar power tower built by several European countries in Almería, Spain.

"In Latin America, for instance, the northern areas of Mexico and Chile have climates similar to the U.S. Southwest, making them suitable for solar energy applications. The Mexican government is interested in remote site solar applications and has a number of experimental projects under way. Northeast Brazil—a perpetually economically depressed area—is another promising site for solar. So is, possibly, the Patagonian area of Argentina.

"Most Latin American countries," Jack continues, "lack fossil fuels—except, of course, for Mexico and Venezuela which are awash with oil. Among other extensively industrialized countries of the area, Argentina is self-sufficient but Brazil has to import almost all its oil, adding to its growing national debt. Solar power, of course, is not immediately going to replace any country's need for oil to run its industries, but it can be a step toward

**Reorganization?
What Reorganization?**

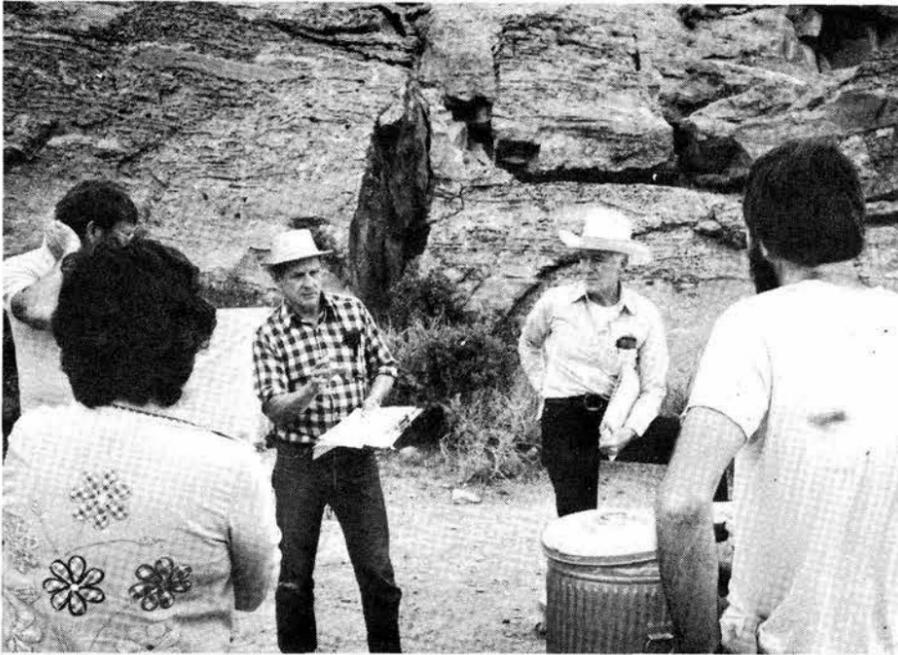
The recent reorganization took place too late for LAB NEWS to adjust all the new organization numbers. Next issue, we hope . . .

alleviating the dependence on imported oil.

"It's noteworthy that Sandia has published three technical reports in Spanish for distribution throughout Latin America. It's part of our responsibility to transfer information to the private sector and friendly nations."

And he adds: "Some alert soul might wonder why we send publications in Spanish to Portuguese-speaking (and reading) Brazil. Well, it's not cost-effective to come out with a Portuguese edition and since written Portuguese and Spanish are quite similar, the latter language will get the information across in Brazil."

The other two SAND reports in Spanish are by Miguel Ríos (4724), *El Programa Fotovoltaico Nacional de los Estados Unidos y Experimentos de Aplicaciones en el Sector Intermedio (The United States National Photovoltaic Program and Applications Experiments in the Intermediate Sector)*, SAND80-0587, and *Una Evaluación Económica Sencilla y Experimentos de Aplicaciones para Sistemas Fotovoltaicos en Sitios Remotos (A Simple Economic Evaluation and Applications Experiments for Photovoltaic Systems in Remote Sites)*, SAND80-0749. All three reports were translated by Carl Mora (3162).



GENE FRYE (1472) at the Chaco Canyon campground discusses finer points of applying latex. He and Bob Weaver were the technical directors of the project.



LAYER of fiberglass cloth is applied to damp latex by Wilson Brooks (4337) and Cherry Burns (ex-Lab Newser). Their mold included the niche in which early explorers found many strands of turquoise. Several thousand Indians are estimated to have lived in Chaco Canyon in the 1000s and early 1100s. Anthropologists believe the site was abandoned around 1200 because of drought.

Sandians Attack Chaco Canyon

In March of this year, LAB NEWS described an unusual request from the Maxwell Museum of Anthropology at UNM to the Labs: could Sandia, with its materials knowledge and skill, somehow replicate architectural details of the ancient buildings at Chaco Canyon? The Museum was putting together a traveling exhibit about Chaco and wished to include examples of the considerable masonry skill of the early Chacoans—doorways, walls, niches, and the like. For portability, the exhibit would be made of fiberglass, but molds were needed first and this is where Sandia's expertise would be useful.

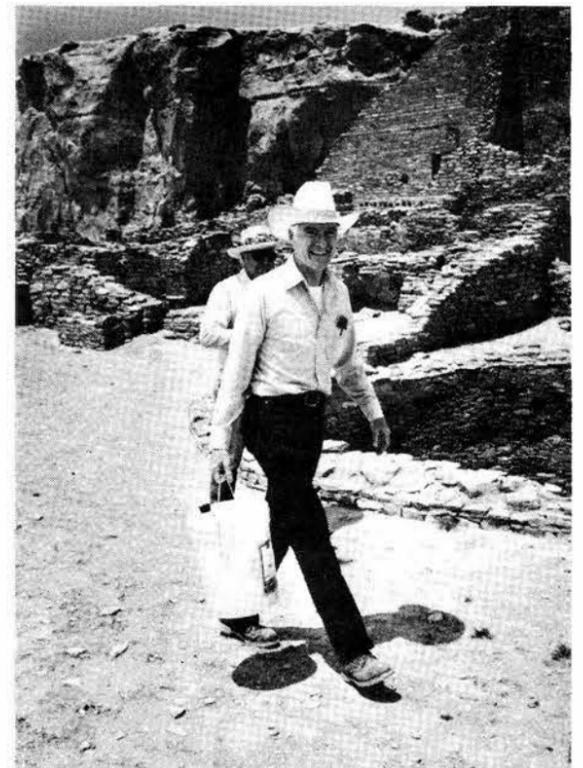
Hank Willis (3100) was able to establish that the Labs did have the capability to make such molds and concluded at the same time that replicating architectural niceties at Chaco wasn't really a part of Sandia's mission. So, after a request for volunteers during a noontime description of the project in Bldg. 815, he found himself with more than 60—a gratifying turnout for a non-pay project involving a weekend at a remote location (170 miles

distant).

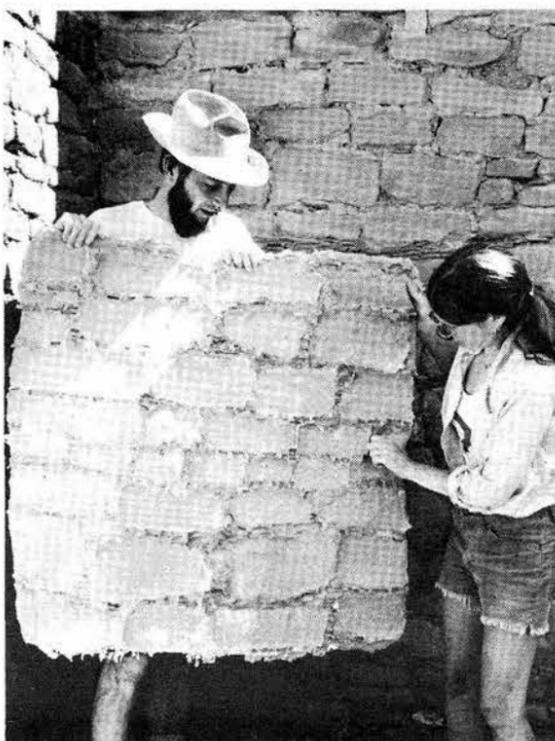
As it turned out, there were more volunteers than work and, after a little head scratching by technical experts Gene Frye and Bob Weaver (both 1472), the volunteer crew was set at 16 people. All repaired to Chaco Canyon on a weekend in May and, working in small groups, completed latex molds of six architectural features. Gene and Bob circulated and offered advice while the workers applied multiple coats of latex and fiberglass cloth. Sunday, the now-cured molds were peeled off, and all hands were able to note the achievement of the two project goals: (1) a high fidelity female mold and (2) not a trace of residue on Chaco's stone walls.

Next step is for Sandia volunteers to cast the replicas; the Maxwell Museum's exhibit people will then construct the displays using the replicas. Emphasis will be on capturing the texture and color of the stones. We'll pass the word when work is done, and the Sandia volunteers' contributions to anthropology may be seen.

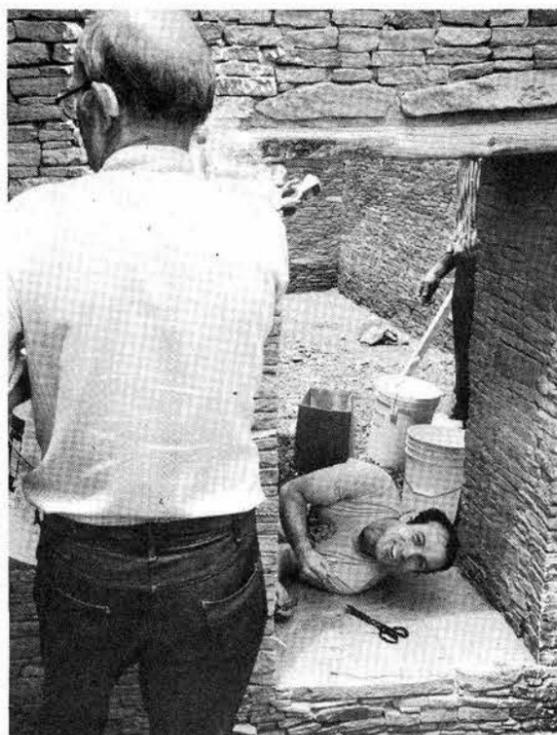
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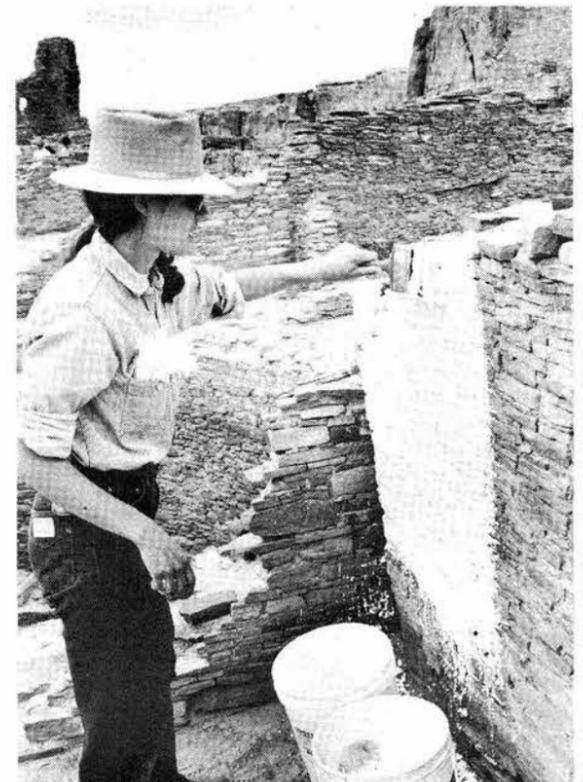
HANK WILLIS (3100) finds out what it means to be project coordinator. He's lugging one of the five-gallon buckets of latex to a work site. That's Bob Weaver (1472) just behind Hank.



RIC (2424) AND BARBARA (1213) DAVIS hold up their mold after peeling it off wall. Latex is able to reproduce smallest detail yet not leave any residue.



BOB BRADLEY (4364) does a back number as he helps prepare doorway for initial latex coating. Glen Kepler (left, 5810) looks on. Doorway was most challenging architectural feature to be replicated.



FINISHING TOUCHES are applied to section of wall by Kathe Korak (formerly 2122). Kathe was one of 16 volunteers on the Chaco project.

'Europe Has 78 Operating Reactors'

[Ed. Note—this is another in the LAB NEWS series of articles about foreign scientists working in Jack Walker's Advanced Reactor Research Department under various international agreements.]

Herbert Meister is a representative of the Joint Research Centre of Euratom, the research agency of the Commission of the European Communities. He is now working in Dick Coats' Postaccident Heat Removal Studies Division 4421 under a collaboration contract between the NRC and the respective Japanese and European authorities.

Herbert is a physicist, holding a PhD earned at the Technical University of Munich and, until the Sandia assignment, was headquartered at the Euratom research center at Ispra, Italy.

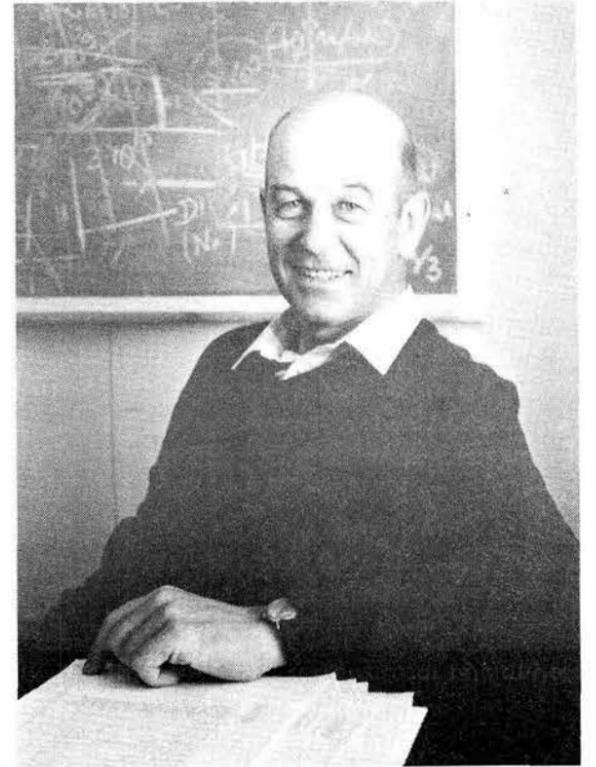
Herbert's specialty is (or was, as he describes it) solid state physics. For most of his career he has performed basic research in elastic and inelastic neutron scattering at research reactors in Germany, Italy, France, and the U.S. at Brookhaven. He spent a year and a half there in 1967-68.

At Sandia, he is involved in experiments on the coolability of reactor core

debris characteristic of that which might be formed in a fast breeder reactor accident. These experiments are conducted on Sandia's Annular Core Research Reactor in Area V. After two years at Sandia, Herbert will probably stay in the field of reactor safety. He hopes that by that time he can make his contribution to the second generation of this kind of experimentation which is actually being prepared by the Europeans to be performed in a few years at Grenoble, France, and Mol, Belgium.

Most of the 10 European nations that are members of the European Communities are committed to nuclear energy, Herbert says, and invest heavily in reactor safety research, both at national research centers and at Euratom. Euratom also conducts research in hydrogen production and storage, in solar energy, fusion technology, instrumentation development for nuclear safeguards, and computer sciences.

The European Communities currently have 78 nuclear power generation plants in operation and more than a dozen under construction. Thirty are operating in England, 29 in France, 11 in West Germany, four in Italy, two in the



HERBERT MEISTER from Euratom, Commission of European Communities.

Netherlands, and two in Belgium.

Herbert and his wife Anneliese enjoy skiing in the nearby mountains in winter, tennis and travel in summer, and good company year 'round. Their two sons are studying at universities in Los Angeles. Mrs. Meister attends courses at UNM and works as a volunteer in a local hospital and in the Indian Pueblo Cultural Center.

Colloquium Report

One Insight into US-USSR Relations

A recent colloquium provided an intriguing, and generally optimistic, glimpse into the real world of arms control negotiations. Robert Buchheim, a former staff member of the U.S. Arms Control and Disarmament Agency and former ambassador to the Anti-Satellite Negotiations, offered a number of thoughts on arriving at arms control agreements with the Soviets:

—The U.S. nuclear monopoly of the late 1940s is "gone beyond recall," and we have to realize that the USSR will not conveniently someday "vanish from the face of the earth."

—Negotiating with the Russians is much like negotiating with anyone else—in fact, like negotiating with Americans. The Soviets, contrary to popular opinion, have a "generally good record in adhering to agreements."

—Americans must realize that the Russians "are not preoccupied with pleasing us . . . Russia was an established culture long before Columbus was born . . . and our relations with them have been episodic."

—Priority should be given to prevention of accidents: Any nuclear war would be a "catastrophe," but a nuclear war by blunder would be a "catastrophe without excuse."

—Equality of forces is not an adequate arms control agreement. The objective of negotiations must be stability—in which neither side can see the prospect of surprise attack without receiving an effective retaliatory strike.

—The Soviets keep their negotiating pros on the job for long periods, unlike us —although the SCC (Standing Consultative Commission) has had "good continuity of personnel." From the Soviet (or indeed any other foreign country's) viewpoint, one problem in negotiating with the U.S. is that the president may negotiate an agreement but the Senate, where issues become politicized, may nullify it.

—Verifiability cannot stand alone as an objective. On-site inspection is much more difficult than it seems at first. Say we have a team of U.S. inspectors in Moscow and they ask to check out a suspected missile site. The Russians will clear the site by the time the inspectors get there. Similarly, if one of our chemical companies were reported to be conducting illegal chemical warfare work, it would be practically impossible for Russian inspectors to prove it. A further complication: "In a fit of pique" over Afghanistan, the U.S. terminated scientific exchange agreements that had permitted us to have experts in the USSR to keep an eye on the Soviets.

—The Soviets are at least as interested as we are in curbing proliferation of nuclear weapons.

—Negotiations need a "clear and steady sense of purpose, boldness, and creativity." We do not need any more "crabbed and cranky argumentation" that we cannot deal constructively with the Soviet Union, or they with us.

On SALT II, Buchheim—speaking for himself, "not officially"—said he originally had "serious trouble" with the negoti-

ations, especially on the problem of implementation. Now he feels SALT II should be ratified because "we don't have any alternative in front of us." It should be ratified with reservations expressed, especially on the status of the Soviet SS-18 missiles. He pointed out that the present administration continues to observe the SALT II provisions.

In response to a member of the audience who felt that it is futile to negotiate with the Russians and that wars cannot be prevented, Buchheim answered, "Sure there'll be wars, but they shouldn't be based on a fundamental threat to commit suicide . . . arms talks are not an illogical exercise."



IT'S THE "ABSOLUTELY" that makes this sign so effective—effective enough, at least, that the sign itself hasn't been covered up (yet).



SOME PUSSYCAT—The adult mountain lion, reaching 120 lbs., is a swift and efficient predator. State Game and Fish Department estimates New Mexico's mountain lion population at 2600.

Vista New Mexico

Mountain Lion Population Up

Several Sandians (Bruce Hawkinson, 3162; Don, 2545, and Mina, 5633, Carnicom; John Southwick, ret.) have reported sightings of a mountain lion in the Sandias recently, supporting a claim by New Mexico's Department of Game and Fish that the population of the large predator is increasing in the state.

Mountain lions in their rugged habitat are rarely seen by humans. By the best Game and Fish Department estimates, some 2600 mountain lions reside in the state. Twenty-nine complaints were registered last year from ranchers and sheep owners decrying loss of livestock from mountain lion raids. The Department "removed" 19 of the guilty predators—either by trapping and moving them to a new locale or by outright killing. These cats are "renegades" in the sense that few actually prey on livestock. Once a lion takes a calf or a sheep, however, it finds the game easy and continues.

Usually, mountain lion feed on deer but they aren't particular—even field mice will do. It's estimated that an adult mountain lion will take a deer every seven to 14 days. The report on the lion in the Sandias states that a dog and a couple of raccoons were among the prey. The Game and Fish Department people were up there this spring with dogs, hoping to capture and relocate the big cat.

Male mountain lions weigh 110 to 120 lbs., females 60 to 70 lbs. Effective predators with powerful limbs, impressive fangs, and retractable claws with remarkable ripping power, they are able to drag prey larger than themselves over rough terrain. Their hunting territory

covers 200 square miles.

During the summer of 1980, in a rescue operation of desert bighorn sheep in the San Andres Mountains, several mountain lions were spotted from helicopters while Game Department biologists were rounding up survivors of a scabies outbreak that killed about two hundred of the bighorns. After the surviving sheep were treated, they were released back onto their range, classified as an endangered species, and a predator control program initiated. Since September 1980, 36 lions have been removed from the range.

Recently, mountain lions have caused problems for ranchers in the Guadalupe Mountains near Carlsbad Caverns. Using the Park as a refuge, the lions were taking livestock. Under New Mexico law, ranchers have the right to kill stock-killing predators. In recent months, 21 lions have been removed from the area by ranchers, Game Department trappers, licensed hunters and U.S. Park Service people.

There is a hunting season for mountain lions in New Mexico, with a two-bag limit. According to tagging records for the 1980-81 license year, 90 lions were killed by licensed hunters—six hunters bagged two each.

In earlier times, the mountain lion ranged from the Yukon to the tip of South America and from the Atlantic to the Pacific. Extinct in South America, isolated populations remain in the mountains of Central America. In the U.S., nowadays, they are limited to the rugged terrain of the Rocky Mountain West. In New Mexico, at least, this majestic animal is prospering.

Q. Would it be possible for the Air Force to reschedule their convoys to avoid the peak commuter rush periods for traffic through the South Valley access gate to the Base? It would seem that a delay of only 30-45 minutes in their morning start time [i.e., beginning the movement at 8:15 or 8:30 instead of 7:30] and an earlier afternoon movement [3:30 instead of 4:00 or 4:15] could significantly alleviate the serious traffic tie-ups which currently seem to occur two or three times per week.

I understand that SNL is merely a tenant on KAFB and that the Base's DoD mission must take priority. I certainly would not object to an occasional traffic snarl for an emergency movement. However, the regular nature of the current movements suggests that they are routine procedures and that a rescheduling of one-half to one hour would not seriously affect mission viability. In addition, from a security point of view, I find it difficult to believe that the overall security of these sensitive shipments is enhanced by having long lines of irate commuters waiting for the trucks to pass. Wouldn't the situation be improved if the number of captive motorists was significantly reduced?

A. The Air Force assures us they try to avoid scheduling convoys during rush hour periods. However, they are obliged to follow instructions from MAC headquarters. Activity in recent months has been somewhat greater than usual. The problem you mention has been discussed with the Air Force authorities, and they are considering alternate routes, where practical, for employees' use to avoid delays.

Secondly, SNLA is not a tenant organization on KAFB. Rather, KAFB is a co-use base shared by DoD and DOE. Regardless, convoys still take precedence.

D. S. Tarbox—3400

Q. Several months ago the maximum value on a Shop Short Order was increased from \$1000 to \$2000. This change is meaningless without a corresponding change in the signature authority level since it takes a section supervisor to sign for \$2000. Are there any plans to change the signature level?

A. Effective this month, a cost center such as the Model Shop can set its own approval requirements for budgeted work to be performed internally. We understand that the Model Shop is planning to set a limit of \$2000 for a non-supervisor for internal shopwork. This will make this approval commensurate with the short order limit. However, budgeted work to be performed externally must still be approved at the levels specified in SLI 1050, Appendix C, for normal procurements.

C. R. Barncord—3200



***Retiree
Picnic
1982***



Photos by Bill Laskar

Sandian Collects Citations

Pete Flout (6815) was recognized recently for his vast collection of Sandia and KAFB traffic citations. We asked him the secret of his success. "Easy," said Pete, pulling a dog-eared piece of paper from his wallet. "These here," he said, "are the Ten Commandments of Parking at Sandia. *First* (he read), *thou shalt not park nigh unto yellow or red curbs. Second, thou shalt not take NO PARKING signs in vain. Third, thou shalt not park amidst those parking spaces reserved unto those who bear a passenger unless thou also art bearing a passenger. Fourth, thou shalt not park in spaces reserved unto others. Fifth, thou shalt not park in spaces reserved unto "second shift" unless thou art one of these. Sixth, thou shalt not park thy vehicle in two spaces; neither shalt thou park "head on" in slots that are angled. Seventh, thou shalt not back into slots that are angled. Eighth, thou shalt not park outside established parking bumpers or earthen mounds that shew parking spaces in lots whereof asphalt lies not upon the earth. Ninth, thou shalt not drive in the wrong direction through angled parking lots. And tenth, thou shalt not drive such that thy vehicle goeth against directional arrows.*

"That's it. I've broken every one, some several times," he said proudly as he folded his treasured paper and put it back into his wallet.

"How did you get started with your citation collection?" we asked.

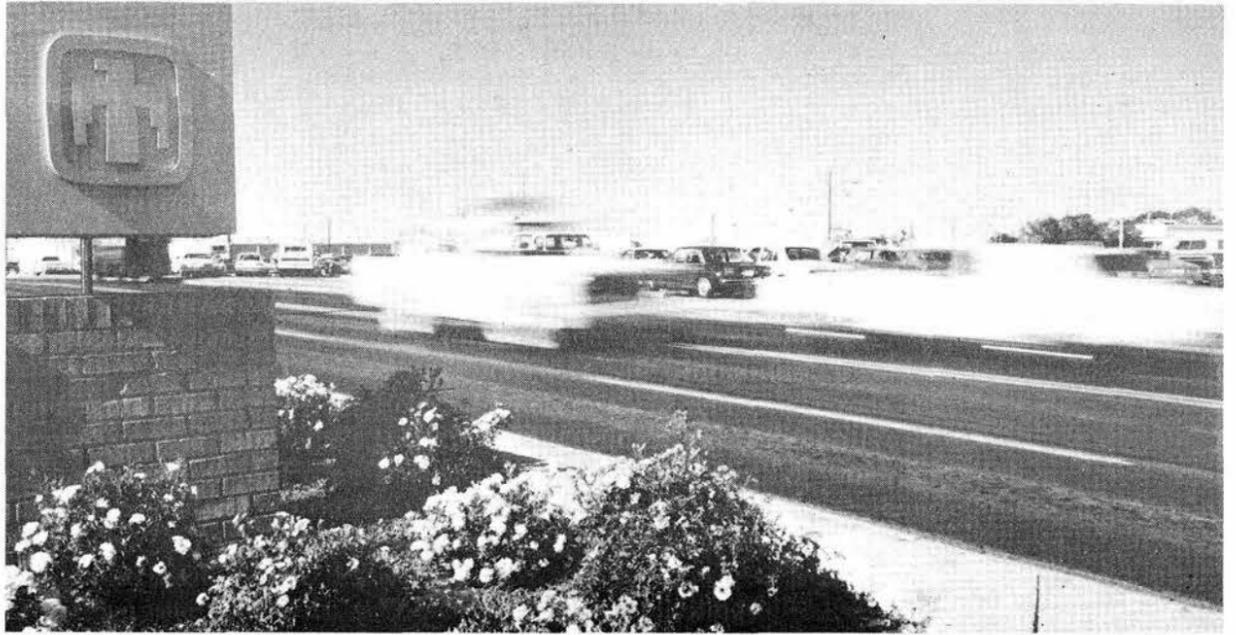
"Like everyone else—out of necessity," he replied. "You see, with half the parking areas set aside for new buildings, I realized I'd have to walk an extra block if I parked properly. Either that or arrive early—perish the thought—to get one of the few close-in spaces.

"Of course," he went on modestly, "I've become really good at my hobby. The thing you've got to do is stick with it. Everyone else chickens out when the stakes get high. Not me. In fact, I've gone beyond Sandia's Ten Commandments now; I'm breaking bigger and better laws, you might say."

"Surely you don't mean theft or murder—or computer crime?"

"Oh, no," he replied. "I'm true to my passion—collecting citations. But I've expanded to include Kirtland citations, not just Sandia's. It's easier than most novices think. Just get caught speeding, for example, and that's simple now that they're using radar guns again. Or—and here's one lots of Sandians aren't aware of—make a U-turn anywhere on Base. You can build your collection fast with just those. Lots of opportunities for illegal turns, too, like off E Street onto Wyoming where you're not supposed to turn right on a red arrow but you can turn on a red light. Add to those a Base Commander who wants a crackdown because of a rise in accidents and, why, you could get a citation just by accident—so to speak."

"But what satisfaction does your hobby



OFF TO HIS LAST CITATION goes Pete Flout, current record-holder for speeding (and other) citations on the Base and at Sandia.

provide?" we asked. "Surely just piling up citations isn't enough."

"Well, that's really what I'm most proud of," he countered. "No one else has as many. If Guinness Book of Records had a scofflaw category, I'd be in it.

"But," he went on, "there are other satisfactions. You know, of course, that for every citation Sandia Security gives you, you have to meet with the next higher level of your management.

"Well, I may be the only Sandian who has really gotten to know every person in my line all the way to my vice-president—and know them well. I'm proud to say not one of their threats, their pleas, their aspersions about my ancestry has gotten through

to me. I'm what they call incorrigible.

"They threatened to revoke my Base driving privileges after my third offense. But they couldn't do it. They simply couldn't do it."

"Why not?" we asked. "SLI 1904 says they can."

"Because of my Kirtland collection. You know, they add points to your driving record for every offense. And when you get 12 points, you can't drive on Base anymore. Well, they got to me before Sandia did. So I can't drive to work now. Sure lucky I live only a mile from a bus line."

"Well, thanks, Pete, and congratulations—I guess." • BH

Colloquium

Designer Genes Mean Identical Twins

A remarkable study of identical twins who have been reared apart was the topic of a recent colloquium presented by Thomas Bouchard of the University of Minnesota. His findings could challenge a theory that underlies much of modern psychology.

According to traditional behaviorist theory, identical twins raised separately should exhibit no similarity—or at least no greater than between any two unrelated individuals chosen at random.

Bouchard and his staff have examined 31 pairs of identical and nine pairs of fraternal twins. The average age at separation was three months, after which they never lived together until being reunited for the Bouchard study. Many had not even been aware of each other's existence. Half of these subjects were from the United States and the rest mostly from Britain, although one set of twins came from Liberia. Most of the twins had been separated before World War II, usually by adoption agencies who placed them with different families, often in different countries. The subjects ranged in age from 28 to 62.

The twins were brought to Bouchard's laboratory at the University of Minnesota where they underwent a week of intensive medical and psychiatric exams. "These were the most comprehensive physical and psychological assessment tests ever given to anyone," said Bouchard, "except perhaps the astronauts."

Despite accepted theory, Bouchard found startling similarities in intelligence and behavior between twins who had never known each other. For instance, Jack and Oscar had been separated at birth—one was raised in Germany, the other in Venezuela and Israel. Yet they share idiosyncratic similarities—both collect rubber bands around their wrists and habitually wear blue safari shirts. All but one of the pairs of twins have identical eyeglass prescriptions.

Bouchard also found that male twins tended to pursue the same occupations. This was not true in the case of female twins who married spouses of different class levels. Although their husbands are not at all the same, the twins are still much alike. As Bouchard says, "Your spouse just doesn't change you."

Heretofore, personality and intelligence have been believed to be determined largely by the environment, but Bouchard feels his data strongly indicate that the genetic factor is far more important in human behavior than formerly suspected. "However," Bouchard adds, "identical twins are still unique human beings in their own right."

Bouchard welcomes inquiries about his work and would appreciate having cases of twins who have been reared apart brought to his attention. He may be reached at the Psychology Department, University of Minnesota, Minneapolis.



DESERT OASIS is one of the places Anthony Muller (4413) took water samples. The watering place has served caravans in the desert for centuries.



FIGURES ON A LANDSCAPE—An outcropping of sandstone in Egypt's Western Desert breaks monotony of drifting sand. Two members of the Smithsonian Expedition look tiny in the vast emptiness.

Isotope-Hydrology Study

Sandian Dates Water

Anthony Muller, an isotope-hydrologist in Fuel Cycle Analysis Division 4413, spent eight weeks earlier this year with the Smithsonian Western Desert Expedition in southern Egypt and northern Sudan. He was taking samples of ground water (as well as surface water) and dating them in an effort to identify times of relatively high rainfall, cyclic since paleolithic times, as a guide to the climate during periods of habitation by early man. The work also serves to gain experience in isotope-hydrology techniques in characterizing ground water flow over geologic time, which relates to Sandia's work in characterizing radioactive waste isolation sites.

Although the main archeological site, directed by Southern Methodist University archeologists from Dallas, was in southern Egypt, Anthony's mobile quaternary geology group (they traversed the rugged desert terrain in VW "Thing" vehicles and Russian jeeps) traveled more than 5000 kilometers taking water samples at desert

oases, wells along the caravan route, and at Lake Merga in Sudan, which is the only standing body of water in the vast Western Desert. The lake, fed from a deep spring in an underlying sandstone formation, covers only a few acres. Up to 300 litres of water were required for each sample to provide enough carbon for carbon-14 dating. Each water sample was precipitated in the field and the samples catalogued and returned to the U.S. for further laboratory work. Field measurements were made of the pH, bicarbonate and carbonate content, and subsidiary samples were taken for major ion, stable isotope, and tritium analysis.

"The first couple of weeks in the desert were unexpectedly cold," Anthony says, "with temperatures below freezing. None of us brought cold weather gear and that hampered our work."

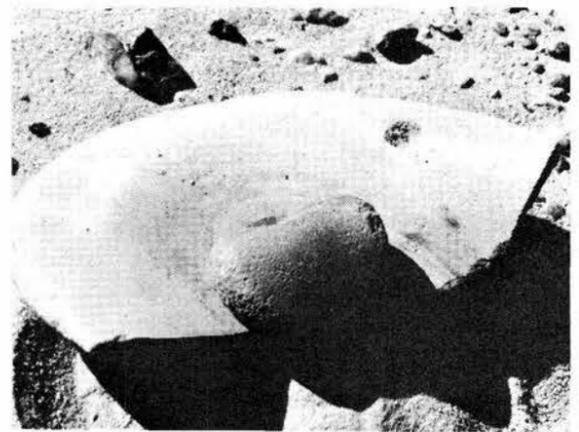
Carrying considerable scientific equipment, camp gear, and provisions, the light vehicles easily became bogged down in the sand. "Lots of shovel work" Anthony says. "It was a physical ordeal. To save on weight that we had to carry, our food supply was mostly canned sardines and Granola bars.

"But I love the desert," Anthony continues. "We saw fantastic landscapes and endless sand. Although it feels like you are the last people on earth out there, you are not always alone. At one point, we thought we were being captured by an element of the Libyan army, but they were Sudanese—very friendly. Most of the time there were just six of us—a very tiny group in a very large and empty universe.

"The archeologists had great luck at the base camp—they found a Neanderthal skeleton—the first in Egypt."

Anthony accompanied an earlier Smithsonian expedition to the area in 1979 when he was a Research Associate with the University of Arizona. He also visited the North African desert area in 1974-75 doing field work for his doctorate in isotope hydrogeology from the University of Paris VI where he was a Fulbright scholar. He joined Sandia in September 1980.

Anthony will present a Sandia Colloquium on this subject July 28.



MILLSTONE and hand stone used by prehistoric people in Egypt's Western Desert resemble primitive tools known to New Mexicans as the metate and mano. The Smithsonian Expedition recently found a Neanderthal skeleton in the area—the first in Egypt.



COLLECTIVE NOUNS

Most of us know collective nouns like a gaggle of geese, a pride of lions, a drift of swine. But those of us who work in R&D labs represent disciplines that lack such colorful nomenclature. Until now, LAB NEWS has created appropriate collective nouns to remedy the regrettable lack, nay, the veritable paucity, of collective nouns in the R&D field. To wit:

- a fusion of particle beam researchers
- an assembly of weapon developers
- a shaft of machinists
- a function of mathematicians
- a galaxy of astronomers
- a reconciliation of tellers
- a byte of programmers

(Suggestions? Send them to 3162.)



ANTHONY MULLER (4413) took samples of ground water and surface water for carbon-14 dating during a recent Smithsonian Expedition to Egypt's Western Desert.

Retiring



Anne Felsen (3733)



AT POPEJOY, ACLOA's production of *Sound of Music* features Allison Davis (5813) and Gene Ives (4330) in lead roles. Duane Dewerff (2336) plays a villain. The show runs Fridays and Saturdays at 8:15, Sundays at 2:15, through June.



AT THE VORTEX, Liz Scott (3153) and Dolores Gravning (6010) portray grieving child and not-so-sympathetic mother in *Nourish the Beast*, a "slightly absurd" comedy playing Fridays and Saturdays at 8, Sundays at 2:30, through June. Reservations at 247-8600.

Take Note

Bill Palmer of Sandia's Coatings Lab 1473 was more disappointed than most Sandians when Josele Garza's Indianapolis racer conked out after the first lap. Still, Bill had achieved a dream—the bright-hued car was a work of art, and Bill painted it himself, including the signs and lettering.

"Always wanted to paint an Indy car," Bill says, "since I painted my first race car back in '59. I painted sprint cars at Speedway Park and Bobby Unser's Pike's Peak cars, but the Indy car was special. Maybe next year we'll win."

* * *

UNM is again offering a summer series of classes in German language for children starting July 5 and meeting once a week through Aug. 18. Various levels are offered for different age groups.

Also, a beginning class in German for adults is available starting July 6. The class will meet evenings on Tuesdays and Thursdays. Instructor is Joan Winter, wife of Charlie (400).

For registration information, call 277-2931.

* * *

The black pottery of the late Maria Poveka Martinez of San Ildefonso Pueblo is on display at the Adobe Gallery in Old Town through July 10. The famous potter's works span a career of over 50 years.

* * *

Herman Roser, DOE Assistant Secretary for Defense Programs (and former head of DOE/AL) is one of the featured speakers at the annual meeting of the Institute of Nuclear Materials Management in Washington, D.C., July 18-21. Tom Sellers, manager of Safeguards Development Department 1750, is conference arrangements chairman.

More than 50 papers on nuclear materials safeguards and a technology equipment exhibit are planned. Registration information is available from the Institute's headquarters, 2400 East Devon Ave., Des Plaines, Illinois 60018, or call 312/635-7700.

* * *

The Albuquerque Arts Board is seeking community participation in selecting sites and planning for new "One Percent for Art" projects. Both artists and interested citizens are sought for an art selection jury. Call 766-7816 or 766-4658 for more info. The program began in 1979 and has installed works of art along San Mateo, at the Palo Duro Senior Citizen Center, and in a mini-park at S. Y. Jackson Elementary School.

* * *

The Santa Fe Festival Theatre has opened a box office in Albuquerque. The summer schedule of plays includes *Wild Oats*, a Restoration comedy set in the Wild West; *Wings*, a portrayal of the need to communicate on the part of a woman who has suffered a stroke; and *Amerika*, a musical celebration of the Land of Opportunity as seen by a 17-year-old immigrant (Madeline Kahn has three roles in this one). Get show dates and ticket info from posters throughout the Labs or come to the LAB NEWS. The local box office is at Signature J clothing store on the upper level of Coronado Center from 10 to 1 and 2 to 5 (closed Sundays).

* * *

The Outdoor Singles Club is an informal

group of single adults who enjoy any kind of outdoor activity: hiking, camping, skiing, river running, fishing, 4-wheel-driving, exploring. Some of their upcoming events include: a hike in the Sandias (June 13), a rafting trip on the Rio Chama (June 20), hiking and camping in the Jemez Mountains (June 26-27), and a proposal for a non-technical climb of Mt. Sneffels near Ouray, Colo., for the July 4th weekend. A dinner meeting is held at the Royal Fork, Eubank, 6 p.m. on the fourth Tuesday of each month. For more information, call Dave Williams (4424), 265-7164.

* * *

Thinking about become a parent soon? On Tuesday, June 15, from 12 to 12:30 p.m. in Bldg. 815 (outside the Tech Area), the Medical Department is presenting a program to explain a non-profit community agency aimed at the support and education of first-time parents.

Judy Taylor, Parentcraft coordinator, says the program uses experienced, trained volunteer parents to help first-time parents-to-be. Couples or singles enroll during the very early months of their pregnancy in groups which meet weekly to acquire information, share concerns, have fun, and provide support for each other.



IT'S A RECUMBENT, and it's quite a bike—more efficient, safer, and kind to the body, or so says the literature. And Jim Davis (5641) has one. This is a 21-speed model, and Jim reports that it's "the only way to lie" (down) and bike at the same time. Recumbents are not inexpensive—if you're looking for one and hear "Attention, K-Mart shoppers," you're in the wrong store.

Jim Myers Is a Big Brother

Jim Myers, a machinist in the Bldg. 892 Branch Shop, first heard about the work of Big Brothers/Big Sisters of Albuquerque, Inc., during an ECP tour of United Way agencies a couple of years ago. At the time, Jim was much impressed with the work of the agencies and was thinking about ways he could make a more personal contribution—more than the standard Fair Share payroll contribution.

“Being a Big Brother,” Jim says, “is volunteering to make a very personal contribution. You take on the responsibility for developing a friendship with a youngster anywhere from six to 18 years old and for spending several hours a week with him. He’s a kid who, for some reason such as death or divorce, lives in a single parent home. Your job is to give him adult friendship, let him know he has somebody on his side, and be a role model.”

Right now, the Big Brothers/Big Sisters agency has 70 young boys and five young girls on the waiting list for big brothers or big sisters.

“Being a Big Brother is a responsibility,” Jim says, “and it involves time, effort and some emotional wear and tear. But the rewards are great. To know that you’ve helped someone, to know that you’ve made a difference in a young boy’s life—now that’s the best kind of satisfaction.”

After volunteering for the program, being checked out by the agency, and attending training and orientation sessions, Jim met his Little Brother a year and



JIM MYERS (1481) with his little brother Michael Killman. Big Brothers/Big Sisters, a United Way agency, is seeking volunteers for 70 youngsters in their program who need an adult friend.

a half ago. They usually spend about four hours together every Sunday afternoon.

“When we met,” Jim continues, “the youngster had a communications or speech problem. He was afraid people weren’t listening so he talked too rapidly, too high pitched, and too intensely. He was difficult to understand and even more difficult to follow. Well, we had a time, but slowly he relaxed with me and now he communicates very well. He talks easily and I do a lot of listening. I can’t take all the credit for his improvement, but I do know my patience and our talking together helped.

“He’s in junior high now and has typical

interests—he’s crazy about rock music, likes baseball and bicycling. We do a lot of bicycling together, stopping to talk along the way. We’ve become good friends—he likes to help me with chores around the house—and I enjoy our afternoons together.”

Jim is quick to point out that not all the youngsters in the Big Brothers/Big Sisters program have personality problems. “Most are shy, lonely or simply unhappy,” he says. “They need a friend.”

If you are interested in becoming a Big Brother or Big Sister, call Doug Black at the agency, 266-8653.

Carl Hawk's Red Roadster Tooling Around Town (Again)

LAB NEWS first ran a story about Carl Hawk's hot little red roadster 30 years ago in April 1952. He had driven it here from Chicago when he joined Sandia in 1951. There weren't many sports cars around in those days.

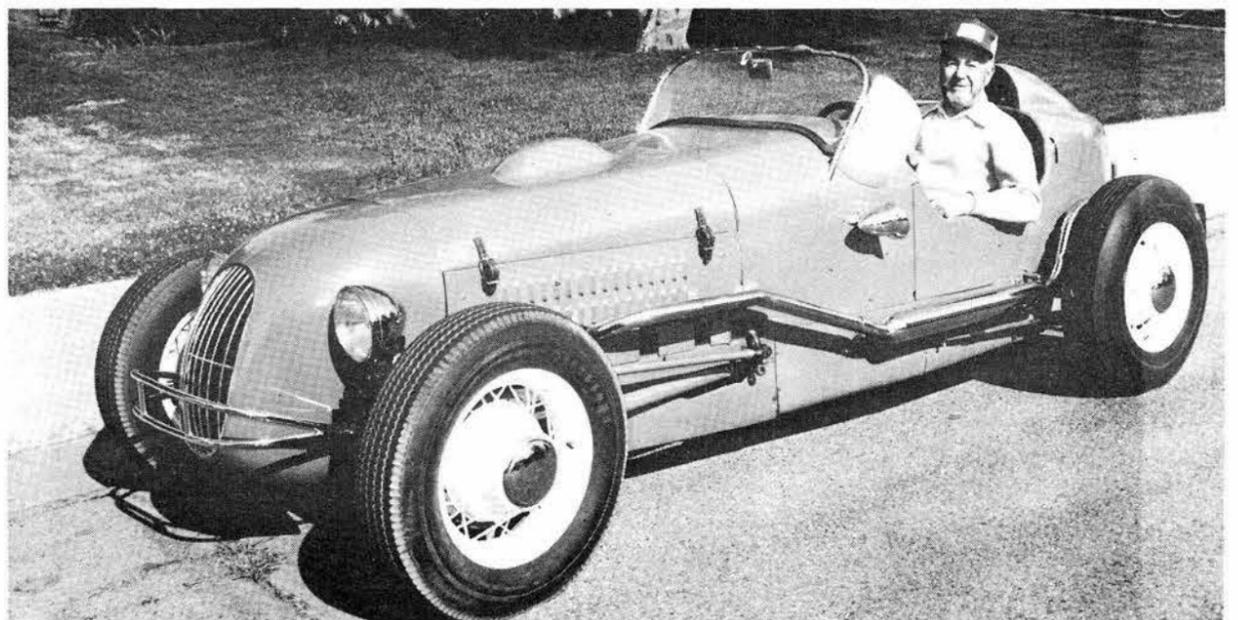
The car, which has been a continuous do-it-yourself project, is back on the road again after being in storage for the past 12 years.

“I meant to rebuild it but I got sidetracked,” Carl says. “I built a two-story addition to my house, designed and built a helicopter, and worked on another home-built airplane for awhile. Then I retired from Tech Art in 1974 and stayed so busy with visits with friends and sightseeing trips that I didn't get around to the car until recently.”

Now, Carl is tooling around town in a very snappy little machine resembling an Indianapolis racer, vintage 1940.

“As a matter of fact,” Carl says, “the car was originally built by a race car shop in Chicago in 1946 from mostly 1940 Ford parts. I bought it in 1949 and have been rebuilding it ever since.

“I've added five inches to the frame and reinforced it, chopped four inches off the tail cone, added a head rest, re-routed the



CARL HAWK, retired tech artist, recently reworked his 30-year-old custom car. Built mostly from 1940 Ford parts, it is a very responsive, quick-handling little machine.

exhaust system from underneath to outside (both sides), fabricated a new cowl and underpan, installed a hydraulic clutch, and painted it.”

The car has a 1940 flathead V-8 engine, '40 Ford axles and '35 Ford transmission—the rest is custom-built aluminum frame and hand-formed aluminum body.

In the rebuilding of the car, Carl had

help from his son Bob, a machinist in Shop Support Division 1485. Bob was eight years old when the car was purchased.

On weekends, the car is parked in front of radio station KZIA (1580 on the dial) where Carl is co-host on an automobile information show on Saturday afternoons and conducts “Talk with Hawk” on Sundays from 2 to 4 p.m.

MILEPOSTS

LAB NEWS

JUNE 1982



Charles Arnold - 5811 15



Don Gregson - 8160 30



Jon Bedingfield - 3721 10



Betty Gatto - 3543 25



Rex Myers - 1752 25



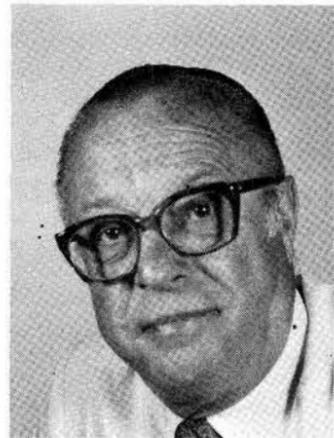
Ray Rychnovsky - 8152 25



Frank Mistretta - 1474 25



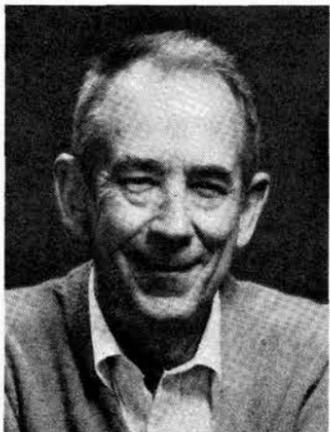
Imogene Holmes - 3531 15



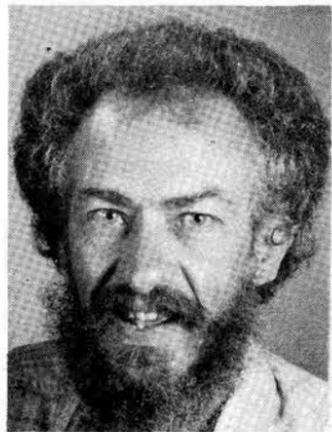
Joseph Pavelko - 1725 25



Gertrude Piraino - 3733 20



Wilbur McGuire - 8444 30



David Pierce - 2313 20



Judy Wills - 2431 25



Bill Whalen - 1523 20



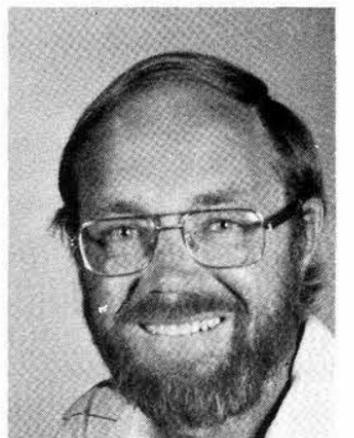
Ken Nielsen - 1124 20



Cliff Pothoff - 8465 25



Dick Sundahl - 8465 25



Don Longcope - 5524 15

Metallurgist Mixes Media

Is metallurgy compatible with art? It is when the mixture is handled by Fred Yost—a metallurgist in Division 5832 and an artist.

Fred will be the host at booth number 203 at the New Mexico Arts and Crafts Fair this month. His work—calligraphy and pencil and charcoal drawings—was accepted for one of the largest juried shows of its kind in the Southwest; over 210 artists and craftsmen will take part in this annual event.

Fred has taken numerous art courses and has been drawing and working with watercolors for many years. His work as a calligrapher goes back about four years.

“As a member of the Civitan Club,” he says, “I often volunteered to do the posters for special events. I decided that I would benefit from a formal course in calligraphy. As I became more proficient, I began to experiment.”

Much of Fred's work combines drawing, calligraphy, and watercolor.

“In China and Japan, calligraphy is a highly respected art form,” he explains. “I like to think of calligraphy as a fine art rather than just the execution of certificates and diplomas.” With that viewpoint, the combination of calligraphy, drawing, and coloring makes artistic sense.

Fred is versatile. He mats his work and constructs most of the frames. He mixes his own ink from gouache, water and gum arabic, and he makes many of his calligraphy pens. But, even more unusual, he makes some of his own paper: casting from a plaster mold that produces a raised design, which he then highlights with watercolor and finishes off with an elegant calligraphic message; or producing sheet paper with a handmade press. With both

types of paper, sizing is applied to prevent the paper from absorbing the ink like a piece of blotting paper.

At the Fair, Fred will offer three categories of both calligraphy and drawings: framed pieces, a bin of unframed work, and a book with a selection of smaller items.

The Arts and Crafts Fair will be held June 25-27 at the state fairgrounds.



ARTS AND CRAFTS FAIR exhibitor Fred Yost will show pencil and charcoal drawings and calligraphy at his booth at the Arts and Crafts Fair, June 25-27. In addition to unframed work, he has a large selection of framed pieces incorporating drawing, watercolor, and calligraphy.

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CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday. Mail to: Div. 3162 (M0125).

RULES

1. Limit 20 words.
2. One ad per issue per category.
3. Submit in writing. No phone-ins.
4. Use home telephone numbers.
5. For active and retired Sandians and DOE employees.
6. No commercial ads, please.
7. No more than two insertions of same ad.
8. Include name & organization.
9. Housing listed here for rent or sale is available for occupancy without regard to race, creed, color, or national origin.

MISCELLANEOUS

- 7mm ARGENTINE Mauser rifle w/custom thumb hole stock, high Monte Carlo cheek piece, 4X scope, \$250. Johnson, 888-3406.
- GUITAR AMP, Musicman RD112, 100 watts, EVM 12" speaker, \$400. West, 281-3460.
- HARDWOOD chopping block, rock-maple top, oak skirting, never been used, \$120. Hesch, 294-3298.
- BAR STOOL, green & chrome, adjustable, \$11. Dancy, 299-8223.
- CHAIRS, 4 folding, walnut finish, padded seats, \$15 ea. Rauch, 821-6992.
- FISHER-PRICE doll house w/furniture & dolls, \$10; elec. self-buttering popcorn popper, \$5. Simons, 821-9343.
- GE, 12" B&W TV, \$68; BIC multiple play turntable, belt drive model 920, dust cover, wood base, \$49; Wards port. stereo headphones, 2 speakers, cover, \$24. Paul, 299-6387.
- PATIO DOOR, 70.5"x80", \$50. Walker, 821-5938.
- RADIAL TIRES, 2 Michelin ZX 185SR-14 est. w/20,000 miles, \$25/pr.; 2 185-14 est. w/25,000 miles, \$15/pr.; mechanics floor creeper, \$6; dishwasher, \$40. Horton, 883-7504.

- RIMS, 2, 15" from '67 Ford car, \$10 ea. Auerbach, 296-1489.
- SIDECAR for medium to large motorcycles, \$500 firm; camper shell for LWB pickup, fiberglass construction, \$150. Roody, 281-1388.
- LIFE VEST, new, men's large size, Stearns, \$15. Merritt, 884-8487.
- VENT A HOOD, 26"x36" range hood; cast iron white kitchen sink. Nelson, 265-1072.
- SPACE SAVER dining table, looks like chest, expands to 90", 6 chairs, walnut finish, \$350; new 2 tube fluorescent ceiling fixtures, lucite cover w/tubes, 2, \$20 ea. Brinegar, 299-7887.
- BEARCAT 250 crystalless scanner, 50 channels, 5 bands, search w/64 search memories; digital clock, AC/DC, priority, etc., \$275 or B/O. Prior, 296-2430.
- YARD SALE: 7112 Seminole NE, bicycle, dishwasher, dishes, utensils, tools, etc., June 11-12-13-14. Glass, 884-4415.
- FRIGIDAIRE built-in electric range, 30" coppertone; 36" matching vented range hood w/fan & light, \$45. Hale, 298-1545.
- LAWN SPREADER, fertilizer-seed, Imperial Mark II, 21" wide, used 2 yrs., \$20. Stang, 256-7793.
- CARPETS: 12'x12' green pile; 15'x12' gold broadloom w/pad; 9'x12' oval braided w/matching runner; brown hall runners. Crowther, 821-0172.
- BAR STOOLS, \$15; brown plaid couch, \$50. Bassett, 265-4280, 898-1840.
- 1 PAIR L60x14 tires on white spoke wheels, \$57; roll bar, \$60. Nelson, 881-0148.
- TWIN BED, \$65; trailer hitch for '74 VW bus, \$75; treadle sewing machine, \$50. Keltner, 298-7888.
- VIOLA, case & bow, 14", \$350. Davis, 281-1248.
- PORTABLE swing for porch/lawn, metal w/pads, \$45 firm. Schuch, 299-8721.
- WARDS moped, engine runs, needs other work, \$75 firm. Weber, 243-7650.
- END TABLE, \$40; five ft. avocado plant in pot, \$20; folding clothes drying rack, \$8. Sublett, 884-4426.
- EXTERIOR STUCCO, beige El Rey, 7 1/2 94-pound bags, \$50. Chamberlain, 898-5841.
- SUNBEAM teflon coated curling/misting iron, \$7; bathroom wastebasket, yellow w/lucite bottom, paid \$15, asking \$7. Burstein, 821-6688.

- TELETYPE, Model ASR-35 (incl. printer, keyboard, paper tape I/O), w/set of schematics & S-100 bus computer interface card, \$125. Kobs, 281-1102 after 6.
- GARAGE SALE: misc. items including teenage boys' clothes. Porter, 2708 Alcazar NE, 884-4577.
- RALEIGH 10-spd. British touring bicycle, \$125; Brittany Spaniel puppies, purebred, \$100. Mozley, 884-3453.
- TRAILER HITCH & gas tank, I.H. Scout; car, manifold, starter mtr., & alt., Dodge 6 cyl.; tube tuner, amp & pre-amp. Bartel, 821-4032 after 6.
- BABY ITEMS: high chair, \$20; wind-up swing, \$20; infant seat, \$7; stroller w/umbrella, \$25. Barnard, 831-4114.

TRANSPORTATION

- 78 HONDA XL-75 motorcycle, dirt/street, 1147 miles, \$350; 74 Chevy Vega GT stn. wgn., \$500. Tichenor, 265-3843, 265-2409.
- 79 FORD Explorer F150, 351 engine, AT, PS, PB, tinted glass, cruise control, 53K miles. Lee, 299-1802 after 5.
- 75 FORD Granada 4-dr., AC, R&H, 54K miles, \$1700. Zucuskie, 881-4086.
- SIX boys' bicycles, 5 are 20", & 1 26", Schwinn's, Wards & Raleigh, 3-spds. & coaster brakes, \$20 to \$65. Pappas, 881-3440.
- 72 HONDA CL350 motorcycle, 6000 miles, 2 helmets, \$595. Koone, 881-2646.
- 77 MAICO 400MX, \$700; Yamaha 100MXB, \$300; Yamaha 125 needs work, \$100. Simmons, 255-3297.
- GIRLS' AMF Stingray bicycle, \$35; ladies' 3-spd. bicycle, \$25 firm. Manning, 255-8940.
- '67 MOTORCYCLE, Triumph X Tiger, restored, \$1850, trades considered. Singleton, 299-1613.
- SCHWINN BICYCLE, 26", 5-spd., \$45; 26" 10-spd. Columbia racing bicycle, never ridden, \$80. Harstad, 298-6551.
- 76 HONDA 400F, 8K miles, rear rack, \$900 or B/O. Prior, 296-2930 after 6.
- '80 FORD Mustang, 4-cyl., 2.3L, AT, AM-FM cassette, 19,100 miles, sell at NADA wholesale \$4500 or best offer. Stang, 256-7793.
- CAMPER, 11' Dreamer w/'74 Chev. 454 V8 one-ton, both completely equipped, deluxe, orig. owner. Sweeney, 299-1630.

- 75 CORVETTE, 4-spd., PS, PB, PW, T-top, headers, alloy turbine wheels, new carpeting, seats, battery & alternator, blue, \$6900. Thornton, 265-3234.
- '73 VOLKSWAGEN super beetle, \$1600. Pierson, 884-3174.
- '68 CHEVY Impala, 4-dr. sedan, 327 cu. in. engine, \$850 cash or negotiable. Davis, 881-3979.

- TWO cabin sites at Bluewater Lake, \$2250 per .5-acre lot. Garcia, 293-3937.
- 3-BDR., lg. den, near UNM & Monte Vista School, low interest, owner financing, \$85K. Aronson, 898-8893.

WANTED

REAL ESTATE

- TRUNDLE BED, ranch oak or similar. Hartwigsen, 865-7836.
- HAD TWINS: looking for a stroller, preferably the type in which they face each other. Bryan, 262-0302.
- DRESSMAKER, careful tailoring, reasonable. Newman, 299-2729.
- COUNTRY WESTERN records to borrow for a few days, will return promptly. Gallegos, 255-5264.
- USED Fiesta outfits in good condition, sizes 6-12, pleated skirts, will pay fair price. Sinclair, 884-7096.
- 10-SPEED bicycle for college student in price range \$60-85. Bartlett, 299-4861.
- CJ JEEP. Muench, 881-7103.
- LADIES' 26" bike, either 3-spd. or reg. brake on foot gears; would consider semi-balloon tires. Burstein, 821-6688.
- LONG shaft trolling motor 6 HP or greater. Garcia, 293-3937.
- 3-BDR., 1 1/2 bath, 1400 sq. ft., assumable 7% loan, \$15K down plus REC on equity, asking \$62,500. Sena, 881-2224.
- NW, 2-bdr., 1/2 miles from I-40, single-car garage, \$14K CTL, assume 8% mortgage w/\$320/mo. PITI. Bonaparte, 831-0869.
- MOBILE HOME, 1978 Nashua, 14x70, 2-bdr., 2 bath, lg. LR & kitchen, refrig., gas range. Jones, 281-1186.
- 3-BDR., 1 1/2 bath, fenced yard, near Lenkurt, \$8K down, \$48K, assume 8 1/2% FHA loan, terms flexible. Duvall, 881-4406.
- 5 ACRES on SW mesa, grassy rolling hills, \$9250, \$1500 down, \$110/mo., 10% interest. Mauldin, 293-2079.
- MOBILE HOME, '81 Golden West double wide, 1440 sq. ft., 2-bdr., 2 bath, all paneled, carpeted, complete appliances, wet bar. Stang, 299-8688.
- NE, 4-bdr., 2 1/2 baths, lg. master suite & den w/fp, 3-car garage, 2378+ sq. ft., some solar, assumable FHA 8 1/2%. French, 821-6144.
- WILL TAKE pickup camper, VW camper, MC, in trade for equity in Winrock Villa studio condominium. Tamashiro, 268-0177.
- 5-BDR., 3 bath, 2700 sq. ft., near Chelwood Elem. school. Morosin, 298-0994.
- NE, 4-bdr. on corner lot, \$70K, near park & KAFB, family room has fp. Bowers, 296-7847.
- 3-BDR., study, formal DR, 2 baths, 2150 sq. ft., fully carpeted, screened patio, 2-car garage, 1.2 acres, barn, tack room. Wheeler, 281-2216.
- RIDGECREST, 2-bdr. house, 2-car garage, other extras, no qualifying for assumable loan, flexible down payment, \$68K. Feltz, 293-8732.

WORK WANTED

- PAINTING, UNM student workshop, references, estimates. Peter Shun-ny, 266-0266.
- YARDWORK, teenagers working for team travel expenses, references. Luke or John Atkins, 298-5762.
- STUDENT wants yard care, will mow, trim, water, fertilize, prune, haul, rake or whatever. Paul Prew, 296-3815.
- COLLEGE student wants house sitting, plant & pet care, available year-round, references. Elizabeth Kind-schi, 256-0531.
- COLLEGE student wants yard & misc. jobs. David Northrop, 884-4718.

New Price For Luau

TONIGHT at Happy Hour Chef Bill Potts goes all out with a prime rib buffet from 5:30 until 9. The buffet includes potato, vegetables, salad bar and assorted desserts. A group called 12 Gauge plays for dancing from 8 until midnight, and special Happy Hour bar prices are in effect all evening.

Next Friday's Happy Hour sees Jeanne Rich and Friends on the bandstand and a fish fry buffet spread.

MID WEEK HAPPY HOURS include Mondays with 25 cent drinks for women, Tuesdays with special prices and a spread of munchies and goodies at 5:30, and Wednesdays with three drinks or three draft beers for \$1.

ONE OF THE GREAT PARTIES of the year is the annual Luau on Saturday, June 26. With porkers roasting on a spit in the patio, mai-tai coconuts, dancing hula girls, fire dancers, music by Spinning Wheel and a fantastic Polynesian buffet, this one may be the greatest Luau yet. All of this goes for \$15 per person, and reservations must be made by noon, June 21. Call 265-6791. The Board made the price change in response to members' requests.

THE BUDWEISER people are running a bar promotion at the Club on Thursday, June 24, starting at 4:30. They will give away prizes every half hour while a glass of their draft beer sells for 25 cents.

CORONADO GRANDSQUARES are into their summer schedule, meeting the first, third, and fifth Monday each month with the Church House Squares. The group meets at the Coronado Club on the second and fourth Monday each month at 7:15. For more info, call Bob Butler (1233), 4-4940.

TEN PEOPLE are needed to arrange an



POLYNESIAN PHANTASIES, a 10-member Hawaiian dance troupe, presents a 55-minute show during the Club's Luau June 26. Spinning Wheel playing for dancing and an outstanding Polynesian buffet (including porkers roasted on the patio) are part of the evening's festivities. The new price is \$15 per person. Make reservations before noon June 21.

overnight raft trip on the Chama River, reports Frank Biggs (4231), travel director. "We plan to carpool to Chama and back," Franks says. "The cost is \$100 per person (\$80 for children 16 and under with an adult) and includes the raft trip with four meals.

"Go to Mazatlan Nov. 1-8 or Nov. 8-15 for \$359," Frank continues. "The package includes airfare, seven nights at the luxurious Playa Mazatlan, transfers, hotel taxes and bell tips, departure taxes, and a special two-hour cocktail party.



"Or cruise down the Mexican Pacific coast on the MTS Daphne Oct. 23-30. Prices start at \$789 and include airfare, transfers, port taxes, and a week aboard ship with meals and all the other usual shipboard activities."

Space remains on both train ride trips. Take a one-day excursion June 26 to ride the Cumbres & Toltec or a two-day outing July 10-11 to ride the Silverton-Durango narrow gauge. The first costs \$42 for adults (\$30 children 11 and under) and the second, \$88 for adults (prices for children vary depending on age). Pre-trip meetings for both groups are scheduled June 15 at 7 and 8 p.m. in the El Dorado Room.

Frank has chartered a bus to attend the Gallup Indian Ceremonial Aug. 14. The package includes treats on the bus, the parade, ceremonial dances, exhibit hall, museum, and rodeo. Adults pay \$32, children 11 and under, \$27.

Fly or bus to Las Vegas Sept. 12-15, stay at the Maxim Hotel, and tour Hoover Dam. The price is \$130 by bus, \$185 by air.

See Frank in the lobby tonight between 5 and 7 to talk travel.



"Omigod—a 9.8 on the Richter scale! That can only mean that someone just hit a \$510,000 jackpot in Las Vegas."