

SANDIA LAB NEWS



VOL. 20, NO. 20, OCTOBER 4, 1968

SANDIA LABORATORIES ALBUQUERQUE, NEW MEXICO OPERATED BY SANDIA CORPORATION FOR
LIVERMORE, CALIFORNIA THE U. S. ATOMIC ENERGY COMMISSION

David B. Anthony Named New Ass't Manager AEC-ALO



David B. Anthony of the Atomic Energy Commission's Headquarters in Washington, D.C., has been appointed Assistant Manager for Operations at the AEC's Albuquerque Operations Office.

Mr. Anthony, who is expected to assume his new duties early in November, has been Assistant Director of the AEC's Division of Military Application in Washington since 1966. He will succeed W. Lee Hancock, who recently joined Sandia Laboratories as Director of Security 3500.

Within the ALO organizations, the Divisions of Weapons Production, Quality Assurance, Non-weapons Activities, and Operational Safety report to the Assistant Manager for Operations.

In his previous position, Mr. Anthony assisted in the development of programs and plans, and in the management of AEC's research, development, testing and production activities for nuclear weapons.

Mr. Anthony joined the AEC in January 1952 in the Division of Military Application and has served as Program Analyst; Chief, Budget Section; and Chief, Budget and Financial Administrative Branch. From January 1962 to June 1966, he was Assistant Director for Program Analysis and Budget, DMA. In that position, he assisted in supervising, coordinating and directing the budget, fiscal and

reporting practices and procedures in the weapons program.

Before joining the AEC, Mr. Anthony was employed with the Office of the Surgeon General, Department of the Army, and the Veterans Administration in Houston and Dallas, Texas. From 1943 to 1946, he served in the U.S. Army and U.S. Air Force, performing statistical duties and serving as a navigation instructor.

He received a BBA degree from Sam Houston State College in 1938.

Sandia Papers at Nuclear Metallurgy Symposium

Several Sandians participated in the Nuclear Metallurgy Symposium on Materials for Radioisotope Heat Sources, held in Gatlinburg, Tenn., Oct. 2-4. The meeting was sponsored by AIME and hosted by Oak Ridge National Laboratory.

Chairman for the session on environmental effects was A. J. Clark, manager of Space Isotope Power Department 9520. Papers presented during this session included: "Effect of Launch-Pad Accident Environments" by S. L. Jeffers and F. D. Kite (both 9512); "Effects of Earth Burial of Radioisotope Heat Sources" by S. L. Jeffers and F. L. Baker (both 9512); "Effects of the Reentry Environment on Radioisotope Heat Sources" by Samuel McAlees, Jr. (9513); and "Impact Effects on Radioisotope Capsules" by R. P. Stromberg (1212).

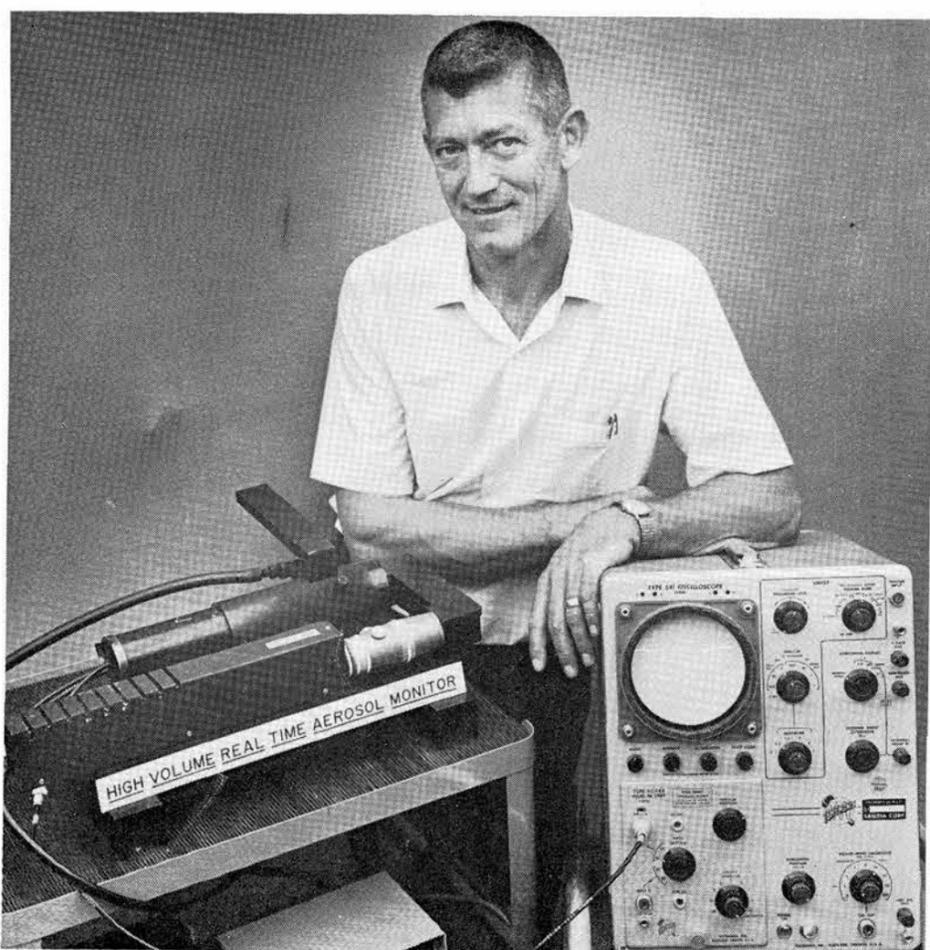
J. R. Holland (5272) presented his paper, "Requirements of Capsule Materials," during the session on materials and processes of encapsulation.



ECP KICKOFF SPEAKERS—Lloyd L. Leger (center), 1968 United Community Fund campaign chairman and vice president and general manager, Mountain States Telephone, Albuquerque, was featured speaker at the kickoff meeting last week of Sandia Employees Contribution Plan drive coordinators and department representatives. President Hornbeck (left) complimented employees on past support of the ECP and urged continuing full support. At right, Hank Willis (3130), ECP committee chairman, discusses progress of the current drive.

Clean Room Technology

Ultra-Sensitive Particle Monitor Invented Here



MONITOR shown by inventor Bill Neitzel (2564) detects extremely small particles in clean room environments.

A high-volume, real-time aerosol monitor invented by W. E. (Bill) Neitzel of Process Application Division 5414 is the latest in a series of contamination control devices developed by Sandia Laboratories.

The monitor — the subject of an AEC patent application — joins a family of ultra-sensitive contamination detectors developed to keep pace with the extremely clean environments made possible by the laminar air flow clean room designed at Sandia earlier in this decade.

The new device samples clean air at 10 cubic feet a minute — 100 times faster than any commercially available unit — and provides the fast-reaction monitoring capability needed for studying and controlling contamination under actual working conditions (also known as real-time capability). It will be used in laminar air flow clean rooms, where particle concentration may be less than 100 particles — larger than 0.5 micron in size — per cubic foot. (There are 25,400 microns to the inch.)

Particle detection instrumentation is contained within a cylinder 15 inches long and 4 7/8 inches in diameter. Sample air is drawn through a laser beam which shines through clean air with no effect and is absorbed in a light trap. If particles are present in the airflow, however, they scatter the laser light, causing it to strike the face of a photosensitive tube. The tube then produces an electrical pulse directly proportional to the size of the particle encountered.

The laser light was selected for its uniform intensity and to permit use of a phototube which — because it "sees" only the specific wavelength of the laser — is virtually immune to background light which may leak inadvertently through the monitor casing.

"The sensitivity of the monitor when

matched with low-noise electronic circuitry should be fantastic," says Bill. "For the first time we may be able to detect and count particles smaller than three-tenths of a micron."

Electronic circuitry provides three types of readout — a digital counter, a digital recorder and an audio indicator. The device may be set to detect particles ranging in size from 0.3 microns to one micron as a total, or in any size group within this range in increments of 0.1 micron.

A probe attached to the monitor by flexible tubing allows immediate checking of small areas within the work location for sources or concentrations of airborne contamination.

Three other kinds of contamination monitors — each designed for use under different conditions — have been developed at Sandia in recent years:

1. A particle counter attachment (also invented by Bill Neitzel) which greatly improves the accuracy of high-density airborne contamination measurement. By diluting the sample with clean air from a filtered intake by up to one thousand times, the counter is able to measure concentrations up to one billion particles per cubic foot. Hence, the same equipment used inside a clean room can be used for monitoring dust concentrations in air pollution studies.

2. A vacuum probe sampler designed for assaying microbial contamination on surfaces, developed by Virgil L. Dugan, now on leave from Planetary Quarantine Support Division 1742. The hand-held device dislodges contaminants with the aid of ultrasonic energy and deposits them on a filter pad for culture.

3. A cleanliness test meter — developed by R. C. Marsh, formerly of Process Applications Division 5414 — which detects

(Continued on Page Two)

Editorial Comment

Democracy Is Expensive

The price tag on the American presidential election has gone from \$140 million in 1952 to \$200 million in 1964.

1968 will easily top that.

How is all that money raised? The full answer to that question is not entirely clear. But studies show that the proportion of campaign finances contributed by private citizens is usually less than 10 percent of the cost of the campaign.

That is one of the weaknesses in the way Americans elect their President. Large contributions from comparatively few sources make up the bulk of the political campaign chest. Most experts feel that this is a dangerous way to leave the situation. Money means leverage. Those who pay something expect to have a say in how it is run, and the bigger the check, the bigger the say.

Americans have a horror of corruption. But they also know that where there is money and power there is going to be some corruption. There have been too many well-documented cases to deny it.

Dunning for campaign contributions used to be a common practice. But wringing of money from government contractors and job holders is no longer so prevalent.

It is generally agreed that the incidence of corrupt practices connected with political money is declining and will continue to do so as more and more attention is focused on the financing of increasing campaign costs. But it is a knotty problem, involving a lot of money, and will take time to solve.

While debate on solutions goes on in Congress and in the universities, each of us can do something to decrease the proportion of campaign financing that comes from rich men and big institutions.

American government belongs to the people. The American people should pay for it. Just getting a presidential candidate through the primaries and into the general elections costs millions. A candidate's stand on the issues may never be heard by the nation at large because he can't afford to wage an effective primary campaign. So it isn't enough for the American people to vote in the primary and general elections. If we want our candidate to be seen and heard, we have to help him pay the costs.

We get the government we deserve. If every voter gave \$5 toward campaign expenses of his party, then his candidates would be free of political debt. In this way the voter would make a meaningful contribution to keeping American democracy alive and flourishing.

Events Calendar

- Oct. 4—Saint's Day celebration, Nambé Pueblo.
- Oct. 5-6—Wheeler Peak, New Mexico's highest point. N.M. Mountain Club, leader Gerry Hittinger, tel. 255-1565.
- Oct. 7—Theatre Royal Windsor presents comedy "The Beaux Strategem," UNM Popejoy Hall.
- Oct. 9—Albuquerque Symphony Orchestra, Maurice Bonney conducting. UNM Popejoy Hall.
- Oct. 12-13—Bernardo and La Joya State Bird Refuges near Bosque and the Bosque del Apache National Wildlife Refuge. N.M. Mountain Club, leader John Tyson, tel. 256-6200.
- Oct. 13—Corrales Casa Tour, 10 a.m. - 4 p.m., buses originate at Territorial House. Benefit for the Corrales Community Library.

On Sandia Base Retreat Is Observed Daily

Every evening at 5:30 p.m. the American flag is honored in a military retreat ceremony staged at the parade grounds on Sandia Base. The flag lowering ceremony gives Sandians as well as military personnel an opportunity to pay respect to the flag.

The ceremony starts with the playing of "Retreat," on the last note of which a gun is fired and "To the Colors" is played. As "To the Colors" music comes over the loud speakers on the parade grounds and at other locations on the Base, the flag is gently lowered so that it can be caught by one of the Military Police color guards on the last note of music.

Civilian personnel on Sandia Base, who are outside a building and within sight of the national colors on the Base flagpole or within hearing distance of the retreat ceremony music, may render the proper respect by facing the flag or music, standing at attention, and placing the right hand over the heart during the playing of "To the Colors," a civilian attired man wearing a hat should hold it over his heart with his right hand. These positions should be maintained until the last note of music.

If in a car you should stop the vehicle, get out, and render the courtesy. In the case of buses, the vehicle should be stopped and one person should get off to render the courtesy while the remaining passengers sit at attention.

Congratulations

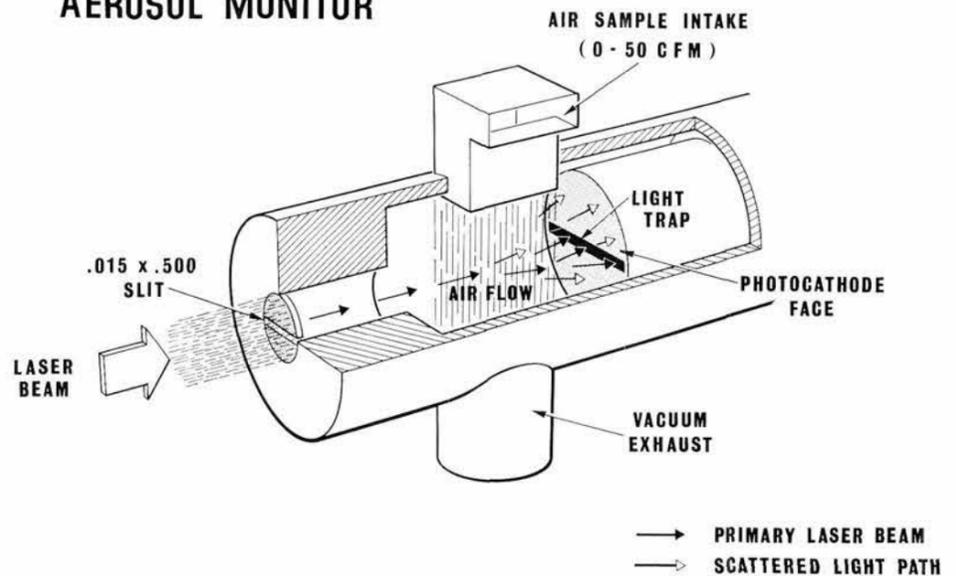
Mr. and Mrs. Ken Ludwick (3415-2) a daughter, Michele, Sept. 14.

Sympathy

To J. M. Luna (2355) for the death of his mother on Sept. 24.

To W. A. Bailey (7233) for the death of his mother Sept. 5 in Cincinnati.

REAL-TIME AEROSOL MONITOR



RAY OF LIGHT from laser beam (left) intersects air flow. Particles in air flow cause light beam to scatter; using photosensitive tube (right), particle size is measured by magnitude of electrical pulse produced by tube.

Continued from Page One

New Clean Room Monitor

and continuously measures contamination levels by measuring evaporation rates with a light scattering photometer. In a volatile cleaning solvent such as Freon, the device will measure contamination levels as low as one part per million.

Additionally, a prototype model of a high volume particle counter was built by a commercial manufacturer (Royco) in 1966 in response to a request from Sandia. The design — which included two major innovations proposed by Division 5414 personnel — involved modifications which increased the sampling rate of existing hardware to one cubic foot per minute and also increased the range of particle sizes which could be detected. This counter remained the most advanced detector until development of the real-time aerosol monitor at Sandia.

The new monitoring devices reflect the worldwide surge of interest which followed Sandia's development of the laminar air flow clean room in 1961. The concept — patented by the AEC in the name of inventor Willis J. Whitfield of Planetary Quarantine Systems Support Division 1742 — has been adapted for such diverse applications as surgical operating rooms, electronic assembly areas, pharmaceutical manufacturing laboratories, and spacecraft assembly facilities.

A high volume, low-velocity of filtered air of a predetermined temperature and

humidity is the chief feature of the laminar flow clean room. The concept has been applied to commercial products now being marketed by more than 40 manufacturers in several countries. In use, the clean air sweeps over everything in its path in a uniform stream, carrying dust, bacteria, scurf and other contaminants directly into an exhaust system.

One of the most dramatic areas for development of the laminar air flow principle appears to be in the field of medicine. After studying its medical use for the National Cancer Institute, Dr. George S. Michaelson, director of the University of Minnesota Division of Environmental Health and Safety, said that "under proper circumstances, laminar air flow can be a fantastic biological barrier."

Today, in addition to general surgery, the laminar air flow principle is being considered for use in the treatment of leukemia patients, in the care of prematurely born babies, as a means of reducing the danger of infection in severely burned patients, and in many other medical applications.

PAGE TWO

SANDIA LAB NEWS

OCTOBER 4, 1968

Photographs by Wayne Graving Receiving National Recognition

A selection of photographs by Wayne Graving (3454) is currently on display at George Eastman House in Rochester, N.Y. George Eastman House, maintained by Eastman Kodak Company, is an international photographic museum and a showcase for the work of contemporary photographers.

Wayne has had a number of exhibits locally and is gaining a national reputation for his work, primarily landscape photography in the manner of Minor White, Ansel Adams and Edward Weston. Wayne's work is in the permanent collection of the Museum of Modern Art in New York City.

George Eastman House had previously purchased a portfolio of his work to become part of the permanent library. The current exhibit will be there through October. In December, another selection of photographs by Wayne will be included in a "Photography '68" exhibit at the Rochester museum. This exhibit will also be published.

In February, Wayne will display a selection of 35 prints at the Friends of Photography Gallery in Carmel, Calif.

Wayne has worked in still and motion picture divisions at Sandia Laboratories since 1958. He is currently working on a fine arts degree at the University of New Mexico.



WAYNE GRAVING (3464) displays a duplicate of one of his photographs now on display in George Eastman House in Rochester, N. Y. Other photographs by Wayne have been acquired by the Museum of Modern Art in New York City.

SANDIA LAB NEWS



SANDIA LABORATORIES
ALBUQUERQUE, NEW MEXICO
LIVERMORE, CALIFORNIA

Operated for the United States Atomic
Energy Commission by Sandia Corporation

Editorial Offices, Albuquerque, New Mexico
Employee Publications, Rm. 112, Bldg. 800,
Tel: 264-1053

Editor: John Shunny
Staff: Cherry Lou Burns, Harvey Frauenglass,
Donald E. Graham, Bill Laskar,
Norma Taylor

Public Information, Livermore, California
Rm. 138, Bldg. 912, Tel: 447-2387

William A. Jamieson, supervisor
Staff: Matthew J. Connors, Lorena Schneider

Permission to reprint material herein for other
than governmental use may be obtained from
the Editor, Sandia Lab News.

Sandian Cruises Remote West Indies Islands Aboard Windjammer

"For anyone looking for real adventure, I'd highly recommend a windjammer cruise," says Barbara Piper (8233) who recently returned from a "barefoot" vacation in the West Indies aboard a 150-foot schooner.

"And you don't particularly have to be a sailor — just love the outdoors, good food, meeting others in an informal and relaxed setting, and visiting out-of-the-way ports," she comments.

"I found sailing in the waters off the Leeward West Indies to be near perfect," she continued. "There are no heavy swells and no big waves. Even when it's cloudy the warm water is a beautiful vivid blue, and when the sun comes out it is crystal clear. The tradewinds in these islands are always blowing; they don't change as the winds do in San Francisco Bay. Most of the shipping between the islands is carried on under sail because the winds are so dependable."

Barbara traveled with only one suitcase and a minimum of clothing. "I took two dresses; one I wore on the flight to San Juan, Puerto Rico, the other on my return flight."

In addition, her wardrobe consisted of a pair of sandals and two pairs of tennis shoes, bermuda shorts and tops, wind-breaker, a sweater, and a bathing suit. "I carried my bathing suit in my purse on the airplane, figuring that if my luggage was lost, I'd still be able to have a good time," she recalls.

Barbara says the West Indies are lush and mountainous, much as you think of



BARBARA PIPER (8233) charts the route and ports of call of her recent cruise through the West Indies.

the South Seas. "In spite of the fact that the islands are under three different flags — Dutch, French, and British — there was no language barrier," she notes. "The only time we exchanged currency was when we mailed post cards; otherwise, we could use our own money — in fact, the natives seemed to prefer the American dollar.

"The islands we visited were sparsely inhabited. Usually the harbor town population consisted of about 1000 inhabitants, and the town was also the capital of the island. We didn't meet tourists, so we got to see how the natives really live. Their world is completely different from ours — they make a livelihood by fishing and live in homes that we might consider to be shacks. But, since there is no cold weather, all they need is protection from the sun or the rain. The natives are unaccustomed to seeing visitors and it's still a big thing when a ship arrives. They are most friendly and always arrange special entertainment and parties.

"The beaches are unspoiled by civilization, and the only things you find are old anchors and parts of shipwrecks, rusting along the shores.

Barbara and her 39 shipmates, plus a crew of 18, sailed out of St. John's harbor on the island of Antigua. "During the 14-hour sail to St. Bartheleme, or St. Barts as it is called, we struggled for two or three hours through a hurricane," she recalls. "We had just hoisted the fifth sail when it hit. This was the most exciting part of the first day because I had never, in my five years of sailing, been in an actual storm — and everyone aboard was 'over the rail'."

The next port of call, Anguilla, was her

favorite. It was the least inhabited and most remote island. "There was a small beach settlement here and only a single place to spend money," she says. "In addition to the usual fishing fleets, salt is extracted from ocean water and processed for export. The natives seemed even more friendly than on the other islands, perhaps because there were so few of them."

At Montserrat, owned by the British but colonized by the Irish, they found a real garden spot. "On this island, we had fresh native fruits such as mangoes, breadfruit, coconuts, and bananas," Barbara recalls.

"But the island of Guadeloupe turned out to be a disappointment. Our ship landed at a port of about 10,000 population, more people than we had seen since leaving Puerto Rico. Here we encountered slums and poverty, and I became disenchanted with Guadeloupe.

"On each of the seven islands we visited, the bay was usually surrounded by hills on which forts had been built, to protect the harbor from invaders in by-gone days," she continued. "We spent a lot of time wandering through these old forts. At Isles Des Saints, we found the best preserved of them all. Here we also found the natives to be very shy, much more so than on any of the other islands.

"Our last sail was a return trip to Antigua," says Barbara. "We landed at English Harbor — around the island from St. Johns, our starting point. English Harbor was once the headquarters for Admiral Nelson's famous fleet and is now a gathering place for hundreds of charter yachts and their crews."

She feels that one of the great things about the cruise was that you could do as little or as much as you liked. "Most of us usually helped in hoisting the sails—the ship had a 130-foot mast with eight sails. I even put in some time at the helm, and discovered that steering 150 feet of steel is a lot different from 26 feet of fiberglass. I also learned to use a compass for navigation since there was no land in sight. The captain offered classes for those interested in knot tying, structure of sails, navigation, etc., and was most helpful in explaining sailing and ship operations," she says.



BARBARA PIPER (8233) musters in uniform-of-the-day during her cruise through the leeward West Indies on a 150-foot windjammer.

LIVERMORE NEWS

VOL. 20, NO. 20

SANDIA LAB NEWS

OCTOBER 4, 1968

Chabot College Lecture Series Includes Three Programs in Livermore

Twelve speakers of national and international fame will be featured during the 1968-69 Chabot College Lecture Series, presented each year as a community service.

This year, for the first time, three of the lecturers will speak in Livermore. They include: William Stringer, columnist and editorial writer of the CHRISTIAN SCIENCE MONITOR who has covered many presidential elections, "A Post Election Analysis," Jan. 6; Dr. Albert Hibbs, senior staff scientist at NASA's Jet Propulsion Laboratory, host of the award-winning television program "Exploring," and science editor for the National Broadcasting Company, "Life on Other Planets," Feb. 6; and Senator Frank Church of Idaho, a member of the Senate Foreign Relations Committee for nine years and chairman of the Subcommittee on International Organization Affairs, Feb. 19, "Needed: A New Foreign Policy for the U.S."

These lectures are scheduled for 8 p.m. in the Livermore High School Auditorium.

The other nine will be held in the College-Community Auditorium in Hayward. Speakers include Harry Reasoner, roving correspondent for CBS News, Oct. 5; the ABC News Correspondents Team, Dec. 9; Robert Hill, Canadian economist, Jan. 23; Al Capp, creator of "Lil Abner," March 6; Dr. Glyn Daniel, world-famed archeologist, March 23; Ambassador Hans Tabor, Denmark's permanent representative to the United Nations, April 8; Andy Warhol, underground film maker and leader in the field of pop art, April 28; David Jordan, chairman of the British Committee for the Interchange of Teachers between Britain and the U.S., May 8; and, Dr. Joyce Brothers, psychologist, author, columnist and radio-TV personality, May 22.

Season ticket books for all 12 lectures are \$7.50 each. Admission to single programs is \$1 per person.

Supervisory Appointment



DONALD C. STONER to supervisor of Components and Instrumentation Section 8183-1, effective Sept. 1.

Don joined Sandia Laboratories Livermore in December 1959 as a technician in the calibration laboratory. A year later he transferred to the telemetry organization where for the past seven years he has worked on various telemetry programs and has helped develop and install ground station equipment.

From 1953-57 he served with the U.S. Air Force as a ground radio mechanic. For one year of his military service he was stationed in Iceland.

Don received his AA degree in electronics technology from Oregon Technical Institute in 1959.

Take Note

Jack Wilson, supervisor of Calibration, Standards and Repair Section 8333-1, presented a technical paper, "From Measurement to Metrology in Industry," at the 1968 Western Metal and Tool Exposition held at San Francisco's Civic Auditorium and Brooks Hall, Sept. 24-26. The exposition was co-sponsored by the American Society of Tool and Manufacturing Engineers (ASTME) and the American Society for Metals (ASM).

Don Skinrod, Jr. (son of Don Skinrod, 8151) shot a low net score of 67 to win the first place trophy in the Sandia Employees Golf Club tournament on Aug. 31. The straight handicap tourney was played at the Skywest Golf Course in Hayward.

In the "best ball twosome" feature, Hesa Yano and Doug Dahl (both 8252) finished in first place and R. E. (Smokey) Maxwell (8243) and Bill Chapin (8168) placed second.

Dennis Rathbun (8151) and former Sandian Hartley J. Jensen were co-authors of an article appearing the September 1968 issue of SPECTRUM, a publication of the Institute of Electrical and Electronics Engineers (IEEE). Title of the paper was "Nuclear Test Instrumentation with Superconductive Cables."

Welcome . . . Newcomers

Aug. 26 - Sept. 25

California	
Dorene M. Allen, Stockton	8242
Karen E. Brown, Livermore	8242
David R. Fielder, Livermore	8311
*Chester M. Hamlin, Livermore	8252
Albert James, Livermore	8242
Pauline A. Kirk, Livermore	8242
Craig J. Mueller, Livermore	8242
David L. White, Livermore	8242
Colorado	
Robert W. Krenzer, Denver	8311
Illinois	
Vernon L. Bailey, Jr., Chicago	8334
Richard I. Brown, Chicago	8151
Indiana	
*Jerome N. Deverman, Lafayette	8324
Lawrence M. Murphy, Notre Dame	8314
Massachusetts	
Charles F. Hottinger, Boston	8182
New Mexico	
*Patricia A. Childers, Albuquerque	8242
Utah	
James L. Keller, Provo	8314
Returned from Leave	
Kenneth D. Marx, Livermore	8334
*Denotes Rehire	

Congratulations

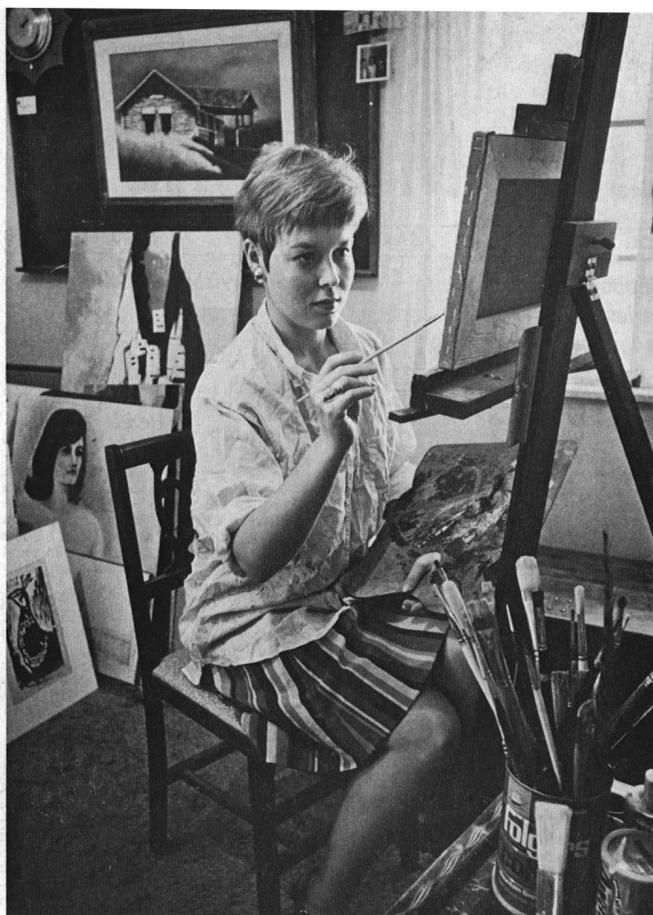
Mr. and Mrs. Al Baker (8154), twin daughters, Kendall Lynn and Deborah Ann, Sept. 1.

Mr. and Mrs. Charles DeCarli (8139), a daughter, Lynette Marie, Aug. 30.

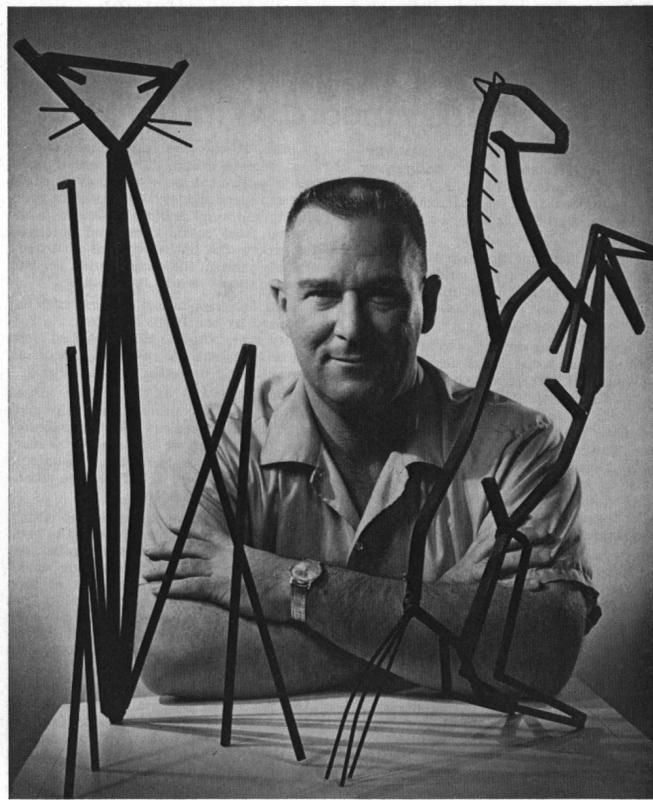
Mr. and Mrs. Bob Schultz (8124), a son, Robert Henry, Jr., Sept. 2.

Mr. and Mrs. Clyde Seibel (8252-3) twins, a girl Shelly Lyn, and a boy, Kelly Allen, Sept. 18.

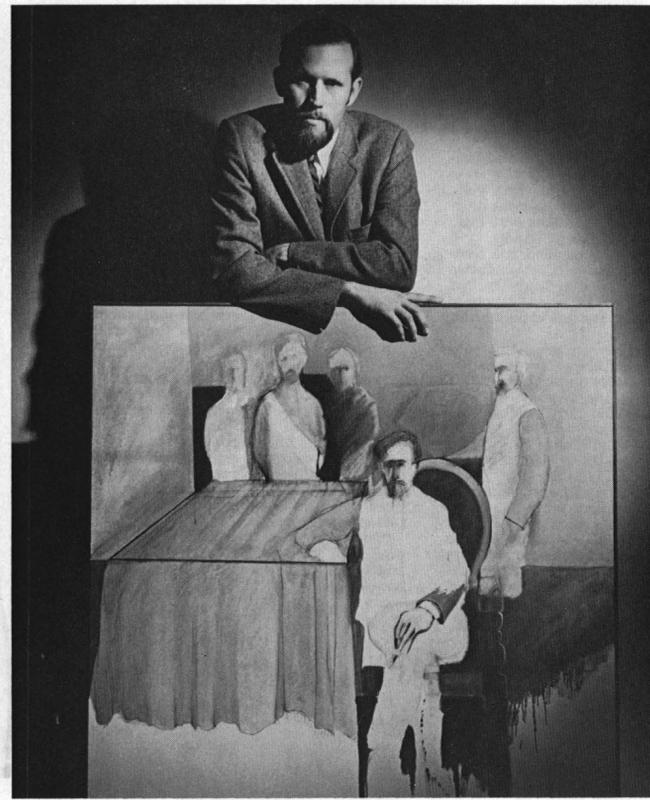
Mr. and Mrs. David Van Houten (8245-2), a son, Rodney David, Aug. 29.



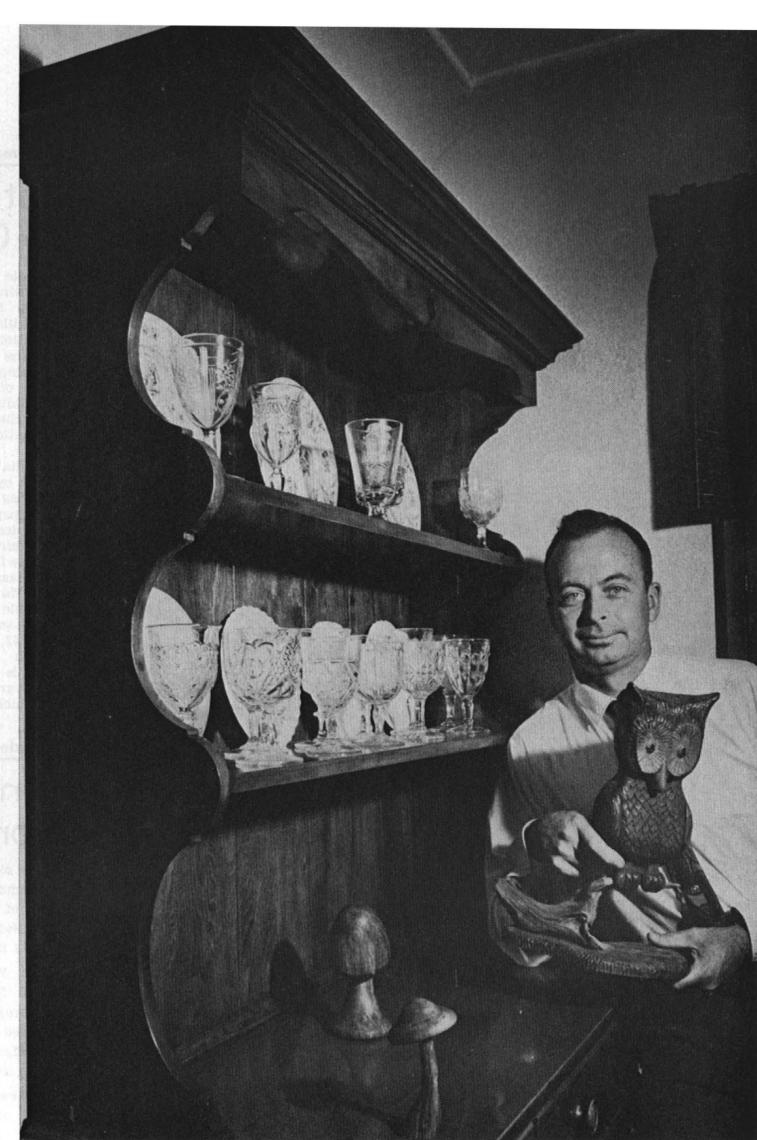
Gaye Romesberg (3413) — painter



Granville R. Mullin (7612) — metal sculptor



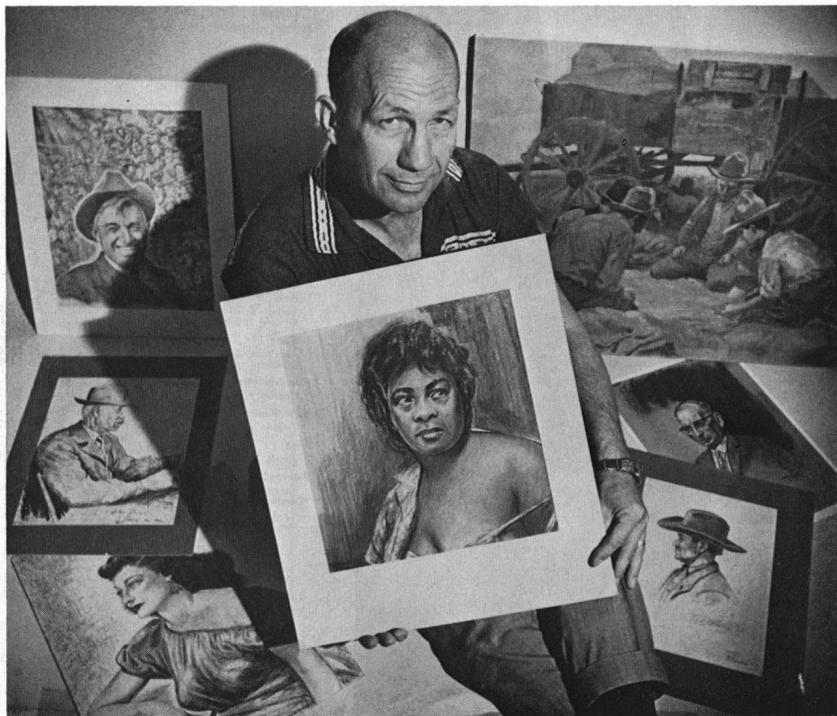
Kenneth R. Miller (3463) — painter



Robert M. Jefferson (9141) — wood carver and furniture maker

Sandia Artists and Craftsmen

The Medium Is Their Message



Terrence M. Clark (3463) — painter



Kenneth E. Pilkington (9124) — wood sculptor



Tudor Marks (3463) — painter



Felix Padilla (4516) — painter



SUE GUM (3251) was strolling through the Tech Area when this happened. The sprinkler head is observing National Fire Prevention Week, October 7-11.

Speakers

A. J. Clark (9520), "The Method of AEC Contracting with Industry," American Management Association course on Fundamentals of Program and Project Management, Sept. 10, New York City.

R. G. Kepler (5113), "On the Origin of Low Quantum Yields for Photoconductivity in Anthracene," International Conference on Electrophotography, Sept. 4-6, Rochester, N.Y.

R. P. Clark (2343), R. Blucher and H. Goldsmith (both of Catalyst Research Corporation), "Phase Diagram and Electrical Conductivity of the System LiCl-KCl-CaCrO_4 ," American Chemical Society meeting, Sept. 9-14, Atlantic City, N.J.

D. C. Wallace (5151), "Pseudopotential Calculation of Thermal Expansion of Simple Metals," Symposium on Thermal Expansion of Solids, Sept. 18-20, Gaithersburg, Md.

A. R. Kennedy (7611-5), "Preprogrammed APT, Another Approach to Programming," Fall APT Technical Meeting, Sept. 18, Chicago.

J. R. Freeman (5241), and F. O. Lane (5242), "Initial Results from a Two-Dimensional Lax-Wendroff Hydromagnetic Code," Plasma Simulation Conference, Sept. 18-20, Los Alamos.

P. D. Wilcox and C. A. Hall (both 2317), "Dielectric Properties of Relaxator-like Ceramics in the $(\text{Pb,Ba})(\text{Zr,Ti})\text{O}_3$," Fall Joint Meeting of the Basic Science and Electronics Divisions of the American Ceramic Society, Sept. 17-20, St. Paul, Minn.

Albert Goodman (1224), "Some Things That the Future May Bring," First Unitarian Church, Sept. 1.

R. S. Claassen (2600), "Research at Sandia," Albuquerque Breakfast Lions Club, Sept. 5.

N. C. Anderholm (1224), "Lasers—A Step Forward," American Society of Certified Engineering Technicians, Sept. 9.

O. L. Wright (4610), "History of Sandia Base," Sunrise Optimist Club, Sept. 10.

C. S. Johnson (7271), "Where Has Justice Gone?" Sandia Optimist Club, Sept. 19.

A. W. Mullendore (5422), "The Scanning Electron Microscope and Its Applications," New Mexico Section of the Ameri-

can Ceramic Society, Sept. 24, Albuquerque.

R. W. Holland (5242) and E. P. Eer-Nisse (5112), "Accurate Method for Measuring Piezoelectric Coefficients," 1968 IEEE Ultrasonics Symposium, Sept. 25-27, New York City.

F. P. Hudson (5233), "Some Characteristics of the Recovery of the Upper Atmosphere from Very High Levels of Excess Ionization"; L. B. Smith (5235), "Density and Temperature Measurements to 110 km Over Kauai, Hawaii," Third Aeronomy Conference, Sept. 23-26, Urbana, Ill.

W. D. Jones (2642), "Defect Prevention through Scientific Management," American Society of Tooling and Manufacturing Engineers, Sept. 25, San Francisco.

R. G. Webster and A. D. Swain (both 1642), "Retrieval, Reduction, and Analysis of Human Factors Data in Large Scale Field Tests," Human Factors Testing Conference, Oct. 1-2, Wright-Patterson AFB, Ohio.

D. R. Parker (3311), "Sandia Laboratory Laser Safety Standards," Rocky Mountain Chapter of the American Industrial Hygiene Association's annual meeting, Sept. 27, Denver.

T. G. Priddy (1541), "Stability of Hydrostatically Loaded Orthotropic Ogival Shells of Revolution," Petroleum Mechanical Engineering Conference, Sept. 22-25, Dallas.

R. H. Croll, Jr. (9322), "Computer Controlled Data Acquisition and Control System"; K. L. Goin (9322), "Status of Sandia Laboratories' High Energy Test Facilities," 30th Supersonic Tunnel Association meeting, Oct. 2-4, Columbus, Ohio.

W. B. Pepper (9324), "Development of a Composite Structure Hypersonic Parachute"; W. B. Pepper (9324) and R. D. Fellerhoff (9323), "Parachute System to Recover Spinning (250 rps) 155 mm Shell Subjected to 20,000 g's Launch Conditions"; I. T. Holt (on leave of absence), "Design and Development of a Heavy Duty 76 ft. Ribbon Parachute" (presented by W. R. Barton, 9324); D. W. Johnson (9324), "Evolution of the Recovery System for High Altitude Sounding Rockets," AIAA Second Aerodynamic Deceleration Systems Conference, Sept. 23-25, El Centro, Calif.

Inflammatory Program?

National Fire Prevention Week Will Be Observed at Sandia Oct. 7-11

Sandia Laboratories will join organizations throughout the nation Oct. 7-11 to observe National Fire Prevention Week. Fire drills, fire protection equipment demonstrations, displays and films will highlight the week's activities at Sandia.

A demonstration of equipment and techniques of fire fighting will be conducted for building fire captains on Thursday, Oct. 10. Included will be a demonstration of automatic sprinkler systems extinguishing fires.

Sandia's Fire Prevention program is conducted by Field and Plant Operations Engineering Division 4544 under Ward Hunnicutt. Inspectors of the division will conduct demonstrations and building fire drills during the week.

Three fire prevention films—"Know Your Fire Hazards," "It's Up to You, Charley," and "Have a Wonderful Evening"—are available to be shown during organizational safety meetings. Call Ray Cohrs, 264-2863, to arrange a showing.

Each year, National Fire Prevention Week is observed during the anniversary of the great Chicago fire of 1871, a disaster which took 250 lives, destroyed 17,400

buildings and cost \$168,000,000.

Statistics show that fires in the United States daily claim an average of 33 lives; fires occur in 1327 homes, 20 schools, 13 hospitals and nursing homes, 130 stores, 123 industrial plants and nine churches.

The annual average of lives lost to fire is 12,200. About 6500 of these casualties result from dwelling fires.

Some 2100 children die in home fires each year. One of every three of these young victims is alone when the fire starts.

Smoking and matches are the number one cause of building fires.

"Fire prevention is everybody's business," Ward Hunnicutt says. "The statistics show that a home in your general neighborhood will be involved in a fire this year. It could be yours and it could be fatal.

"We know that fires can happen at Sandia in spite of our program of fire prevention. A truly successful fire prevention program can only be achieved through the effort of each employee.

"Purpose of Fire Prevention Week is to urge each employee to make this effort and to point out actual and potential fire hazards."

Awarded 'Best of Show'

Sandia Technical Artists Win Honors in National Competition

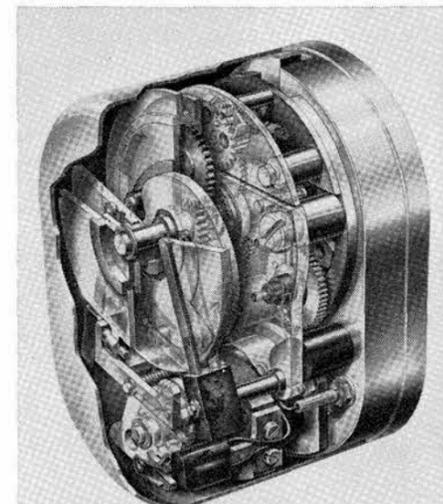
The work of Ray Chavez and Leo Ortiz of Technical Art Division 3463 was judged "best of show" in a recent competition of the National Association of Industrial Artists in Washington, D.C.

Jim Walston received a second place award for 35mm slide projection art in the projectuals category and Judy Elder received an honorable mention in the poster design competition.

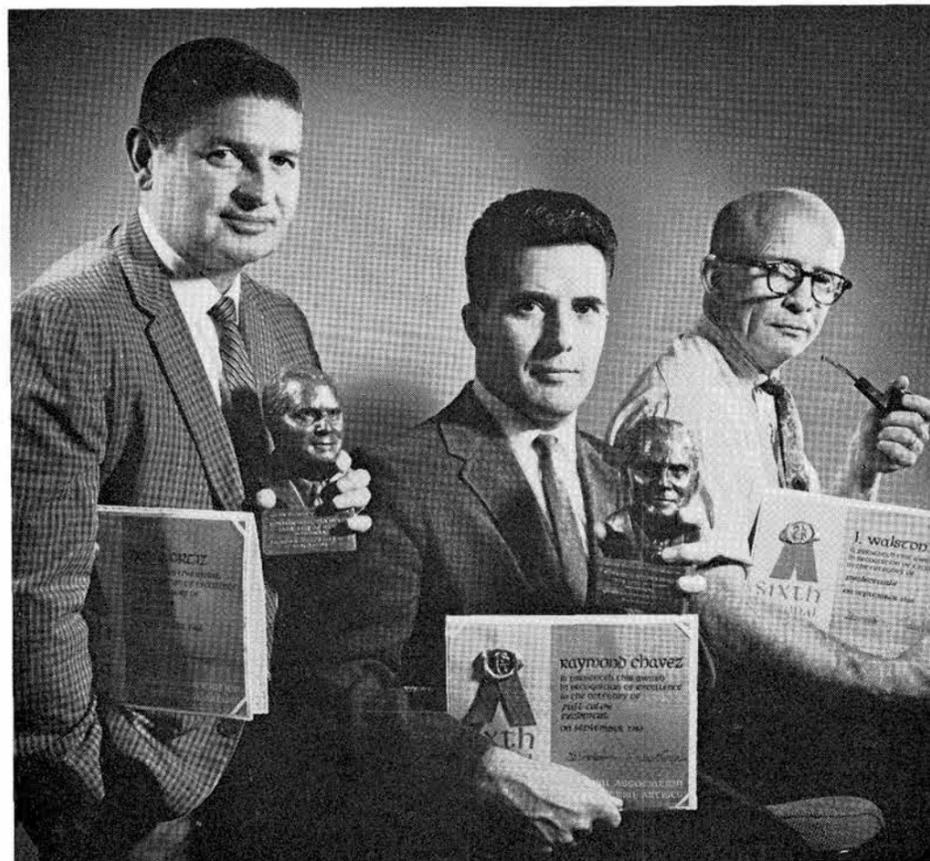
The "best of show" work was awarded the Newman Bumstead Award — named after one of the nation's outstanding graphic artists.

The work honored was a full color cut-away drawing in which "phantom" technique permits the viewer to "see-through" an interval timer. (See illustration.)

The work of the Sandians was displayed in the Pentagon last month and is now part of a traveling exhibit in major Eastern cities.



INTERVAL TIMER drawn in full color using "phantom" technique was judged "best of show" in a recent national competition. Ray Chavez and Leo Ortiz (both 3463) were the artists.



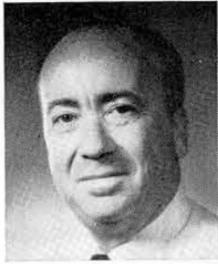
SANDIA TECHNICAL ARTISTS won honors in a recent exhibit sponsored by the National Association of Industrial Artists in Washington, D.C. From left, Leo Ortiz and Ray Chavez, were awarded the Newman Bumstead Award for "best of show." Jim Walston (right) won a second place award for 35mm slide projection art and Judy Elder (not shown) earned an honorable mention for poster design.

Service Awards

20 Years



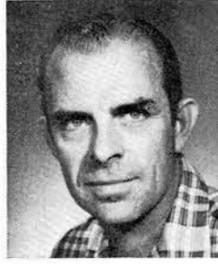
Frederic Alexander
3434



T. A. Allen
4221



R. B. Barwick
4118



R. E. Bohannon
7344



T. J. Chavez
4623



W. T. Dobbins
4231



E. E. George, Jr.
2444



R. J. Gonzales
4614



R. J. Gorney
4254



M. E. Grothe
4150



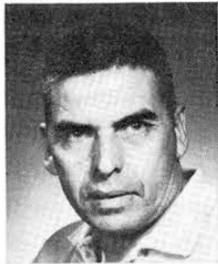
E. P. Gurule
4614



P. J. Langdon
2342



Max Lopez
4575



E. R. Martinez
4623



P. F. Meijs
2442



A. P. Montoya
2342



P. C. Montoya
1524



I. M. Moore
1610



H. J. Plagge, Jr.
7221



R. E. Reed
1651



R. B. Yoder
6021

15 Years



Joseph Crompton
9415



J. W. Hahn
4213



W. E. Hall
4622



James Ketner III
7311



H. Anita Poteet
4361



E. A. Ryan
7452



W. J. Shock
1515



Donald Spatz
9521

10 Years

Oct. 4-17

F. R. Krauss 2491, G. J. Williams 2491, Polly P. Horne 4135, Clemente Valencia 4512, P. R. Santiago 4575, Florencio Romero 4614, J. J. Jackson 4622, D. L. Fulton 7324, Alice J. O'Meara 7336, J. E. Vanderpoorten, 8124, A. T. Norwich 8226, H. F. Bacon 8245, Fermin Nieto 4574, A. M. Sorley 7455, H. E. Widdows 9324, P. R. Wilkes, Jr. 9327, J. W. Carroll 4312, T. D. Bewley 4251, E. H. Lopez 4545, R. E. Freeman 8226, M. M. McKinley, Jr. 2351, W. V. Knauth 3112, Kathryn E. Lawson 5422, E. L. Devor 7626, C. H. Johnson 8223, H. L. Reis 8223, Sarah E. Sparger 8232, and Elaine A. Brint 8161.

High Interest in FORTRAN Language

About 500 persons at Sandia know and use FORTRAN, which probably ranks it just after English and Spanish in languages used at the Laboratories.

Its importance in the computer field was underscored in 1966 when FORTRAN became the first programming language to be standardized in the United States; international standards are currently being developed.

At Sandia, both in-hours and out-of-hours courses in use of this computer language have been offered. It is needed primarily by programmers working with computers of great complexity or having a high number of memory elements.

The ninth meeting of the USA Standards Institute subcommittee X3.4.3B was held at the Coronado Club last month. The host member on the subcommittee was C. B. Bailey (9422) and observers included N. A. Smith (9427) and B. K. Tiefa (9421).

Purpose of the subcommittee is to clarify interpretations, determine errors, and identify omissions in the existing USA Standard FORTRAN and Basic FORTRAN specifications.

Mr. Bailey has represented Sandia Laboratories at the meetings since February 1967 and from 1964-66 he represented the Control Data Corporation users organization (COOP), in which Sandia is a member.

Germans Like Film

"Clean Air Is a Breeze," Sandia's film on use of the laminar flow concept for clean rooms, is being translated into German for showing to West German industry.

A German licensee is manufacturing and selling laminar flow clean room equipment in the Common Market. When a copy of the film was shown to the licensee, the Germans were impressed and felt that the film would be of great help to German industry in developing clean room techniques.

Welcome . . . Newcomers

Sept. 16-27

Albuquerque	
Priscilla B. Archibeque	3421
Maria E. Beroldi	3126
Gilbert L. Diewald	7613
Dixie N. Fambrough	3126
Edward Garcia	4574
Diane S. Kopp	3126
Elefio R. Montoya	7613
Elta M. Moore	3126
*Norma W. Richter	3126
Eugene P. Royer	9121
Susan P. Sawyer	3126
*Colletta B. Thomas	3521
Bernardo J. Vigil	7613
Samuel T. Wallace	7453
Gail A. Wille	3126
Iowa	
Nicholas J. Magnani, Ames	5431
Kansas	
Norman D. Wing, Lenora	5111
Ohio	
Charles A. Randall, Athens	5271
Oklahoma	
Bill N. Boatman, Oklahoma City	7613
* Rehire	

SHOPPING CENTER

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 Corporation 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.

FOR SALE

Miscellaneous

COINS, large bills, hanging lamp, hall chair, old rocking chair, sell or trade for old guns, prefer Winchester or old Colts. Zaluga, 344-1564.
BASSINET w/skirt; blond plastic western style couch & rocker. Cockrill, 268-5502.
AM-FM-STEREO-TV console; 2 end tables; 2 ceramic lamps; two candle holders; wall clock; all ebony, all Chinese modern. Morewood, 299-1344.
TIRES, Goodyear, red stripe, wide ovals, D70, E70, 14" rims, 700 miles. Gochmayer, 256-6975.
PARKA, USAF nylon arctic parka w/wolverine fur trimmed hood, warm and rugged, large size \$30; USAF nylon insulated pants, \$7. Mattox, 296-4149.
MULTILITH press offset 1250 model. Garcia, 877-4264.
KENMORE gas range, white, 42", griddle, extra burner, \$90. Martin, 282-3794.
SOFA, 2-pc. Danish modern sectional, incl. 8 foam cushions w/zipped covers, \$35. Browning, 299-6384.
HONDA Super Hawk 305cc, under 3000 miles, 1968, still under warranty, \$525. NiCastro, 265-6814.
HAMMOND spinet organ, model M-3, \$750; women's golf clubs and cart, \$25. Gelwicks, 9000 Zuni SE, 299-3909.
3/8" Skil industrial drill, \$30; Bostick roofer's hammer stapler, \$7.50; blond leatherette ottoman, metal wire base, \$6.50. Johnson, 255-5427.

STRING BASS 3/4 size w/cover and bow, \$225. Ray, 299-1255 after 6 p.m.
24" B&W TV-stereo, reg. \$700, for \$100; modern furniture, mahogany. Mowrer, 255-2063 after 5 p.m.
SEARS 3-speed Spyder, new puncture proof tires, \$25. Frye, 255-8364.
RIFLE, .303 Enfield w/sling and recoil pad, \$25. Quant, 256-9287.
FREE KITTENS, fluffy Persian type, grey and black striped, eight weeks old, ready to take home. Lynes, 268-0144.
SOFA, Shaw 90" traditional, loose pillow back, custom quilted floral print, beige background, \$300. Still, 298-3005.
VIOLIN w/bow & case, \$45. Pardee, 255-1998.
MINIATURE SCHNAUZER, 1 yr. old, all shots, spayed. Martin, 296-3095.
BABY BED, innerspring mattress, full size, natural finish, drop sides, teething rails, \$15. Oglesby, 344-6331.
'65 MARLETTE mobile home, 10x50 w/12x17 expanding living rm. Shoemaker, Bosque Farms, 1-636-2786.
100% wool carpet, approx. 9'x7' w/pad, beige, \$20; 50-yr.-old Gibson guitar, \$75. Young, 255-9022.
MEN'S WATCH, Zodiac 24-hour, 17 jewel w/s-proof luminous second setting, antimagnetic, cost \$74.50, sell \$64.50. Foster, 265-0069.
FEMALE peke-a-poo puppy, \$50. Lawrence, 299-9118.
FRIGIDAIRE range, \$25. Edwards, 268-1544.
TIRE 8.5x14 Goodyear blackwall, used 2000 miles, tubeless, \$15. Erickson, 298-4416.
BICYCLE, boy's 26" needs one new tube, \$8; hamster cage and exercise wheel, \$1.50. Joseph, 299-6989.
FOLDA-ROLA folding stroller, swivel ball-bearing wheels, collapsible handle, \$5. Daut, 255-2529.
FRIGIDAIRE refrigerator, 12 cu. ft. w/separate freezer door, \$125; Wards 13 cu. ft. freezer, \$125; Frigidaire range w/rotisserie, \$60. Zachmann, 299-6871.
TRAVEL TRAILER, 1965 Holliday, 19 ft., self-contained, many extras, \$2295. Jelinek, 242-4224 after 5.
VIOLIN, 3/4 size German make w/case, stand and books. Perfect for beginner. Detorie, 299-1868.
NEW BIFOLD closet doors, louvered, 8 x 6', \$20; swing set, \$5; tricycle, \$5; child's go-cart, \$5. Skinner, 299-8953.

WASHER and dryer, Speed Queen auto., electric, white, w/hoses, \$40 for pair. Leeman, 299-9149.
NATIONAL MATCH .45 automatic, accurized by Cranston, certified 2 inch group at 50 yards, polished blue finish, walnut stocks, \$125. Smaller, 299-8413.
CURTIS MATHIS 3-way combination AM-FM 21" TV console, 30 watt each channel, 2 years old, paid \$565, will take \$250. Ortega, 243-2687.
'67 HARLEY-DAVIDSON M-50 Sport, one owner, \$150; ladies black riding boots, size 7-D, \$15; 3-inch reflector telescope, 160x Barlow lens, \$30. Stathis, 268-4037.
21" B&W TV, \$25. Smith, 299-6873.
MODEL 88 Winchester 308 lever action rifle, padded case, cost \$175, sell \$120; pair of stop watches, cost \$85, sell \$40; solid oak bunk beds, \$45. Cook, 298-1772 after 5.
YAMAHA studio size piano, walnut, used 1/2 years, guarantee. Patrick, 296-1785 after 6.
8" CRAFTSMAN table saw w/motor, stand & table extension, \$60. Bentz, 299-3448.
CHILDRAFT, 15 volumes, sell for half price. Hendrix, 299-8872.
36" GAS RANGE, 4-burner, lg. griddle, lg. oven, electric rotisserie, \$50; 24" girl's bicycle, \$5; 9x9 umbrella tent, all metal frame, \$10. Benson, 268-3586.
CLARINET, Buffet, B-flat, \$60; Hoover upright vacuum cleaner, model #334, \$30. Newman, 299-2729 after 5:30.
SSB CW AM all band 15-tube ham receiver Heathkit Mohawk RX-1, \$135; modified 522 2-meter rig, \$35. Bassett, 898-1840.
STUDENT VIOLIN, E. Reinholdt Schmidt, \$50. Gross, 255-7327.
'57 TRAVEL TRAILER, 15', equalizer hitch, sell separately; half-breed poodle puppies, 6 wks. old, \$5. Workman, 298-8312.
PUREBRED Siamese kittens, blue and frost points, \$10 ea. Randle, Placitas, 1-867-2668.
SIAMESE kittens, sealpoint, CFA registered. Simon, 345-1522 or 299-0703.

Cars and Trucks

'63 RAMBLER 8 pass., 5-dr. STW, 6 cyl., OD. Stake, 255-0610.
'56 CHEVROLET 6 cyl., stick shift, new battery, radio, fine camping car. Schneider, 299-3769.
'62 SIMCA 4-dr., recent engine overhaul, 2 new tires, \$400. Carnahan, 898-2974.
'66 CONTINENTAL 4-dr., leather interior, AC, etc. McVay, 299-3359.

EARLY '55 CHEVROLET pickup, 4-speed, 1959 6-cyl. engine, new brakes, \$325. Hindi, 299-4221.
'63 CORVAIR Monza, convertible, standard shift, red, white top, \$575 or best offer. Rev, 299-6264 after 5:30.
CAR WITH CAMPER, '65 Pontiac Star Chief, AC, PB, PS, camper mounted on top, icebox, sink, \$2495. Rudeau, 256-2380.
'57 PONTIAC station wagon, best offer. Hooker, 298-4313 after 6.
'61 CORVAIR 4-dr., AT, economical back to school car, \$175. Koetter, 268-6428.
'67 PONTIAC Tempest, custom coupe, PS, R, AT, new car warranty, priced below blue book. Dineen, 255-8246.
'66 PLYMOUTH Valiant 100, AC, R&H, clean, \$1200 (below book price). Johnson, 299-5105.
'63 VOLKS sedan, one owner, \$850. Dudley, 298-6955.
'55 1-ton Jeep pickup, 4-wd, warn hubs, \$450 cash. Schoen, 256-7640.
'65 CORVAIR, one owner, 24,000 miles, \$800. Corli, 255-1186.
'66 FORD Falcon, 6 cyl., 2-dr., white w/red upholstery, 3-spd. trans., radio, 21,000 miles, \$1100. Hale, 298-1545.
'66 MERC Monterrey, 4-dr., HT, 390 V8, \$1795. Carlson, 299-9096.
'59 RAMBLER 2-dr., recently overhauled, \$275, see at 11425 Bellamah NE. Hiller, 296-5059.
'65 JEEP Wagoneer, 4wd, original owner, many extras. Appel, 299-3776.
'67 CHEVROLET BelAir V8, 3-seat station wagon, AC, AT, PS, PB, 327 engine, etc., 15,000 miles, \$2400. Hart 299-8832.
'59 FORD F-100 4 x 4, lwb, 700x15 tires, extra gas tank, hubs, custom cab, 292 V-8. Shoemaker, 636-2775.
'64 CADILLAC any offer over wholesale (\$1550) will be considered (retail \$2100). Cooke, 5908 Natalie NE.

Real Estate

4 ACRES with unfinished home and big garage, can live in, electricity and plumbing. Skelley, Rt. 3, Box 423 J, Los Lunas, tel. 636-2177.
MOSSMAN 3-bdr. brick/stucco, corner, pullman baths, LR w/FP, DR, paneled 18 x 26 den, patio, AC, garage, carpet, drapes, appraisal \$24,000, sell for \$22,000. Cowham, 298-4249 after 5:30.

UNUSUAL EXPOSED beams, flagstone family room, two fireplaces, large recreation room, 1 1/4 baths, 3-bdr., 2700 sq. ft., extras, Zia Fatima schools. Hill, 268-1420.
R-2 LOT in SE Heights, close to Sandia Base. Gutscher, 255-3736.
CONDOMINIUM 2-bdr. apt. 3 miles from Taos Ski Valley, carpet, drapes, brick fp, electric kitchen, completely furn. Use it yourself or rent it. Carnicom, 282-3421.
3-BDR. HOME, 1 1/2 baths, carpeted throughout, huge patio, fish pond, 15 fruit trees, corner lot, dbl. garage. Phillips, 299-8337.

WANTED

BABIES DRESSING and storage table; 39 x 75" four inch foam mattress; 5 x 6" or larger cream shag rug. Reichardt, 296-2403.
'65 or '66 International Travelall or Chevy, GMC, 4-dr. carryall (suburban). Must have power steering. Leeman, 299-9149 after 6.
SWING SET and 5'-6" metal skis. Westman, 255-6048.
TO CONTACT persons that have Australian silky terriers. Eifert, 299-3970.
SHOP MANUAL for International Scout. Baxter, 344-7601.
USED 4-wd vehicle in good condition. Swayze, 268-5222.
LAND TURTLE, box turtle or tortoise. Schwoebel, 268-6440.
WILL TRADE '68 Volkswagen seats with headrests for the 1967 VW seats without headrests, white leatherette upholstery. Hopkins, 256-6972.
RIDE from area north of Montgomery, west of Eubank to Bldg. 880 or 860. Przystas, 296-1945.

LOST AND FOUND

LOST—Rx glasses, topaz ring w/3 small diamonds on each side (reward). S. C. Rx glasses w/brown frames, brief case w/pack of Camels, glasses in embossed case, light blue cardigan sweater, 2 1/2" long pocketknife w/white handle, gold earring w/red garnet—for pierced ears, approx. 12 keys on ring including car keys & Quik-Set keys, pearl set from ring. LOST AND FOUND, tel. 264-2757, Bldg. 610.
FOUND—Rx glasses w/black frames, pink tinted Rx glasses, key, large silver earring w/crystals, blue scarf, glasses w/clear & black frames. LOST & FOUND, tel. 264-2757, Bldg. 610.

Coronado Club Activities

Gala Wine Taste Set Manana At Club; Hofbrau on Oct. 19

For connoisseurs of fine wine or for the rest of us who might enjoy an introduction to the wine tasting, the Coronado Club has scheduled a gala Wine Taste tomorrow evening starting at 6:30 p.m. Wine, champagne, and exotic mixtures of "cold duck" (sparkling burgundy and champagne) will be available for sampling.

Dinner (top sirloin steak with onion rings) will be served from 8 until 9 p.m. Dancing to Phil Graham's orchestra starts at 9 p.m. Tickets (\$3 for members, \$3.50 for guests) should be picked up by 9 p.m. tonight.

Social Hours

Tonight, the Club's popular southern fried chicken will be the buffet feature while Rex Elder's combo holds the bandstand.

For Friday, Oct. 11, Mexican food will be wheeled out while Bud Fischer makes the happy music.

Seafood, the kind New Mexicans like, will be served for social hour Friday, Oct. 18, while Sol Chavez and the mighty Duke City Brass play for dancing.

Social hours start every Friday right after work. The buffet is scheduled from 6 until 8 p.m., and dancing is scheduled from 6 until 9 p.m. Special prices are in effect until 8 p.m. Pat Reich and piano entertain in the main lounge with a sing-a-long from 9 until 12 p.m.

Teenage Go-Go

A group called The Kidds will be plugged into the bandstand for the Teenage Go-Go scheduled Saturday, Oct. 12. The bash starts at 7:30 and runs until 10:30. Member parents should pick up tickets at the Club office.

Bridge

Ladies bridge will meet Thursday, Oct. 17, for an all-day session starting at 9 a.m.

Duplicate bridge meets Mondays at 7 p.m. The Fall ACBL Charity Master Point competition will be played Monday, Oct. 14. For dinner reservations call 268-7605.

Sanado Club Luncheon

Sanado Club members will meet for a sherry luncheon at 1:15 p.m. Tuesday, Oct. 8. Sam Fresquez, guitarist, will present a musical program. For reservations call 298-4546.



WINE TASTE—No matter how you look at it, Archie Pearlman (4333) urges making reservations today for tomorrow's special event at the Coronado Club—wines for tasting and sirloins for dining. Phil Graham will play for dancing.

Octoberfest Hofbrau

Saturday, Oct. 19, is a day to mark on your calendar. The annual Hofbrau festival will feature all the German food goodies and free refreshments. Tickets will cost \$3 for members, \$3.50 for guests. Make your reservations early.

Bowling Club

The Coronado Bowling Club is seeking new members.

Adult programs consist of women's and men's bowling plus mixed doubles with tournaments in all leagues. The Club also sponsors a children's bowling program including league play and tournaments.

Additional information and membership forms may be obtained by contacting John Nakayama (1513), club president, or Dick Demmel (4152), vice president.

Noon Fashion Show

On Tuesday, Oct. 15, the Coronado Club will offer a fashion show for noon-time diners. Models will show fashions from Lillyans.

Coronado Ski Club Off to Early Start

Once the weather turns cool, you can be sure that skiers are right in there "thinking snow." Members of the Coronado Ski Club are no exception.

The club will start promoting good fellowship among skiers and prospective skiers at the first meeting of the season, Tuesday, Oct. 15, starting at 7:30 p.m. at the Coronado Club ballroom. E. Blake of Taos Ski Valley will talk about fun in the snow. Members must belong to the Coronado Club. Dues for the ski activity group are nominal: \$1.50 per person or \$3 per family per year.

Last season's membership of 325 helped make possible lift ticket discounts at some ski areas, reduced instruction tickets for both children and adults, and charter bus trips to New Mexico slopes. Both lessons and trips are subsidized by the club.

To find out more about the Coronado Ski Club and to meet its officers, plan to attend the Oct. 15 meeting. Jim Griscom (2453) is club VP and may be contacted for further information.

Karl Svensson Completes Drafting Curriculum In Sandia TI Program

Karl Svensson of Design Definition Section 7611-5 is the latest Sandia employee to earn a technical institute equivalency certificate in the Sandia out-of-hours program. He completed the requirements of drafting and design curriculum.



Karl joined Sandia as a graded employee in the drafting organization in 1958. He was promoted to staff assistant six years ago and has been working as a programmer for Sandia's numerically-controlled drafting system; using computerized methods, the system produces precision graphic drawings.

Before joining Sandia, Karl was an engineering student at the University of New Mexico. In Sandia's technical institute program, he was able to transfer many of the required credits from his UNM work. He completed nine courses in the Sandia program.

Low Temperature Physics Paper Given in Scotland

J. E. Schirber, manager of Solid State Research Department 5150, presented a technical paper at the 11th International Conference on Low Temperature Physics, held recently at St. Andrews, Scotland.

The paper, "Effect of Pressure on Spin-Orbit Coupling and the Fermi Surface of Cd," was co-authored by W. J. O'Sullivan (5151).

The conference is held every two years for scientists interested in various low temperature phenomena. At this year's meeting, subjects of special interest were liquid helium, superconductivity, quantum effects in metals, and cryogenic techniques. "It was an opportunity for active workers in the fields to get together long enough to interact," Mr. Schirber says.

The 12th conference — in 1970 — will be held in Kyoto, Japan.

Following these sessions, Mr. Schirber visited scientists at the University of Leeds and the University of Bristol to discuss problems in low temperature metal physics.

He later attended the Electron Mean Free Paths in Metals Conference, held in Zurich, Switzerland. Purpose of this conference was to examine the progress of both theoretical and experimental approaches to the problem of scattering of electrons in metals and, hopefully, to stimulate studies in promising areas.

Take Note

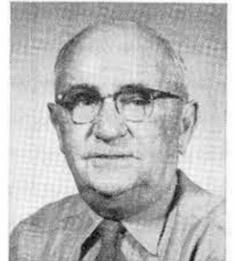
Bernalillo County Planned Parenthood Association needs volunteers to staff its Thursday evening clinic from 6:30 p.m. to about 9:30 p.m. On-the-job training is offered; the position involves conducting social interviews and completing patient charts. Sandians now serving on the Planned Parenthood Board of Directors include R. S. Claassen (2600), and the wives of Robert A. Erickson (7451) and Edwin R. Phillips (7621).

A. W. Porter (3312) has been appointed New Mexico director of the Air Force Military Affiliate Radio System (MARS).

MARS supplements normal Air Force communications by providing emergency backup facilities and personnel during times of domestic emergencies. Membership is open to amateur radio operators 16 years or older. Mr. Porter will coordinate membership activities throughout the state.

Mr. Porter became a radio operator during World War II and has continued his interest through the years. He transmits and receives on both HF and VHF frequencies.

Death



Matt Ungerman, a retired Sandia employee, died Sept. 12. He was 79.

He worked nine years at Sandia as a stockkeeper in the Development Shops. He retired in March 1959. He was also responsible for Laboratory Christmas decorations for a number of years.

He was a member of the original group of 10 young men in St. Louis, Mo., who organized the Junior Chamber of Commerce in 1918.

He is survived by his widow and one son.

PAGE EIGHT

SANDIA LAB NEWS

OCTOBER 4, 1968

Sandia Safety Signals



LSD

Talk to your children about not being bullied into trying this stuff. Some adventurous types might be tempted to try LSD—just once, to see what it is like. Tell them don't. A small dose may induce severe psychotic reactions, including hallucinations and acute panic with suicidal and homicidal states. But more insidious is the "flashback," a recurrence of the psychotic reaction after a single use, months or even a year later.

Orange Cones

Have you ever wondered why Telephone Company trucks always have orange cones out, front and rear? One reason is that the cones provide a warning of the parked vehicle. Another thing the cones do is force the driver to check the front and rear of his vehicle before he attempts to leave a parking space. Numerous instances have been reported where drivers have picked up cones and found children playing under the truck where they would have been injured if the driver had not checked.

Bill Garcia Puts Excitement of Understanding Into Spanish Class

During WWII Bill Garcia (3233) was stationed with a group of Navy radiomen on a small island in the South Pacific. He was there two years and it could have been a long, dull tedious time.

But Bill learned to speak Polynesian (the only American in the group of 25 who did so) and, as a result, he enjoyed the two years on Atafu.

"There were about 250 Polynesians in the area," Bill says, "and I made an effort to talk with all of them. They have a fascinating culture. I listened and learned and had a great time. I sort of joined their community."

This may be why Bill is outstanding as a teacher of the Spanish language in Sandia's out-of-hours educational program. He taught his first class of beginning Spanish last summer and is now instructing an intermediate class. The students of the first class have remained organized and the group now meets socially to continue to learn the language.

Naturally, Bill is pleased. His efforts have helped one group of people to a better understanding of the language and, indirectly, of the Spanish-American heritage.

"The word is 'Hispano,'" Bill says, "and it refers to those Americans, like me, who are first of all Americans but with a Hispanic heritage. The Spanish who came here over 400 years ago brought the Hispanic culture with them, and as their descendants we have maintained this culture but have added our own American values to it."

"This country was and is the great melting pot. The differences in Americans are



BILL GARCIA (3233)
"The word is 'Hispano'"

what helped make it a great country."

Even in the differences, Bill says, you find common ground. For instance, in the Spanish language there are more than 350 words that are the same as in English. A basic vocabulary is about 800 words. Learn another 450 basic words and you can converse.

"This is exciting," Bill says. "Language is different and people are different but there is common ground. Discovering it, understanding it and talking about it enlarges your own humanity."