

Mr. Abbott

F. E. Abbott Named AEC-ALO Ass't Manager

Frank E. Abbott (AEC-ALO) has been promoted to the newlyestablished position of Assistant Area Manager for Administration and Security in the AEC's Sandia Area Office.

Mr. Abbott has been Chief of the Administrative Branch of the Area Office since April 1958, and prior to that was in the Finance Division, ALO, from February 1952

A native of Denver, Mr. Abbott is a World War II veteran of U.S. Army service. He received his B.S. degree in commerce at the University of Denver.

Prior to joining the Commission he was with the U.S. Department of Agriculture and the U.S. Treasury Department in Denver.

John A. Larned Vice Chairman of **Board of Education**

John A. Larned, AEC-ALO Program Coordinator at Livermore Laboratory, has been named vice chairman of the Alameda County (California) Board of Education. Mr. Larned has served on the board since 1959.

Professor to Speak At Colloquium

Prof. J. S. Koehler, of the University of Illinois, will speak at a Sandia Research Colloquium on Aug. 17 at 9:30 a.m. in Bldg. 815.

Subject of Mr. Koehler's talk is "Present Knowledge of Point Imperfections in Metals." Tickets are not required for the meeting. For further information, contact Diane Martin (5432), ext. 27155.

Two Rockets Propel Sandia Research Sled at Mach 1.3 in First Test at Holloman

A new Sandia research rocket sled, designed to hit Mach 3 was fired last week for its first test under partial power. The test was made on the six-mile track at Holloman Air Force Base.

sled achieved Mach 1.3 and was still accelerating as it slammed into the water brake. Some 36 telemetering channels reported the field information from a rocket sled's acceleration, vibration, in-

ternal stress and strain, and pressures during the 5,250-ft. run.

Bickel of Track and Explosives Section 7323-1.

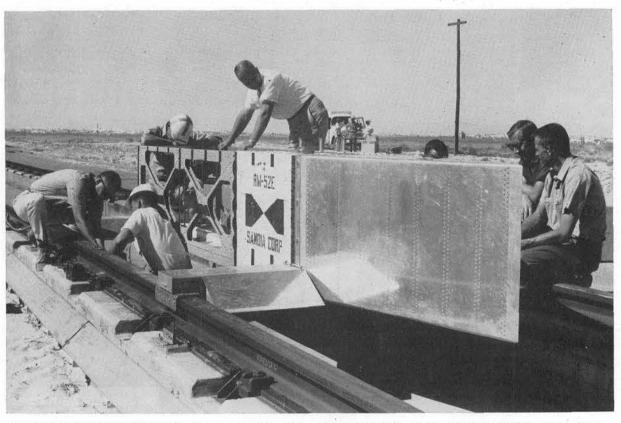
Data collected during the test With two rocket motors, the runs of the sled will be used for tests of a model of the same sled. "Previous attempts to correlate

sled against wind tunnel data from

a model have not been totally successful," Dave said. "We hope to Designer of the sled is Dave perfect a method of accurately predicting the performance of a rocket sled design in advance from wind tunnel models."

The wind tunnel tests are being comparison against wind tunnel conducted at the University of Minnesota Rosemont Laboratories. R. J. Loncharich of Engineering Aerodynamics Division 7134 is handling this portion of the re-





ROCKET SLED RESEARCH-A new Sandia sled was readied for its initial run at the Holloman Air Force Base track recently. L to R: R. R.

Beasley (7244), R. L. Johnson (7244), Capt. Henderson (USAF), W. T. Moffat (7240), D. C. Bickel (7323), and D. W. Bauder (7323).

ECP Agencies Geared to Give Help To Individuals Who Need Assistance

search sled project.

Aerodynamic properties of lift, drag, and pitching moment are being explored as well as methods of predicting the shock and vibration loads on the sled.

The sled is scheduled to be fired again today using two motors. The number of rocket motors will gradually be increased to eight. Each of the Javelin motors can produce a maximum of 32,000 lbs. thrust.

"From the data already collected," Dave said, "we are predicting more than Mach 3 when using all eight motors."

R. R. Beasley (7244-2) is the Field Test project engineer for the sled runs.

The sled and nose sections were built in Sandia Laboratory's Sheet Metal Shop, organization 4224-4.

L. J. Paddison **Heads National IRE** Organization

L. J. Paddison, Director of Product Test Equipment Development, has been named national chairman of the IRE Professional Group on Reliability and Quality Control.

Membership in this group is worldwide and comprises about 1800 members.

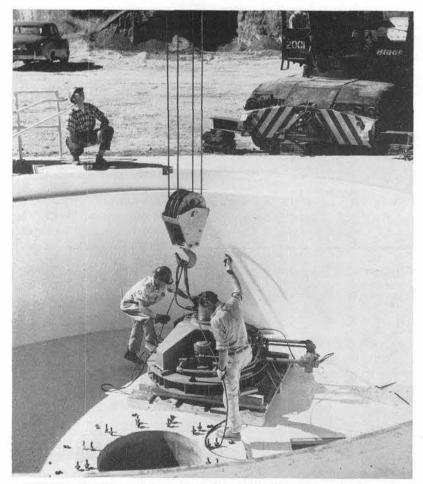
The group's field of interest is in principles and practices used in reliability and quality engineering of electronic products.

Mr. Paddison has been a member of the professional group since 1952 and has served as national vice chairman for the past six years.

Within the past 14 years Mr. Paddison has headed Sandia's Quality Assurance and Reliability Development organizations in addition to his present position.

During World War II he was active in research and development work on the Navy VT Fuze at the Applied Physics Laboratory, Johns Hopkins University. Mr. Paddison worked on a Navy contract at New Mexico School of Mines for a year prior to joining Sandia's staff.

He is also a member of the American Society for Quality Control, and the American Ordnance Association.



Where your dollars serve . . .

POWER HEAD and base ring for Livermore Laboratory's new 16-foot, 60,000 G-pound centrifuge is lowered into position in Area 8. Watching the proceedings is Project Engineer Harry Jacobs (on rim), of Natural Environmental Section 8121-2. The centrifuge is expected to be in operation early in September.

at one time or another, benefited from services of most of the 34 local agencies they support with the Employees Contribution Plan. Whether by handling adoptions, providing emergency financial aid, or giving nursery care, these agencies can help: Family Consultation Service, Catholic Charities of Albuquerque, Albuquerque Travelers' Assistance, St. Anthony Home for Boys, and Christina Kent Day Nursery.

Family Consultation Service

People come to the Family Consultation Service from all walks of life. They come for help in clarifying the problems they face. The counselors at the Service office provide such help, but they leave the actual solution of the problem to the individuals concerned with it.

Some families come to the office together: sometimes the husband or wife comes alone. But the Service's staff members, Mrs. Katherine Brown and Lawrence Brown, are usually able to persuade each member of the (Continued on Page Three)



KINDERGARTEN-AGE pupils enjoy playground during recess at Christina Kent Day Nursery. The Nursery provides day care and recreation facilities for about 65 children of working mothers.

Editorial Comment

Let's Do Something About It !

LAB NEWS

Each year statistics have shown an increase in the number of highway casualties. Figures for 1960 were no exception. Though they are half a year old, the figures are sobering for motorists taking to the roads for their summer vacations.

Last year 38,000 people were killed in automobile accidents. More than 3,078,000 were injured. Deaths were up 400 (one per cent) over the previous year. Injuries increased more than 200,000 (seven per cent).

This is indeed a sorry accomplishment for a civilized people. It advanced no cause, served no purpose, taught no lesson. It came about solely through a lack of concern for others, through negligence, carelessness, and indifference.

Judging the extent of this grim highway toll by number of deaths alone does not take into consideration the ever increasing number of injuries and the consequent suffering and economic losses.

Eighty per cent of accidents resulting in personal injury involved driving violations — they are man-caused. The auto-mobile is far more reliable than the human behind the steering wheel. We cannot place responsibility for this casualty list anywhere other than on ourselves.

The fact that the number of deaths has not risen sharply in recent years is due largely to better and more prompt medical care rather than care on the part of the drivers.

What can be done about this situation? Here are several steps which could be taken:

1. Be sure the states in which we reside have a strong street and highway safety program. Perhaps we need to survey present laws and enforcement procedures and recommend improvements in the regulations and prosecution of violators. Certainly we need to be sure that we have a strong program of public information on the urgency of the problem.

2. Be sure we have a safety education program which begins in the grade schools and continues with driver training be-

fore young people can get their licenses. 3. We must be willing to express our support of a strict program of law enforcement. We must be willing to abide by it. Speed is a major cause of fatal accidents (38.5 per cent). It might be necessary to revoke licenses of first-offense speeders. Harsh? Yes! Effective? Yes!

4. Each of us must pledge to develop within ourselves habits of care, caution and courtesy behind the wheel. Bold positive steps will save lives. Maybe even our own.

Three Employees Return to Sandia After Completing Military Service



R. E. Baack

Three men recently returned to their jobs at Sandia Laboratory after tours of duty in the Army.

Rolyn E. Baack (2441) served two years in the Army Corps of Engineers, and was stationed mainly at Fort Belvoir, Va. He originally came to work at Sandia in June 1958.

Returning to his job in Inspection Division 4213 was Samuel M. Bragg. He was stationed 27 months with the Army at Fort Riley, Kan. Sam first came to Sandia in August 1957.

Lawrence J. O'Connell is back in Systems Test Development Diviving in the sion II. 2444, after se Army for two years. He was stationed at White Sands Missile Range, N. M. Larry was hired by the Corporation in February 1957.



L. J. O'Connell S. M. Bragg Congratulations

Born to:

Mr. and Mrs. Don Butts (4321) a daughter, Joni Lynn, on July 5. Mr. and Mrs. Roland C. Hewitt (7234) a son, Randolph Charles, on July 5.

Mr. and Mrs. Steve Drago (2644) a daughter, Karen Elaine, on July 6.

Mr. and Mrs. C. H. Turnbull (8142-1) a son, Andrew Arthur, on July 13.

Mr. and Mrs. R. E. Baldwin (8222-3) a son, Daniel Edwards. on July 14. Kathleen is on leave from 8225-1.



SIX-KEY BRAILLING MACHINE, which punches raised dots in paper, is used by Evys Warren (1442) to transcribe English into the language of the blind. Different dot combinations form all 26 letters of the alphabet. At right, Elizabeth Frost (1442), also a Braillist, checks copy which Evys has just typed.

Sandians Who Serve

Evys Warren, Elizabeth Frost Typing Braille Books for Blind

Most people take for granted the ability to read. But a blind person must have a special kind of book before he can enjoy the pleasure and knowledge gained from reading.

Helping give the sightless a chance to read are Evys Warren and Elizabeth Frost (both 1442), who recently took a six-month course to learn the Braille language. When the two women signed up for the volunteer class they agreed to spend at least one hour a day practicing, and also to type a minimum of 30 pages in Braille a month when they completed the course.

The Braille system consists of raised dots in different combinations for all 26 letters of the alphabet. As in shorthand, abbreviations and contractions are also used. A blind person "reads" by moving his finger tips over the raised dots.

"It seems like an impossible task to distinguish the dot combinations by touch." said Evys. "but when someone loses one of his five senses, the other four become sharper."

Evys and Elizabeth learned to operate a Brailling machine which has six keys on it. The Braille letters are formed by hitting one key or several keys simultaneously. Numbers zero through nine have number follows.

After finishing the course, Evys submitted a 50-page book in Braille to the Library of Congress for her certification as a Braillist. The Library sent her manuscript to a blind proofreader who checked it for errors and correct format.

Two weeks ago she received notice that her work was satisfactory and she became the eighth certified Braillist in New Mexico. Elizabeth sent her work in after Evys and has not received her certification yet.

They are both members of the Braille Service of New Mexico, which was established last November as a non-profit organization. Elizabeth is treasurer of the group. "We are always looking for new members," she said, "and guarantee that every person who joins will find something of particular interest for him to do."

Several Albuquerque service clubs have purchased Brailling machines, which cost \$90, and donated them to the Braille Service of New Mexico.

Instructor of the Braille course was Mrs. Willard Converse (whose husband works in 3425). She was the first certified Braillist in New Mexico, and devotes a great amount of volunteer time to this work. Mrs. James Demas (Jim works in 7523) also volunteers her

R. W. Hall Earns **General Portrait Photo Certificate**

Robert W. Hall (3462-1) has been awarded a special Certificate of Merit by the Winona School of Photography (Ind.) for completing an intensive course in General Portrait Photography.

The course is offered to professional photographers during the summer months and counts toward the requirements for becoming a Master Photographer. New techniques, new equipment and materials, as well as new methods of photography, are among the subjects covered in the Winona curriculum.

Bob has been in Sandia's Still Photography Section since April 1957.

Sandian Plays Part In Mountain Rescue

Oscar Goodwin (3467) participated recently in the rescue of a woman who fell from a high point on the Sandia Mountains. Oscar was taking photographs when an excited child told him, "My mama just fell off the cliff."

Oscar climbed down the steep slope and helped the woman's husband and two other men carry her back in a makeshift stretcher. The climb, about 60 ft. straight up, took two hours.

Oscar then drove the woman in his station wagon to the Sandia Base Hospital. She is now recovering from broken bones and injuries received from the fall.



Smokey Maxwell Heads Livermore Lab Drive United Bay Crusade

Roy "Smokey" Maxwell (8225) has been named chairman of the Livermore Laboratory drive for the 1961 United Bay Area Crusade. Assisting him will be E. A. "Gene" Aas (8144)

Smokey will serve also as Livermore Valley account executive for the Industrial Division, a position he held during the 1960 campaign. He was also vice chairman of the Livermore Laboratory drive in 1960

Overall goal for the Bay Area drive this year will be \$11 million, an increase of six per cent from the 1960 campaign. Participating in the drive will be 263 national and local health, youth, and social welfare agencies in the five-county area. The campaign will get under Oct. 1 and conclude Oct. way 31.

Mr. and Mrs. M. O. Jones (8142) a son, Steven M., on July 16.

Mr. and Mrs. W. R. Wall (8125-1), a daughter, Kelley Leeann on July 17.

Mr. and Mrs. Ray G. Mosteller (2441-1) a son, Randall David, on July 26.

Sympathy

To Raymond Clark (3111) for the death of his father-in-law in Jamesport, Mo., July 15.

To Paul Morgan (2622) for the recent death of his father in Indiana.

To Lester Bierly (4574) for the recent death of his mother in Loganton, Pa.

To Marvin Harvey (4223-2) for the death of his mother in Nortonville, Kan., July 21.

To C. R. Eisenhour (7241) for the death of his father in Hummelstown, Pa., July 26.

To Cleo F. Hughes (2442-1) for the death of his mother in Louisville, Ky., July 20.

To John L. Irwin (7185-1) for the death of his father on July 21.

the same dot combinations as the letters "a" through "i," but a symbol preceding the dots indicates a

Welcome

Newcomers July 17-28

Albuquerque	
*Barbara E. Eaglin	3120
*Donnie R. Fenstermacher	3444
Dotsie M. Hester	
Betty J. Louden	3126
*Sue T. Mathes	3126
Marsha A. Moor	4314
*Jack O. Palmer	
M. French Stewart III	3446
Bernie Vallejos	3444
*Laura K. Ward	4623
Colorado	
Gene H. Jeys, Westminister	4411
Connecticut	
Jerome B. Allyn, New Haven	1113
Illinois	
Dorsey E. Bishop, Chicago	7323
Kansas	2251710
James D. McClure, Lawrence	2313
Nebraska	
Marjorie J. Spatz, Omaha	3126
New York	
Donald J. Gould, Norwich	1312
Dennis W. Smith, Binghamton	1122
North Dakota	
David C. Boknecht, Grand Forks	1121
Ohio	
William J. Lenz, Dayton	7115
Pennsylvania	
John C. Borg, Bethlehem	2563
Texas	
William D. Parsons, Austin	4112

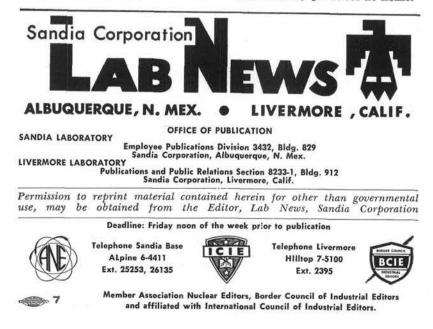
Denotes rehired eturned from Leave

James M	. Freese	e, F	t. (Ord,	Calif.	 5153
Lawrence						
White	Sands,	N. 1	Μ.			 2444

services as a proofreader for the Braillists.

In the fall, Evys plans to teach her own class. If anyone is interested in taking the course, contact her at ext. 22158. According to Evys, "It's the most worthwhile thing I've ever done."

Sandra R. McIntosh (8212-3) Take a Memo, Please A POWER MOWER can be as dangerous as any industrial machine when improperly operated. Utilize safety practices at home.





ORPHAN TODDLERS pass the time at St. Anthony 93 children. Most of these children have had Home For Boys. The Home is providing care for no other home in their entire lifetime.

Continued from Page One

ECP Agencies Help Those in Need

family to share in the counseling. If the husband and wife are both available, they are interviewed in separate rooms. After completing interviews, the counselors discuss their findings and review the problem with the husband and wife. With the counselors' guidance, the family works toward a solution of the problem.

Psychiatric counseling is also available. Fees, ranging from \$1.00 to \$10.00 per interview, are based on family income and budget.

Catholic Charities of Albuquerque

In the past 11 years, Catholic Charities of Albuquerque has provided 73 children for adoption into the families of Sandia employees. The agency also provides many other services to Catholic and Protestant members of the community. One of its major tasks is the coordination of the work of other social agencies.

For example, a juvenile delinquent may be referred, by the Catholic Charities office, to a social agency where a psychologist is available to handle juvenile problems. A family, in danger of being broken apart by internal problems, can be helped by a social case worker. Necessary arrangements for such case work are then made, with the Charities office acting as coordinator. A family in need of financial aid, which is not eligible for help from any other public or private agency, receives aid from Catholic Charities.

Some financial support of the agency comes through the United Community Fund, but a good share is derived from voluntary public contributions.

Albuquerque Travelers' Assistance

The people who apply for aid at the Albuquerque Travelers' Assistance office have two things in common; they are in transit and they need help.

Last week, for example, the Assistance office helped several individuals and families who were involved in journeys of continental proportions. One man, on his way from New York to Los Angeles, was stranded in Albuquerque by lack of funds. A family enroute from Indiana to California was forced to stop by sickness of one of its members, a boy who had contracted measles before leaving home. An elderly lady traveling to Oakland for the funeral of her sister. stopped at the Assistance office, exhausted by the effects of her trip.

Through the organization's help, these travelers were able to complete their journeys, and many of them made arrangements to repay the office for its aid.

St. Anthony Home for Boys

The St. Anthony Home For Boys provides a happy and healthy way of life for 93 children of Catholic and Protestant backgrounds. Boys to the age of 14 and girls to the age of five are given all of the benefits of parental care, as well as medical aid and education.

Many of the children come from broken homes. Some have been abandoned, orphaned, or neglected. Many remain at St. Anthony's until they are ready for high school. Some eventually return to their parents.

St. Anthony's provides help for children of every race and creed. A complete nursery, kitchen, laundry, classrooms, and dormitories are provided. Recreational and vocational facilities are located at the Home, and residents all share the responsibilities of maintenance.

About one-fifth of the Home's total income comes from the United Community Fund. Funds are used for food, clothing, maintenance, medicine, and rehabilitation.

Christina Kent Day Nursery

The Christina Kent Day Nursery provides care for 64 children of working mothers.

Fees for nursery care are based on family income, and range from \$1 to \$4 per week. A pupil enrolled at the Nursery can count on having his days filled brim-full with activities, all designed to keep him as busy and healthy

AUGUST 4, 1961

PAGE THREE

Coyote Test Field HE Experiments To Give Sound Transmission Data

LAB NEWS

Starting today, a series of high explosive tests is scheduled in Coyote Test. Field. The research project will determine the effects of bursts at different heights on the transmission of sound waves. Waves carried by the detonations will penetrate the ozonosphere, a layer of warm air some 20-30 miles high—then refract to distant western points.

First of three tests was scheduled for this morning. Starting at 8 a.m., four detonations were scheduled for five-minute intervals.

The other detonations are planned for about Aug. 11 and 18. Tests will be postponed if weather conditions indicate energy waves may be transmitted to populated areas. The blasts probably will be audible in Tech Area I and in the city.

In each series, the non-nuclear explosives are to be discharged at heights of 50, 17 and $3\frac{1}{2}$ ft. and at ground level.

Scientific Director of the study is J. W. Reed of Applied Experiments Division 5112. H. J. Plagge of Coyote Test Field Section 7251-2 is Field Test project engineer.

Monitoring stations will be established in El Morro and Zuni, about 105 and 130 miles away. Instruments in these stations will measure and record pressures.

AT&T-NASA Plan to Launch Two Communication Satellites Next Year

American Telephone and Telegraph Company and the National Aeronautics and Space Administration (NASA) have signed an agreement to launch two experimental communications satellites next year.

The agreement, which is designed to carry forward a cooperative project, calls for launches on April 17 and Oct. 15. AT&T will provide the satellites and the ground station at Rumford, Me., and will have the responsibility for all experimentation after the satellites are in orbit. NASA will provide the rockets, the launching pad at Cape Canaveral,

Livermore Lab Chess Players Start First Tournament

Livermore Laboratory's first chess tournament began July 26 with the final match scheduled for Aug. 18. Games will be played each Monday and Thursday during the noon hour.

Thirty-two players entered the first match. Winners will go on to compete in the winner's bracket and losers will enter a second bracket in the double-elimination tournament. Winner of the loser's tournament will meet the winner of the winner's bracket for the chess championship title. The final victory will go to the player who is undefeated or who has not lost more than one game.

Honors for Abstract

Robert L. Burgess (7213) has won second place in the Museum of New Mexico's Annual Fiesta Show for his oil abstract "Hint of a Hill."

The public will have its first look at this year's winning paintings during an open house from 3-5 p.m., Sunday, Aug. 6, at the museum in Santa Fe. The art show will continue through September.

In March the collection of outstanding paintings from this region will be hung in San Fran-

and related tracking and telemetry services.

AT&T will pay the cost of the satellites, the ground station facilities, etc., and reimburse the government for all identifiable additional costs by the government.

In connection with the signing, Frederick R. Kappel, AT&T President, said, "We are pleased with the agreement, which permits us to proceed with our space communications experiments. This is an important step toward the realization of the worldwide communications system described by President Kennedy.

"Our country leads in the peaceful use of space and the establishment of a satellite communications system would prove to the world our peaceful intentions and the strength of our free enterprise system."

The government receives license to inventions made under the agreement and the right to sublicense them under certain conditions. AT&T will provide NASA with such commercial satellite data as NASA may request and specifically identify. The government will pay the cost of gathering and producing this information.

AT&T or NASA may terminate the agreement at any time except during a period beginning 90 days prior to a scheduled launch date and ending with the day NASA fulfills its tracking responsibilities (about two months after the launching).

William Dehon Wins National Honor in Photo-Essay Contest

William Dehon, who recently joined the Lab News staff, has received notice that he won second place in a national photo-essay contest sponsored by Samuel French, Inc., dramatic publishing house.

Bill's prize, to be given to Powell (Wyo.) High School where he taught English and Journalism, is royalties from 50 plays published



FAMILY Consultation Service counselor, Lawrence D. Brown, discusses application form with Mrs. Katherine M. Brown, agency executive director and counselor. Counseling service is provided families with marital difficulties, child-parent conflicts, and other problems. When advisable counseling is on a family-wide basis. and happy as possible.

If a pupil arrives at the Nursery in time, he has breakfast with his classmates. After breakfast, there's an informal health inspection. Then, he's free for some time on the playground, where he has a choice: swings, a merry-go-round, a jungle-gym, or teeters. Or he can amuse himself as he wishes.

If an enrollee is in kindergarten, he can count on some formal classroom work. But there are also chalkboards and drawingboards, finger paints and crayons, books, toys, and games. There isn't time for boredom.

Around 11:30 a.m., everyone cleans up for lunch. The food is excellent; it's prepared by Mrs. Louisa Lopez, a woman who knows nearly all there is to know about her craft. She's a good and trusted friend of everyone at the nursery, especially the children.

After lunch, there's a halfhour's time for the playground. At 1 p.m., everyone cleans up again before taking a rest. At 3:00, after rest-time, chocolate milk is served to those waiting to go home. cisco.

This was also the fourth straight year that Bob has been awarded first prize for one of his mosaics. by French.

His winning entry concerned a play, "Playboy of the Western World," which was presented by Powell High School students.



TWO NATIONAL SAFETY AWARDS were recently presented to the AEC. K. F. Hertford (left), AEC-ALO Manager, holds the President's Safety Award. Vincent C. Vespe, Director, Operational Safety Division, ALO, displays National Safety Council's Award.

PAGE FOUR

Supervisory Appointments

LAB NEWS

sonnel Re-

search, Train-

ing and Educa-

tion Depart-

Bob came to

Sandia nearly nine years ago

ment.

J. ROBERT GARCIA to supervisor of Personnel Research Division 3133, Per-



to work in Personnel Testing. He transferred to the Personnel Development organization in June 1956 and two years later was promoted to section supervisor. Bob has headed Personnel Research Section 3133-1 since November

1960. Before coming to Sandia he was an employment specialist for the U.S. Employment Security Commission in Albuquerque for three years. He also had worked a year for the Soil Conservation Service as a junior assistant engineer.

Bob received his Bachelor's degree in business administration at the University of New Mexico in June 1949 and his MS degree this June. He is a member of Alpha Kappa Psi, honorary business society.

During World War II Bob served three years in the Navy.

EUGENE L. EMERSON to supervisor of Shop Engineering Section 4214-1,

Gene has been

six



worked in three different project divisions in addition to a

year in environmental testing. Previously he taught engineer-

ing drawing from 1953-55 at the State University of Iowa while completing requirements for his MS degree in mechanical engineering. Gene received his BS in mechanical engineering at the University of Notre Dame in 1950.

He also worked three years with a design group for a food processing equipment manufacturer in Cedar Rapids, Iowa.

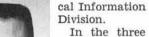
Gene served in the Navy for three and a half years during World War II.

He is a member of the American Society of Mechanical Engineers and is a registered professional engineer in New Mexico.

JOSEPH M. ZANETTI, JR. to supervisor of Publications Section



3423-1, Techni-



IRA B. WARD to supervisor of Test Assembly Section 8126-3, Livermore Lab-

oratory. "Jerry" has been with Sandia since February 1953. He began as a technician i n mechanical assembly at Sandia Laboratory,

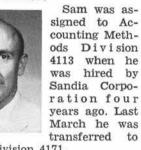
and from there went to fusing and firing and full-scale testing. He transferred to Livermore Laboratory at the time of its establishment in 1956. Here his work included full-scale testing, flight testing, explosive control, and test assembly.

Before coming to Sandia, Jerry was employed for eight years at the Naval Ordnance Test Station in China Lake, Calif., where he was in charge of the magazines and explosives for six years.

Jerry attended the Coyne Electrical School in Chicago, and took night classes in electronics at the University of New Mexico.

A World War II veteran, he served in the Navy aboard a submarine tender in the southwest Pacific.

SAM N. GAETO to supervisor of Operations Methods Section 4111-2, Engineering and Operations Methods Division.



was a public accountant for six

Master's degrees in business adlic accountant.

> 5000, 7000, 8000) Department.

November 1956. The following May he was promoted to super-

visor of the section and two years ago was transferred laterally to



NEW OFFICERS of the New Mexico Council of Technical and Scientific Societies plan a full James McCutcheon (1322), president; and Dale year of activities. From left are Bill Asher (4542), Buchanan (7321), vice president of the council.

Promotions

Tony Satroplus (4234) to Technician Donovan B. Dawson (4253) to Machinist Thelma M. Cole (3126) to Typist Clerk Martha J. Williams (3466) to Document Clerk Mareta R. Mocahbee (7512) to Record Clerk Charlie N. Eden (3464) to Mail Clerk Wilma R. Ash (4153) to Accounting Clerk Helen W. Henderson (4151) to Accounting Clerk Phyllis A. James (7535) to Secretarial Typist Robert E. Craven (4411) to Draftsman Thomas H. Kutzley (4411) to Draftsman Theodore F. Roller (4411) to Draftsman Jocelyn L. Fuller (4411) to Draftsman Charles E. Wimmer (4411) to Draftsman Thomas M. Bolz (4411) to Draftsman Leroy L. Keck, Jr. (4411) to Draftsman Joan M. Branks (4411) to Draftsman Julian A. Lovato (4411) to Draftsman Robert W. Blagg (4411) to Draftsman R. Gary Daniels (4411) to Draftsman Donald F. Oard (4411) to Draftsman Henry H. Passmore (4413) to Draftsman Robert E. McDermott (4413) to Draftsman Donald W. Shadel (4413) to Draftsman Paul L. Spencer (4413) to Draftsman Robert C. Anderson (4413) to Draftsman Robert C. Anderson (4413) to Draftsman Mathew J. Roach (4413) to Draftsman Robert B. Dick (4413) to Draftsman Karl D. Svensson (4413) to Draftsman Lenard H. Wilhelmi (4413) to Draftsman Herbert A. Zenger (8241) to Staff Member Joseph T. Plant (4212) to Metal Stock Handler & Cutter David A. Paschal (4233) to Assembler Andres Landavazo (4512) to Machinist

New President Lists Goals For Technical-Scientific Council

James McCutcheon (1322) has been elected president of the New Mexico Council of Technical and Scientific Societies. He heads new officers including Dale Buchanan (7321), vice president; C. M. Littleton (7511), secretary; and Bill Asher (4542), treasurer.

The Council consists of representatives of 10 technical and scientific societies having a combined membership of 1200. The Council handles liaison for intersociety activities and is an information center for the associated organizations.

Upon taking office, President



Mr. Horne

George D. Horne to **Retire Next Month**

McCutcheon announced four continuing goals of the Council. They are: to increase attendance and activities at meetings, to promote professionalism among individual society members, to plan a technical and scientific center in Albuquerque, and to publish a comprehensive directory of all technical societies.

Coronado Club Sets Luau for Saturday, Aug. 19

Coronado Club is repeating one of its big events of last summer, the Luau. Appropriate costumes should be worn for the Islander's night-6 p.m., Saturday, Aug. 19.

Hawaiian-style barbecued spare ribs, baked salmon, chuck wagon roast beef, and a fresh fruit bowl will be featured at the buffet served from 6 to 8.

Entertainment starts at 8:30. This includes Hawaiian singing and dancing, and a synchronized swim group. Tommy Kelly's combo will provide music for dancing from 9 to 1. Tickets for members are \$2.60, and guests, \$3.60.

Two Saturday-night dances and two social hours round out the next two weeks' activities. The M.B.C. Trio will play for the dance tomorrow night, and on Aug. 12, Al Hamilton will be in charge of the music. Tickets for these dances, which last from 9 to 1, are \$1 for members, \$1.50 for guests

Social hour tonight features the music of Tommy Kelly and next Friday Aug 11 it will be Eddie Chavez. Live music is played from 5 to 8, social hour is from 4:45 to 6:15, and the \$1.75 buffet is served from 6 to 7:30.

He received his Bachelor's and

Budget Division 4171. Before coming to Sandia Sam

March he was transferred to

years for the firm of Giomi and Solberg in Albuquerque. He also taught business classes in the Belen high school for a year.

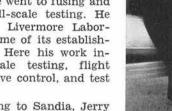
ministration at the University of New Mexico. He is a certified pub-

During World War II, Sam served three years in the Navy.

HOMER G. PIERCE to supervisor of Budget Division (1000,

4171, Budget Homer started work with Sandia in Case Costs Section in

Sam was as-



in the Technical Information Division at Sandia Laboratory and Technical Writing and Public Relations Section 8233-1 at Livermore Laboratory.

Before joining Sandia, Joe taught English and speech at Piedmont and Pleasant Hill high schools in California. He is a graduate of St. Mary's College, Moraga, Calif., where he received his BA degree in English literature in 1950. He did graduate work in English at the University of California, Berkeley, and took additional courses there and at San Francisco State College in education and educational administration.

From 1951 to 1953 Joe served in the U.S. Navy as a lieutenant, junior grade, assigned to the Pacific fleet. He is a member of Alpha Pi Gamma Upsilon, scholastic society.

Operations Methods Section 4111-2.

From 1949-56 Homer was audit and systems supervisor for the Zia Company at Los Alamos.

He has a Bachelor's degree in Business Administration from the University of New Mexico and also attended San Diego State College.

During World War II, Homer served in the Navy four years.

L. W. Newman Goes To Scout Conference At Philmont Ranch

Lyle W. Newman (2313), district leadership committeeman in the Kit Carson Council of the Boy Scouts of America, recently attended a Cub Scout Leaders Conference at Philmont Scout Ranch near Cimarron.

Participants in the various training conferences at the Scout Ranch are selected by the local Boy Scout councils. Lyle's wife and son went with him for a combined training experience and family vacation.

David A. Paschai (4233) to Assembler Andres Landavazo (4512) to Machinist Elaine M. Cox (3126) to Secretarial Typist Barbara D. Hoeke (3126) to Secretarial Typist Helen M. Johnson (3126) to Secretarial Typist Enid A. Morton (3126) to Secretarial Typist Enid A. Morton (3126) to Secretarial Typist Beverly J. Flowers (3126) to Secretarial Typist Deluvina S. Montova (3421) to Library Assistant Mary D. Walker (3452) to Technical Clerk Carol A. Hogan (4135) to Ivoucher Clerk Deluvina S. Montova (3421) to Assignment Clerk Hazel R. Whitlock (3461) to Senior Clerk Ruth E. Fogarty (4135) to Investigator M. Ann Whipple (7241) to Math Analyst Robert H. Banks (4151) to Staff Member Charles R. Walker (8223) to Staff Assistant Sally L. Forrest (8224) to Staff Assistant Sally L. Forrest (8221) to Typist Clerk Kelley T. Fosmo (4614) to Utility Operator Donald D. Butts (4231) to Technician Emily Makal (4131) to Disbursements Audit Clerk Ferdinand F. Thome (8223) to Shop Clerk Cecil L. Haynes (4221) to Assembler Joyce L. Kleve (8212) to Typist Clerk H. G. Tankersley (3130) to Scretary Donald J. Gallagher (8234) to Order Analyst Henry L. Stratmann (8234) to Corder Clerk Jack R. Simpson (1352) to Laboratory Assistant Dora E. Elick (3462) to Ozalid Operator Santiago J. Abeyti (3464) to Messenger John R. Russell (4212) to Material Handle

After Long WE Service

George D. Horne, retiring the end of this month, will observe 40 years with the Western Electric Company on Aug. 10.

Mr. Horne came to Sandia Corporation in April 1950 on a temporary leave of absence from Western's Hawthorne Plant in Chicago, and has been here ever since. He was promoted to supervisor of Plant Accounting Division 4153 in December 1951.

Mr. Horne was born and educated in England, and served four years in the British Army and two years in the British Civil Service. He came to America in 1921 and joined Western Electric at that time.

Retirement plans include a trip to England next year; it will be the first time he's been back. Home maintenance, golf, and travel will occupy most of his leisure time from now on.

Mr. and Mrs. Horne live at 441 Montclaire SE. They have three children, George, Jr. (3452), "Fritzie" Franks (a summer hire in 4333), and Kay Sherman of Riverside, Ill. The couple also has four grandchildren.

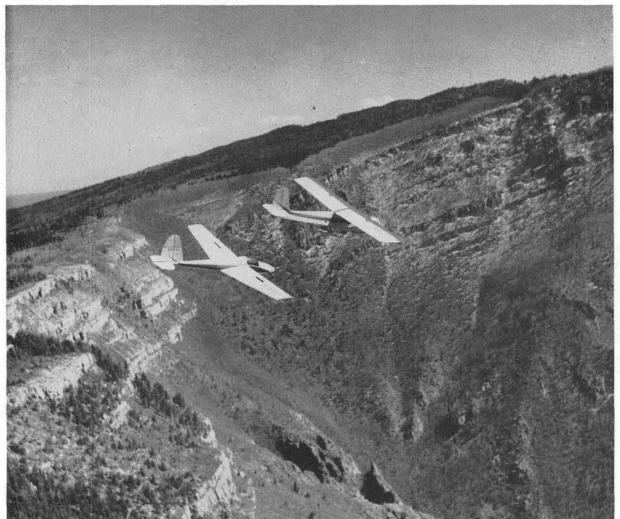
'Old-Timer' Pilot C. L. Carpenter Joins Silver Wings Group

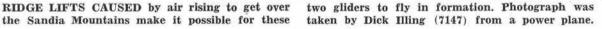
Veteran pilot Charles L. Carpenter (7185) was admitted on July 10 to the Silver Wings Fraternity, a world-wide aviation group made up exclusively of men and women pilots who made their first solo flights a minimum of 25 years ago. Mr. Carpenter made his first solo flight at Denver, Colo., on Nov. 9, 1935.

"I'm an old timer who's never lost his interest in aviation," Mr. Carpenter explains. At present, he is engaged in local flying to interest his son in aviation. Mr. Carpenter has recently logged about 90 hours in aircraft such as the Piper Tri-Pacer, the Piper Super Cub, and the Cessna 150. He plans to attend a statewide reunion of members of the Silver Wings Fraternity which is being planned for later this year.

LAB NEWS

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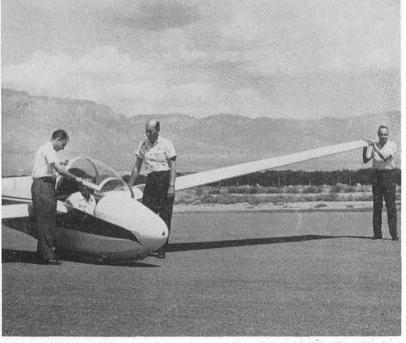




Forms for Amateur Radio License Exams Are Made Available

Carl W. Franz (1321-1) has announced that application forms are available for Amateur Radio Operator Licenses. Carl is the local FCC amateur license custodian. He also has a stock of new-type Novice and Conditional-Class license exams for those qualified under FCC rules to administer examinations. Commercial Operator Forms (FCC 756, 753-1) for Third Class Restricted Radiotelephone Operators, as well as the other forms, are also available. Carl may be reached at CH 3-3110 between 6 and 7 p.m.

Examinations for all classes of Commercial, Amateur Extra and General Class Licenses will be conducted by the FCC on Saturday, Oct. 7, 1961, at the Albuquerque High School, 110 Broadway N.E. Commercial License applicants will start at 8 a.m. and the Amateur Class applicants at 11 a.m. Examinations must be completed by 4:30 p.m.



IT TAKES THREE MEN to prepare for glider flight. Jim Stark (7143), left, and Hermann Wente (7131) secure Hank Tendall (7115) for his take-off. Ken Cordes (7134) holds one wing.

Charles Smith Conducting Experiments On 500 Potted Plants, Improving Growth Rates

Charles Smith (4574) is a happy man when he's puttering around the many plants and flowers he grows at his home.

"I don't care about how pretty or how big the plants are," he said from somewhere amidst his 500





CONTROL PANEL in the cockpit shows instruments used for glider fying. Hank Tendall and Jim Stark make careful last check.

Soaring Is One Big Search For Those Elusive Thermals

The cockpit of a glider has the same controls as a small power plane except for one thing — no throttle. When you're soaring you depend upon air currents and your skill. With proper use of both you stay in the air.

Soaring is a new sport to Albuquerque. Four Sandians are almost ready to take flight tests for glider licenses. They are Ken Cordes and Jim Stark (both 7134), Hank Tendall (7115), and Hermann Wente (7131).

Jim and Ken are both former P-38 pilots, and Jim is now flying F-100's in the Air National Guard. Hermann flew F-86D's until a few years ago with the old (now deactivated) 93rd Squadron based at Kirtland. Hank is a private pilot and owns his own plane.

Soaring conditions in the Albuquerque area are considered among the best in the country because of the warm climate and mountainous terrain. Thermals, ridge lifts, or waves are necessary for soaring.

The warm temperature helps form thermals which are columns of rising air. When air rises to get over the Sandia Mountains, ridge lifts result. Air bouncing off the mountains creates high altitude waves downwind from the range.

Seek Those Thermals

When flying cross country, pilots depend mostly on thermals. How

ed to the back of the airplane, hooks onto the glider nose. When the glider reaches necessary altitude and air speed, the sailplane pilot releases the rope and starts soaring.

The winch tow consists of a long steel cable which is wound around a drum powered by an automobile engine. One end of the rope is fastened to the glider which is placed at the other end of the runway. The glider is pulled down the runway as the winch winds the cable in. When the plane gains enough speed to take off, it climbs steeply over the winch and then the cable is dropped. A small parachute floats the end of the cable down.

Need Pilot Experience?

"It's not necessary to have pilot training to fly a sailplane, but it's easier to catch on if you have," says Jim. "Our current president started with no pilot experience last year, and already he's an accomplished glider pilot."

"Contrary to popular opinion," Jim continued, "gliding and soaring is not a dangerous sport. Even though there's no engine. Nearly all sailplanes and gliders have 'lift spoilers' that permit controlled short-roll landing. The aircraft have low landing speeds (30-35 mph normally) and can be stopped in a few feet even with no headwind."

A German pilot on temporary duty at Kirtland Air Force Base for two months showed club members what could be accomplished with soaring. He flew 373 miles to Garden City, Kans. Several of his glides carried him 50 miles or more at an average speed of 50 mph.

from somewhere amidst his 500 potted plants. "I'm interested in what makes them grow, and I like to do a lot of experimenting."

Smitty is, for example, trying to develop an African Violet that will grow outdoors. He has started one which looks like it's going to be a healthy plant, but he's not predicting results yet.

Another project is growing geraniums which will bloom in the wintertime. But Smitty will have to wait until the cold season to see if he's been successful. He's also working on hybrid ornamental peppers with red, purple, and yellow pods.

Last winter he stored 25 plants outside to see if they would live until spring. He covered them with a heavy layer of leaves, and was delighted to find 18 still alive when warm weather came.

Of course with all this experimentation, Smitty has tried every kind of fertilizer. He finally came up with one he liked best. It's his own mixture. However, he's still combining chemicals to see if he can get better results.

One particular plant with very robust-looking leaves filled a pot

GARDENER CHARLES SMITH (4574) has about 500 potted plants around his home. He is holding a Jade plant, and in the foreground is an asparagus fern which is about 21 ft. long.

abundantly, but Smitty doesn't take much credit for it. "That's German Ivy," he said, "and you can almost make it grow by waving the plant over the pot, it's that easy."

He picked up another pot, turned it over and tapped it on the side of a bench, and took the plant out without losing a grain of dirt. He wanted to explain the root system. Smitty has a down-to-earth philosophy about his interest. "I don't use the botanical names," he remarked, "because no one but a professional would know what I was talking about."

He pointed out one called the mother-in-law plant. If you eat the stem it causes a swelling in your throat and you lose your voice. "That's wishful thinking," he believes. do you find a thermal? "Trees and water usually absorb heat, so stay away from them," says Jim Stark. "Look for light spots on the terrain and fly over them. If you feel a slight bump and your instruments indicate a slight lift, turn the plane back to the spot because you're probably in a thermal. When you gain enough altitude, glide in the direction of your goal until you find another thermal. Then start over again."

All four men belong to the Albuquerque Soaring Club, which owns two gliders and a winch tow. The gliders are a two-place trainer and a single place higher-performance plane which members constructed from a kit. The oneseater has oxygen equipment and instruments for cloud flying.

The men do most of their flying on weekends and holidays. On a good day, each person averages about two flights, each lasting from one-half to oneand one half hours. On occasion, flights have lasted more than five hours.

Gliders are launched by either winch- or aero-tows. For aerotows a 200-ft. nylon rope, attach"We'd be glad to talk to anyone interested in joining the soaring group," Jim said. The Albuquerque Soaring Club headquarters is presently located at Alameda airport, and several members can usually be found out there on good weekends.



"What's a nice kid like you, doing up in a place like that ? "

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-Champion Larry Tabor-

Golfers Vary Actions At Cloudcroft and **Play Bridge Too**

Narrow, tree-lined fairways, occasionally guarded by water hazards, dominated the course at Cloudcroft where 49 Sandia Laboratory golfers played in a weekend tournament recently.

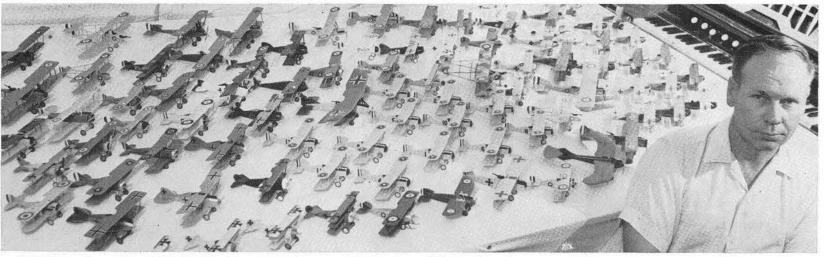
Larry Tabor (4412) led the golfers in the handicap tournament with a net score of 105, and was awarded a trophy. Team winners received gift certificates.

Tied for four-ball team honors at 104 were Jack Canute (7231), Glenn Guist (4412), Charlie Runyan (4220), and Rex Roselle (4413); and Jim Kelly (2632), Oscar Schroll (2542), Dan Power (7241), and Bill Rappleyea (4253).

Two teams also tied at 107 for three-ball winners. They were Maury Chavez (4132), Lou Aragon (4171), and Bill Rappleyea; and Glenn Morter (7147), Larry Tabor, and Vic Sirwinski (2444).

Two-ball team winners were Jack Canute and Oron Worden (2313)

A duplicate bridge tournament was also held in conjunction with the golf tournament. Fred Silva (7521) and June Leonard (3432) tied for first place individual honors and received duplicate trophies.



NINETY scale models of World War I combat planes are displayed by Jim Breitenbach. Jim draws his own plans for each plane, builds each part "from scratch," and mixes special paint to simulate the

original color schemes used. He spends as much as 100 spare-time hours in the construction of a single plane. Collection was started in 1945 when Jim was a B-29 gunner stationed in Florida.

Building Precision Scale Models of WW I Combat Planes Occupies Jim Breitenbach

"They were fabulous airplanes," Jim Breitenbach (7323) was saying. "Made of wood, wire, fabric and dope, those old crates were flown by reckless fools, but they wrote a special chapter in the history of warfare."

Jim was looking at his collection of 90 colorful models of World War I combat planes. Each model was a masterpiece of precision and detail, an exact replica of the original. The scale used for all the planes was quarter-inch to the foot.

Jim picked up a small Fokker tri-plane. It was painted bright yellow with a sky blue control surface and a red cowl. The tiny machine guns looked wicked.

"Richthofen flew one like this," Jim said. "These others (he indicated four more Fokker tri-planes painted in bizarre colors) resemble the markings of Richthofen's Flying Circus. They took a terrible toll of Allied fliers. Richthofen alone shot down more than 80 confirmed planes in combat."

"Wagtail"

Jim's models range from the German "Taube" (Dove), used during the earliest part of the war to the British Westland "Wagtail," which saw action late in 1918. Each one is thoroughly researched and the plans are painstakingly drawn in minute detail. Materials used in the construction

include balsa wood for the fuselage and wings, and basswood or white poplar for the rudder, elevators, and struts. Silver thread is used to simulate the intricate wire rigging of the original plane. Exposed portions of the motors are made from carved wood. For instance, Jim constructs a radial engine around a hardwood crankcase, and adds cylinders made from dowels wrapped with thread. This is then enclosed in a carved cowling with tiny exhaust pipes protruding at the rear.

Wheels are another bit of ingenious construction. Jim shapes a piece of solder into a ring, paints it black, and mounts it on a carved hardwood hub. He duplicates spoke wheels by using thread, made stiff with glue, as the spokes.

Jim builds all his models "from scratch." Plastic is a dirty word around his house.

Full Squadrons

"Handle it easy," Jim said. "A job like that Nievport 28 takes about 60 hours to complete. The large Bristol two-seater took about 100 hours to build."

Jim sees no end to his hobby. "Enough pictures and drawings are available to draw plans for about 200-odd different types of WW I planes. And then, too, I can always build whole squadrons of individual types, like the 12 SE-

5's and the 15 Fokker D-VII's that I have here."

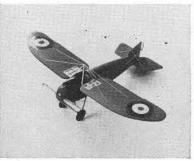
The building of the collection of 90 models started in 1945 when Jim was a B-29 gunner stationed in Florida. "A friend, H. A. Burdwood, and I started one rainy weekend and we've kept it up since," Jim said. "He now lives in Yarmouth, Me., but we keep the mails busy exchanging plans and information."

In addition to the solid scale models. Jim has built rubber- and gasoline engine-powered flying models and models of old sailing ships. Current project is a Zeppelin airship, built to the same scale as the WW I combat planes. The frame of the Zeppelin is already built and measures over ten ft. in length.

"I figure it will take about six months to finish it," Jim says, "but first there's a Vickers 'Gunbus' that I want to complete."



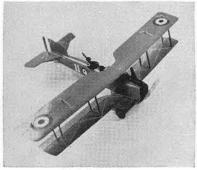
Sopwith "Baby" Seaplane



Bristol Monoplane



Albatros D-III



Bristol F2-B

It's an Easy Short Drive from Livermore To California's Serene, Scenic Muir Woods

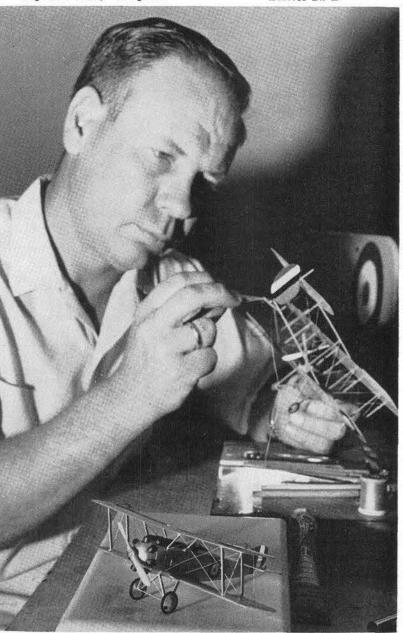
Sandia Corporation employees at Livermore Laboratory will find Muir Woods within easy reach, with a round trip possible in one day. However, for more extensive visits, overnight accommodations may be arranged in nearby cities. This is the third article of a summer series describing vacation spots in Northern California and New Mexico.

Just a short drive north of San Francisco, across the Golden Gate Bridge, stands the Muir Woods National Monument with marvelous scenic views, an uncrowded trees found at Muir Woods grow picnic area, and the peace and in regions along the Pacific Coast

state where the giant redwoods are found in abundance, this area is the closest to Livermore, a distance of about 60 miles. The same quiet so welcome to the weekend extending from 125 miles south of

cisco in Humbolt Redwoods State Park, is 364 feet high, the tallest living thing on earth.

The coastal variety of redwoods is often confused with the giant sequoia of the Sierra. Trees of this species are found in the Sierra Nevada at altitudes of 4000 to 8000 feet. These trees attain diameters of 35 feet or so but are considerably shorter than their coastal relatives. Giant sequoias are found in Sequoia, Kings Canyon,



vacationer.

Principal attraction for the visitor is the magnificent redwood, or coastal sequoia preserved by the National Park System in this 485acre national monument. Trees of the species found in the park exceed 2000 years in age and rise hundreds of feet in the air.

The towering trees, cathedrallike in appearance, help establish a mood of serenity in the park. Brooks and winding trails provide new vistas around every turn.

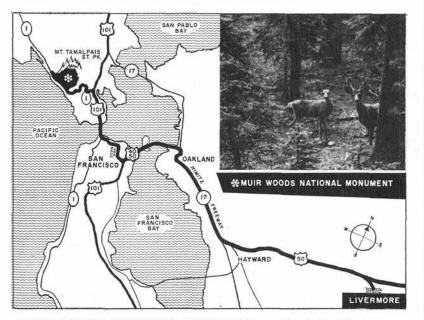
Hundreds of raccoons, deer and birds of all varieties populate the area and bobcats and skunks can be seen occasionally. Steelhead trout and salmon are plentiful in the pools and streams but they are there to be seen, not to be caught.

Forest rangers conduct regular tours of the park from sunrise to sunset, the hours the park is open. Souvenirs and refreshments are available at a small shop adjacent to the administration building.

Adequate parking space and a picnic area are provided, but no fires are permitted and there are no campsites.

Although Muir Woods is but one of many parks throughout the San Francisco to the southwest corner of Oregon. The Founders Tree, 250 miles north of San Fran-

and Yosemite National Parks, the destination for many other weekend vacations.

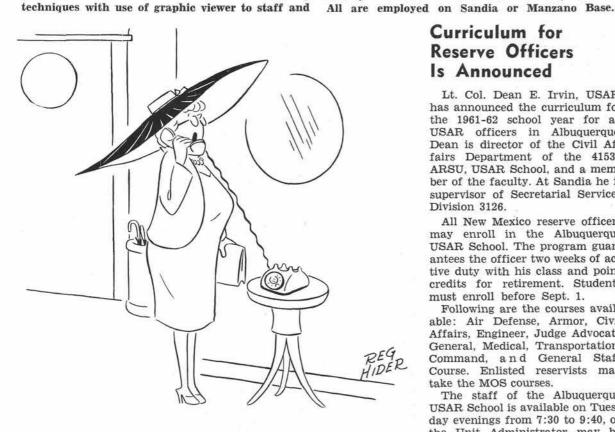


MUIR WOODS NATIONAL MONUMENT, north of San Francisco, is the destination for this issue's Weekend Vacationer. About 60 miles northwest of Livermore, the park can be visited easily in one day. A more extensive tour, taking in Mt. Tamalpais State Park and nearby beaches, makes a fine weekend outing.

STRIVING FOR REALISTIC DETAIL, Jim Breitenbach uses silver thread to simulate intricate wire rigging on his models. He is completing a Vickers "Gunbus." In the foreground is a recently finished model of a British Westland "Wagtail."



LT. COL. Dean E. Irvin demonstrates teaching faculty members of the 4153d ARSU, School. techniques with use of graphic viewer to staff and



"Wind velocity, please?"

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near 7893.

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CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication unless changed by holiday. RULES

- 1. Limit: 20 words
- One ad per issue per person 3.
- Must be submitted in writing Use home telephone numbers
- 5. For Sandia Corporation and
- AEC employees only 6. No commercial ads, please 7. Include name and organization.

FOR SALE

TV, portable, \$50. Jimenez, AX 9-17 0474

- 0474. POWER TAKE-OFF for Willys transfer case, \$35. Andrews, AL 6-7328. PORTABLE RADIO-PHONO, \$30; blond corner step-table, \$7.50; 20-in. 3-speed window fan, \$15; 8-place settings Drag-onfly Winfield China, half-price. Rueb, AX 9-4805
- onfly Winfield China, half-price. AX 9-4805. TWO METAL (T) clothesline poles

and Continuer, longe parts, randscaped, near Winrock, schools. Scott, AX 9-7893.
'61 AUSTIN A-55 sedan, cash or older car in trade. Hoglund, AX 9-8233.
PIANO, Kimbel Studio, priced to sell. Kochmann, AL 6-1680.
BLOND WURLITZER reed organ and stool, \$50. Banks, AL 5-2544.
COOLER, refrigerant window type, 220v, almost new, bargain. Bergquist, AM 8-6909 after 5.
USED COUCH w/matching chair; pink kitchen clock; new Westinghouse portable mixer; used Sunbeam Mixmaster. Davis, AX 9-3384 before 3 p.m.
CORRAL FENCE, 200 ft. white board, 4 to 5½ ft. high, 3 gates, bargain price to remove from Base housing. Campbell, ext. 35242 or 29192.
MATTRESS and box spring set; walnut dining table, 6 chairs, w/felt base, table top pad. Culley, AL 6-6308 after 5.
BRM HOME, 134, baths, \$14,500, \$1,300 down, GI loon; 16 cu. ft. Carrier Freezer, upright, \$225. Americana Encyclopedia set, \$100. McCarthy, 10705 Irene NE, AX 9-2862.
ROTARY LAWN MOWER, 19", 4-cycle engine, used one season, \$30; auto-tow bar, Blue Chip w/brake cable, \$35. Von Biesemann 298-0222 ROTARY LAWN MOWER, 19", 4-cycle engine, used one season, \$30; auto-tow bar, Blue Chip w/brake cable, \$35. Von Riesemann, 298-0222.
WHEEL CHAIR, lightweight, folding. Dunsworth, 243-4364.
AIR CONDITIONER, portable, TravelAire, Model 960, double squirrel-cage blowers, cost \$70, selling \$29. Johnson, AX 8-1011, 8703 Aztec NE.
DAY-BED COUCH, \$15; new Revere Ware. Farrell, AX 9-4938.
TELESCOPE, Sky-Scope 31/2", reflector, 455-60x-125x eye pieces, \$25. Webr, DI 4-5183.

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COLLIERS ENCYCLOPEDIA, complete set, \$35; freezer, 14 cu. ft., chest type, \$143.50. Candelaria, 345-0844. 3 BRM INEZ BRICK, 13/4 baths, new car-peting, drapes, dishwasher, sprinklers, air conditioner, large patio, landscaped, near Winrock, schools. Scott, AX 9-7893 NEXT

6 - 2719

Curriculum for **Reserve Officers** Is Announced

Lt. Col. Dean E. Irvin, USAR, has announced the curriculum for the 1961-62 school year for all USAR officers in Albuquerque.

Dean is director of the Civil Affairs Department of the 4153d ARSU, USAR School, and a member of the faculty. At Sandia he is

supervisor of Secretarial Services

All New Mexico reserve officers may enroll in the Albuquerque USAR School. The program guarantees the officer two weeks of active duty with his class and point credits for retirement. Students must enroll before Sept. 1. Following are the courses avail-

able: Air Defense, Armor, Civil

Affairs, Engineer, Judge Advocate

General, Medical, Transportation,

Command, and General Staff

Course. Enlisted reservists may

The staff of the Albuquerque

USAR School is available on Tues-

day evenings from 7:30 to 9:40, or

the Unit Administrator may be

contacted at 142 Monroe NE, AL

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6

take the MOS courses.

Division 3126.

NE. BEDROOM SET, twin beds, large double dresser w/mirror, small chest, grey. Inglat, TR 7-1146 after 5:30 p.m. COMBINATION "Boodle" baby buggy, car bed and stroller w/mattress, \$25; bottle warmer and vaporizer, \$3; 3 walnut chairs, \$6. Farrell, AX 9-4938. S&W COMBAT masterpiece, .38 special, \$65; 6 boxes ammo, holster, other ac-cessories included, consider .45 auto. trade. Cranston, 256-1662. FRENCH POODLES, miniature silver. Uli-varri, AL 5-3936, 4820 McKnight Ct. NE. POWER LAWNMOWER, reel type, \$40; '60 POWER LAWNMOWER, reel type, \$40; '60 Cushman Super Eagle, lots of extras, \$300. Krahling, AM 8-8126, 1036 Cushman Super Eagle, lots of extras, \$300. Krahling, AM 8-8126, 1036 Princeton NE. SCREEN DOOR, 6'8''x3', \$9; living room suite, \$80; wrought iron coffee table w/glass top, \$3.50; three table lamps, \$10. Heineman, AL 6-6387. 30-06 SPRINGFIELD, blued, Jaegers trig-ger, Lyman 48 and 17 sights, muzzle brake, Fajain Monte Carlo stock, glass bedded. Applegate, AX 9-3337. CONN ORGAN, original cost, \$2500, will sell for \$850; typewriter, standard size, \$25. Dixon, AX 9-6886. PLASTIC SWIMMING POOL, 10 ft. dia-meter, 24" deep, tubular metal frame, aluminum sides, \$25. Bauer, AL 5-7774 CEMENT MIXER, 21/2 cu. ft., w/o motor, \$45. Toya, 125 El Pueblo Rd. NW, DI 4-2775.

Sandia Service Awards 15 Years





Joseph O. Muench 1442 Aug. 12, 1946

LAB NEWS



Leo P. Ortiz 3463 Aug. 12, 1946



Don B. Shuster 7200 Aug. 14, 1946

Peter G. Rospopo 4253 Aug. 8, 1946

William J. Howard 8100 Aug. 15, 1946

Tom L. Wallace 1414 Aug. 16, 1946

10 Years Aug. 5-18

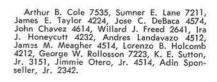
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Marjorie E. Baca 4335, John R. Johnson 7232, Charles H. Maak 1121, Thomas W. Mc-Kinney 2422, William T. Price, Jr. 2541, H. S. Swartzbaugh 7254, Donald E. Grebe 7234, Bonnie M. Montano 4573, Elizabeth C. Heisler 1000, Joe A. Trujillo 4573, Floyd C. Mc-Gimsey 7311, Thomas R. Bates 1413, Raymond M. Caster 2422.

Attends Training Course

David J. Chavez (7225-2) and Elizabeth H. Juckeland (8121-1) recently completed 10 - day courses on complex vibration practice at MB Electronics, New Haven, Conn. The courses presented information on random noise theory, basic sinusoidal or complex random vibration testing techniques, and diagnosis of equipment faults.

SHOPPING CENTER



Catches Huge Trout

The granddaddy of all German brown trout may have been caught by Vince White (4413-2) during a recent trip to Horse Tooth Lake in Colorado. The fish weighed 6 lbs. 7 oz. and measured 25 in. Vince's entry currently is placing first in a monthly fishing contest at Fort Collins, Colo.

SHOPPING CENTER

CLOCK w/Westminster GRANDFATHER

- GRANDFATHER CLOCK w/Westminster chimes, weight-wound; also electric floor polisher. Hill, CH 3-3493.
 TO SWAP 7.10/8.00-15 tire chains for 9.00-14. Stam, AX 9-3724.
 RIDER for 2-mon car pool seeking third man, vicinity Cuervo and Candelaria to 880/892. Slack, AM 8-3289.
 MOVIE PROJECTOR, 8mm, must contain 300 or 500 watt lamp. Reinman, AL 6-9737.
 FOAM RUBBER for mattress, 4-pieces approximately 4 ft. x 2 ft. x 3 inches each. Kotoski, AX 8-1732.

proximately 4 ft. x 2 ft. x 3 inches each. Kotoski, AX 8-1732. O RENT three bedroom home, before Sept. 1, prefer Monroe Jr. High School district, no small children. Mortensen, AM 8-3626.

TO SWAP very good bird cage for a sturdy dog house. Everett, AX 9-6057. TO JOIN reliable car pool from Candelaria and Blume NE. Trybul, ext. 55244.

LOST AND FOUND

LOST AND FOUND LOST—Black tobacco pouch, roll type; blue personalized check book of James McIlmoyle, sterling and turquoise tie clasp, yellow sweater, Sandia auto, elec. pocket protecter w/Sheaffer pen and pencil set and Vaper-Writer; papers left in bike basket, Kaywoodie pipe, maroon Sheaffer pencil w/gold band and silver top, sleeping bag containing little girl's clothes, aluminum car key, Eard deiverte licence of Mcdi

DEADLINE FOR SHOPPING CENTER ADS Friday Noon, Aug. 11

'59 MERCURY WHEELS, 2, w/Town and Country tires, \$20 each set; Westing-house dryer, \$100. Reeves, AX 8-1507.
MAGIC CONTOUR COUCH. Reinertsen, AL 5-1954.
3 BRM BRICK home, large Ir, paneled den w/fireplace, landscaped, c a r p et e d, drange air conditioned no avuilifying.

3 BRM BRICK home, large Ir, paneled den w/fireplace, landscaped, c ar p et ed, drapes, air conditioned, no qualifying. Oliver, AL 5-3959, 1108 Kentucky NE. PHILODENDRON in urns; automatic wash-er, desk, dinette set, fireplace tools, bedroom suite, lamps, utility cart, step table, card table. Barker, AX 9-2365. BEAGLE PUPPIES, 2 females, AKC regis-tered. Moulton, AX 8-2511, 3120 Pitt NE.

strands wire clothesline, bring shovel and take them. Hurley, 1004 Clancy NE, 298-4440. MOBILE HOME, Anderson, 1955, 40x8, living ream corported one bettern

- living room carpeted, one-bedroom, built-in range, eye-level oven. Mick, AX 9-5814 evenings and weekends, 2621 Rhode Island NE.

- --oo14 evenings and weekends, 2621 Rhode Island NE.
 TWO HIGH CHAIRS, \$8 and \$5; playpen, \$12; car-bed-seat, \$2; potty chair, \$2; maternity clothes, size 12-14. Joseph, AX 9-6989.
 BOYS' BICYCLE, 26" balloon tires, w/chain guard and kick stand, \$20. Bemis, AM 8-6376.
 '51 JEEP WAGON, overdrive, heater, new brakes, engine overhauled, \$250. Lueh-ring, DI 4-2676.
 BRM, 13/4 baths, utility w/220v., built-in range, Spanish fireplace, vigas, sprinklers, landscaped, walled, \$16,000, no qualifying. Hewitt, AM 8-2563 or AM 8-2822.
 '51 OLDSMOBILE 88, 4-door sedan, best

- AM 8-2822. '51 OLDSMOBILE 88, 4-door sedan, best offer, Gossett, AX 8-0750. '58 SIMCA station wagon, clean, \$495. Sauer, AL 6-6831. 21" TV, blond console, \$75; Filter Queen vacuum cleaner w/attachments, \$20. Chandler, AX 8-1976. CAMPING TRAILER, sleeps three, \$149; Klipsch-type speaker system. \$85;
- Alipsch-type speaker system, \$85; auxiliary gas tank, 40 gal., \$15. Win-blad, DI 4-3109, 4413 Palo Duro NE.
- CAST IRON SINK w/hardware, \$15; plat-form rocker, green upholstery, \$10. Burns, AL 5-3737, 1319 Dartmouth NE.
- NEW COOLER, 4000 cfm, 2-speed, pump, 25 ft. copper tubing, \$100. Scully, 345-25 ft 1771.
- LAWN MOWER, Craftsman, 18 in., \$18. Guest, DI 4-6554.
- O RAMBLER custom 4-door station wagon, total mileage, 6300; air con-ditioner, automatic shift, heater, self-adjusting brakes, \$2300. Belmore, AX 9-5770, 1612 Hendola NE. '60

- 45X-00X-125X eye pieces, \$25. Weber, DI 4-5183.
 LIONEL TRAIN, 2 complete trains w/upper and lower tracks, tunnels and many ex-tras, mounted on 5'x12' train board, \$400 worth for \$75. McWherter, AX 8-0879.
- 3-087 8-0879. '48 CHEVROLET, 2-door w/1955 Chev. V-8 engine, floor shift, w/w tires, R&H, \$295. Lowe, 408 Montclaire SE. HI-FI COMPONENT type stereo system, cost \$750, sell \$300 cash. Call Saturday, Sunday, or evenings Monday thru Wednesday. Hendricks, CH 2-0135.
- '52 OLDS 4-door, hydramatic, radio w/ rear speaker, heater. Bureta, AL 6-1833 after 6:30 p.m. or weekends.
- '57 CHEVROLET, 2-door, V-8, auto. trans., R&H, w/w tires, 6000 miles on new motor, \$795 cash. Clothier, AM 8-5470. FIVE BRM Home, 21/2 baths, Mossman, air conditioner, curtains and drapes, large garage, sprinklers front and back, established yard, block wall. Whittaker, AX 9-9172.
- 17" TV, console, \$35; Ironer, Universal, \$40. Keever, AX 9-1334.
 MAPLE TABLE, drop leaf, Early Ameri-can, almost new, extends to 42x84, seats 12, \$80 or best offer. Wheelock, AM 8-4402 after 5.
- DRAPES, 1 pair heavy faille, champagne color, 144"x84", \$25; 1 pair modern, 72"x46", \$5; others. James Dishwasher, \$40. Goodwin, AL 6-7145 after 5.

\$45. Toya, 125 El Pueblo Ra. NYY, et 4-2775.
ELECTRIC STOVE, Frigidaire, standard size, only one chip in finish, \$50. Williams, AX 9-1631.
BRM ROBERSON, 13/4 baths, ac, front sprinklers, carpeting, drapes, Venetian blinds, walled, lease /option to buy. Alexander, AX 9-7967, 9619 Arvada NE.
'58 PORSCHE Speedster, \$1900. Rucker, AL 5-4395 weekends or after 5.
BRM HOME, NE, w/stove, refrigerator, air cooler, garbage disposal, garage, disposal, garage.

2 BRM HOME, NE, w/stove, refrigerator, air cooler, garbage disposal, garage, terms and price to be negotiated Hawk, AL 6-6264. K22 REVOLVER, Smith and Wesson, w/ holster, \$45. Moyer, 345-0567. POLAROID CAMERA outfit, Model 80A, includes compartmented case, print copier, bounce flash, close-up set, tri-pod, \$50. Petrone, AL 5-3633. LAWN TRIMMER, electric, reconditioned, sharpened. Kelly, AL 5-7226

- '57 VOLKSWAGEN, pampered by original owner, R&H, new sunroof, paint, battery, recaps, brakes, best offer. Burns, CH 2-2407 ofter 5.
 '61 FORD Galaxie hardtop, stick shift, overdrive, 1500 miles, many extras, \$2795 total price. Marquez, CH 7-3825, 915 Waldie Rd. SW.
 '52 PLYMOUTH, 4-door, heater and overdrive, 90,000 miles, one owner, \$95. Bray, AX 8-2334.
 '58 CHRYSLER, white, 300-D, 390 hp, air conditioned, loaded w/extras, 31,000 miles, \$2195 Bascom, AL 6-2824.
 AMATEUR EQUIPMENT, Globe Chief 90-A transmitter, Hallicrafter S-40-B receiver, UM-1 modulator, Heatthkit V.F.D. Coax Relay. McFarland, AX 9-1819.
 '58 DODGE ½ ton pickup, new motor, auto. trans., heater, \$940; '57 Ford ½ ton pickup, 4-speed, R&H, \$900. Ward, AL 6-9286.
 3 BRM HOME, brick, den or extra bedroom, Inez addition, many extras. Schooley, 2308 Cutler Place NE.
 GREAT LAKES TRAILER, 10x42 ft., furnished, modern, clean, late '59 model w/washer, two bedroom. Williams, AM 8-8889.
 ALUMINUM GARAGE DOOR. Ryanczak, AX 9-3527.
 '88 FIAT "600". Everett, AX 9-6057.
 '9 MODEL A Ford, 2-door sedon, new motor, body fair shape, \$270. Roy, AL 5-7427.
 '50 MERCURY Club Coupe, \$225. Wilson, AX 8-0049 MERCURY Club Coupe, \$225. Wilson, '50
- Su MERCURY Club Coupe, \$225. Wilson, AX 8-0049
 BRM HOME, 13/4 baths, dining room, dishwasher, disposal, blinds, drapes, carpeting, double garage, sprinklers, landscaped, covered patio. Bishop, AX 9-0649 after 5.
 WASHING MACHINE, Kenmore topload-ing, fully automatic. Blumenthal, AL 5-8185.
- WASHING MACHINE, Kenmore topload-ing, fully automatic. Blumenthal, AL 5-8185.
 SHELTIE (TOY COLLIE) puppies, AKC registered, show and obedience cham-pionship stock. Schneider, AX 9-6243.
 AUTOMATIC WASHER, Easy, 4-years-old, \$35; purebred blond Cocker Spaniel pup, 6-weeks-old, \$20. Hunter, AL 6-7610, 2812 Madeira Dr. NE.
 '56 LAMBRETTA SCOOTER, recently over-hauled, \$100. Pearcy, AM 5-0127
 ALL-STEEL, one-wheel luggage trailer w/ new heavy duty tire and '61 license plate, \$45. Bauder, AX 9-7322.
 RACER KART, David Bradly. Brown, AX 9-5405.

RACER KA 9-5405.

WANTED

- RIDE OR CAR POOL from vicinity of Hoff-mantown to Bldg. 800. Snider, AX AX
- mantown to Bldg. 800. Snider, AX 8-0246. D JOIN car pool or swap rides to Bldg. 800. Schneider, 2817 Espanola NE, AX 9-3769. TO

- Schneider, 2817 Espanoid NE, AX 9-3769.
 RIDE FROM Cardenas and Claremont NE to Bldg. 802. Tyler, AL 5-3770.
 RIDERS—travel from 12th and Menaul NE to Cornell, Cornell to Highland, High-land to Ridgecrest. Lang, DI 4-1917.
 RIDE FROM 131 Harvard Dr. SE to Gate 6. Fidler, CH 2-5815.
 RIDE FROM 1200 Wilmoore SE (Yale SE) to Bldg. 800, will pay or join car pool. Davis, 243-2315.
 HOMES FOR pretty fuzzy grey kittens. Tatum, TR 7-0997.
 HOME FOR SAMOYED dog, needs good home, will give to responsible party. Lowe, AL 5-4719.

- Ford keys and driver's license of Mari-lynne M. Kay, Henckles pearl-handle pocket knife. Lost and Found, ext. 26149.
- FOUND-Blue Paper-Mate ball point pen, OUND—Blue Paper-Mate ball point pen, sunglasses in red zipper case, ladies glasses in brocade holder, safety glasses found in men's rest room Bldg. 802, magnetic gold loop earring, Benrus pocket watch, GM car keys. Lost and Found, ext. 26149. OUND—Joan of Arc silver medal at Los Altos pool. Burns, ext. 26135.
- FOUND-

FOR RENT

- FOR RENT
 2 BRM HOUSE, w/stove and refrigerator, wall to wall carpet, SW Valley, \$50 per ma. plus utilities. Gallegos, CH 2-7937.
 2 BRM HOUSE, 2318 Rice Ave. NW. Perea, AM 5-0861.
 2 BRM HOUSE w/den, unfurnished, water paid, \$125 month, 541 Solano NE. Kite, AL 5-8208.
 2 BRM APT. in brick triplex, unfurnished, newly decorated, air conditioned, stove, refrigerator, washer rough-in, water & garbage paid. Tillman, AL 5-6292.
 3 BRM HOUSE, unfurnished, redecorated, 13/4 baths, ac, walled, close to schools, 13/4 baths, ac, walled, close to schools.
- 134 boths, ac, walled, close to schools, Winrock, \$100 month, available Sept. 15. Jones, 298-3891, 1610 Inez Dr. NE.

FOR SALE AT LIVERMORE

- CABIN CRUISER, 17 ft. Custom Craft, flying bridge, 40 hp. Mark 55 Mercury motor plus Master Craft trailer, \$1200. Roske, HI 7-4429.
- Roske, HI 7-4429. PORTABLE JAPANESE Transistorized Re-ceiver, AM and short wave, \$30. Soren-son, Ext. 2359. BABY CRIB, spring and mattress, 2 year size, \$12; overstuifed chair, green up-holstery, \$25. Frost, HI 7-5994. TOY FOX TERRIER, male, six months old, pedigreed, papers included, has all shots. Chappell, HI 7-5801.

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LAB NEWS

POST HASTE-Members of Sandia's Emergency Force assembled during a "dry run" exercise of the group last week. L to R: A. O. Butts (4514-1), E. J. Whitmore (4575), and J. M. Winter (4512-1).

Emergency Force Assembles In Minutes for Trial Exercise

A "dry run" last week called out the 50-man Sandia Laboratory Emergency Force.

The force was created to deal with emergency situations such as floods, snow storms, and explosions. The group assembled for the practice exercise within 10 minutes of the call.

"We do not intend to use the force in emergencies which other agencies are already geared to handle," according to John Timmons of Emergency Planning Section 3232-1 which directs the force. "However, the Emergency Force could be used to help such

organizations as the Fire Department and Plant Security.'

The force is composed of volunteers, some of whom possess special skills or knowledge which would be of value in emergency situations.

"Our plans are to train the force in handling different types of emergency problems," John said. "We will get necessary equipment and have it ready for use." Last week, after assembly in Building 815, the force attended demonstration of emergency a and rescue equipment by the Albuquerque Fire Department.

Egyptian Cubit Was Man's First Attempt To Standardize Linear Measurements

When Noah undertook to build the Ark. God instructed him to make it 300 cubits long, 50 cubits wide and 30 cubits high. Later the Egyptians established the royal cubit, which became the first standard of linear measurement. Now, this royal cubit in replica has found its way to Sandia Laboratory.

Several weeks ago, J. C. Moody (2411-1) wrote to Continental Machines, Inc., of Savage, Minn., requesting a chart to be used for a speech concerning systems of measurement. Soon he received a long, rectangular, heavily-insured package. The package contained a wooden box, carefully finished and varnished, and covered with the scribed lines of Egyptian hieroglyphs. The cover lifted easily. Inside was a black granite master of the royal cubit.

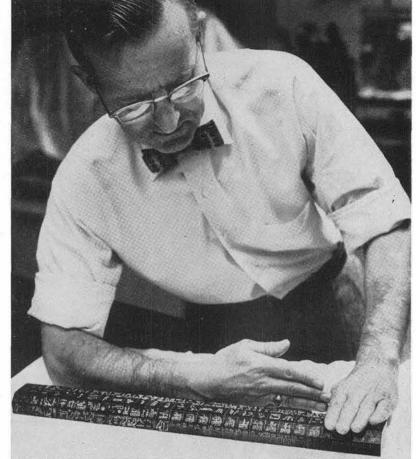
"It was a museum replica of the real thing," Mr. Moody explained, "and was used by Continental Machines as a display. They were generous in sending it to Sandia, and you can imagine its effectiveness as a visual aid for a speech."

Prehistoric man instinctively used his body dimensions as standards for measurement. The cubit, one of the first standard linear measures based on body dimension, consisted of the distance from the point of the elbow to the tip of the middle finger. By 5000 B.C., dynastic power had reached such a magnitude that the body of the monarch only was referred to as a standard. The Egyptian pharoah, Amenhotop I (c. 1411 B.C.) devised a royal measurement consisting of the standard cubit (equal to six palm spans) plus one palm-span of the royal hand; a measurement designated the "royal" cubit

Cubit Subdivided

The royal cubit was subdivided into one, two, and three finger breadths (digits); one palm (four digits); one hand (five breadths digits); one small span (12 digits or three palms); one large span (1/2 cubit length); one t'ser or two thirds (16 digits or four palms); one remen (20 digits), used for land measurement: and one small cubit, used for common measurements. The royal cubit had an overall length of 20.63 inches, and was used for measurement of temples and pyramids only. It was used to calibrate a number of measuring sticks or "working cubits." Egyptian craftsmen and artisans were required, on penalty of extreme punishment, to check their field instruments periodically against the royal cubit. The master instrument was made of black granite, the most dense and stable material known to the Egyptians.

"The cubit was the basis for the



ROYAL cubit length is demonstrated by J. C. Moody (2411-1), who used replica for recent lectures on measurement. Scribed lines on right end of front face were used for fractional measures.

Egyptians' dimensional control which served as the reference system," Mr. Moody said. "It enabled them to draw plans, and to determine relative dimensions of structural components." By combining these skills with imagination and direction, they became consummate builders. The cubit eventually became the measurement basis for the execution of sculptures and paintings, the construction of chariots and sailing vessels, the building of canals and systems of irrigation, and the collection of taxes involving land measurements. Circles and arcs of desired diameter and radius were drawn with lengths of string accurately measured against the cubit. Later, the Greeks utilized the string-circle principle in developing calipers and proportional dividers.

Egyptians Use Rope

The Egyptians found that a rope, marked by equally-spaced knots, could be extended between pegs in units of three, four or fiveknot lengths, in order to produce a right angle. The cubit was used to make an accurate right-angle form

Club Pool to Be Busy in August With Number of Splash Events

August swimming pool activities Saving from 9 to 10 a.m. Monday at the Coronado Club include seven different events.

Supervised water recreation for the youngsters will be held Monday through Friday from 3 to 4

p.m. all during August.

right-angle forms. Alexander the Great conquered Egypt in 332 B.C., but the conquest had no lasting effect upon the Egyptian standards of mea-

master to construct and check a

set-square, as well as to devise a

horizontal level, composed of two

surement. "As a matter of fact," Mr. Moody explained, "the Greeks utilized the Egyptians' cubit in developing the Greek olympic foot (12.16 inches). Then the Romans came along and based their Roman foot (11.65 inches) on the Greek standard. The Anglo-Saxon foot, from which the modern linear foot is derived, utilized the Roman foot as its basis.

"We can thank the Egyptians, indirectly at least, not only for establishing the foundations for modern measurement standards. but for paving the way to modern dimensional quality control, to progressive gauging, and to duplicate part production," Mr. Moody said. "Their influence upon our modern way of life is enormous."

through Thursday. Cost for this course is \$5. Competitive Stroke Correction

classes will be held from 8:30 to 9 a.m. Monday through Saturday. The class will be divided into two



EMERGENCY TRAINING-Special equipment was demonstrated to Sandia Laboratory's Emergency Force by members of the Albuquerque Fire Depart-

ment. The Sandia force will help the Fire Department or Security organization in case of any emergencies that may arise from time to time.

Both pools will be closed to the public until noon on Aug. 28 as swimmers will be taking Red Cross certification tests.

On Aug. 20, the Club will hold a free Swim Carnival for members and their families only. Participants can buy their lunches at the Club from 12 to 1. The pools will be closed at 1 except for those entering the water carnival events.

Four different swimming classes will be offered to members. Sixteen one-hour classes will be taught in Junior and Senior Life

groups, each meeting three times a week. Fee for the 12 one-half hour classes is \$2.

Four one-hour classes in Adult Drown-proofing (for persons 16 and over) will be offered on Sundays from 9 to 10 a.m. This course costs \$2

Skin Diving Classes will be held from 8 to 9 a.m. on Saturdays and Sundays. The Club will furnish air lungs for this \$5 course which consists of eight one-hour lessons. For further information call the Pool office, ext. 41287.

Sandia's Safety Record

Sandia Laboratory's current safety record of 122 days or 4,295,000 employee-hours without a disabling injury ended Tuesday as a maintenance employee working in the motor pool strained himself while installing a heavy cylinder in a vehicle.

At the time, the injury was painful but did not seem serious, however, pain built up over night and the employee reported to Clinical Medical Department 3330 the next morning. The employee is now recov ering at home.

Livermore Laboratory HAS WORKED 518,000 MAN HOURS OR 101 DAYS WITHOUT A DISABLING INJURY