

SANDIA LAB NEWS

published every other friday for the employees of sandia corporation, contractor to the atomic energy commission

Vol. 9, No. 16

ALBUQUERQUE, NEW MEXICO

August 9, 1957

Field Test Using Rockets to Get Data From High Altitudes

Sandia Corporation scientists, long engaged in upper air studies in balloon research, have launched a new program using rockets to gain high altitude data.

The study was initiated July 27 at the Tonopah (Nev.) ballistics range with the launching of a rocket which soared 80,000 feet in the air. A second rocket achieved the same altitude on Aug. 1.

The rockets, packed with telemetering equipment and instru-

mentation, will also provide important information regarding the ballistic performance of the test vehicles.

The next test is scheduled for later this month.

To carry out the new program, approximately 50 engineers and technicians from Sandia Corporation in Albuquerque and Salton Sea Test Base will be at the Tonopah range during the initial stages of the test program.

Adequate safety measures have been taken to assure the rockets will land in unpopulated areas. The vehicles will be fired in a southeast direction from the city of Tonopah and will impact within the range.

The nose cones of the rockets, containing instrumentation

equipment, will detach themselves from the rockets during descent, floating to earth by parachute to allow instrument recovery.

The ground to air rockets will attain various altitudes during the study and may be visible from the city of Tonopah.

During the course of the flights important data will be obtained on the rockets' behavior through optical instrumentation on the rockets and on the ground, radar tracking and instrumentation and telemetering equipment mounted in the nose cones.

Organizations participating in the program include Systems Development (1200), Research (5100) and Field Testing (5200).

Joe Hegge Addresses Meeting of Electronic Industry Leaders

Joe Hegge, 1470 Department Manager, and chairman of the Albuquerque Chamber of Commerce Electronics Advisory Board, presided at a dinner meeting of more than 100 representatives of Albuquerque's electronics industry July 30. The meeting was held at the Alvarado Hotel.

The local industrialists and business executives were guests of the Chamber and the EAB to hear Mr. Hegge outline the purposes of the board and its long range objectives. Another Sandian on the board is C. J. McGarr, (2200). Ex-Sandians on the board include Bert Bittner, Gene French and Dick Moore.

Formed last January, the board is working to get more electronics manufacturing firms to come into New Mexico. They work closely with the Chamber and the New Mexico Economic Development Commission. Plans are now being made to conduct a comprehensive economic survey in the community, to evaluate resources and facilities and to obtain a great deal of statistical data required to answer the questions of prospective businesses.

Electronic industries are especially desirable for Albuquerque because they require little raw material and natural resources, including water. Shipping costs are normally low because of the relatively small size of the products, technical manpower requirements are not excessive and market for such goods is expanding. There is an established local market for some such items.

New Vending Machines In Operation Aug. 15, Expect Improved Service

Improved service and operation of the vending machines is expected as a result of a change in concessionaires effective August 15, according to Employee Services Division (3122). The Coca Cola Bottling Co. is the new supplier and arrangements have been made to have two men servicing the machines on a full-time basis instead of only one.

Equipment will include the latest type drink dispenser machines which will serve a drink tasting almost exactly like similar bottled drinks. "Coke" and two other flavors will be available at most locations. Candy, cigarettes and coffee will be available at the same locations as before. Prices will remain unchanged.

To Save Safety Record Ethel Canady Continues Work With Broken Finger

Ethel Canady is the Queen of Electrical Repair and Modification Section 2231-2. She earned the esteem of her co-workers recently when she saved the enviable safety record of the section—no lost time injuries since November, 1950.

In keeping with the safety awareness of the section, Ethel was removing a metal handle of a hand drawn cart from the aisle when she broke the little finger of her right hand. The handle was left in the aisle by someone not in her section and Ethel was pushing it under a work table to get it out of the way. In doing so her finger was caught between the handle and the edge of the table.

She reported to the Medical Division and told them, "Just fix the finger so I can get back to work—this is not a lost time injury."

Later she told T. A. Allen, section supervisor, "I just couldn't take any time off the job. I work

right beneath the sign that says 'This section has not had a lost time accident in 2,463 days'."

In addition to the sign that proclaims the safety record, the section also conducts a monthly safety slogan contest. Slogans are submitted by section personnel and the winning slogan is posted with the winner's name until the next month.

"You can't measure safety with a broken rule," submitted by Paul Vandenberg is considered one of the year's best offerings. Currently on display is the slogan "Around the Clock Be Safety Wise—Our Safety Rules Are Just Your Size," submitted by Lillian Liskovec.

T. A. Allen takes no credit for the section's outstanding record. "It's something we do as a group. Each of the 15 persons in the section has to do his individual part in promoting safety."



FEATURED ACT at the Coronado Club Summer Swim Carnival Sunday, Aug. 18, will be the Synchronettes shown here performing one of their aquatic numbers. The Carnival will begin at 1:30 p.m. and will include exhibition swimming, diving, racing and swim contests. The girls are (L to R) Nancy Walker, Pat Fackenthall and Charlotte Stevens. All are coeds at University of New Mexico.

Technical Paper Will Be Presented By Two Sandians Sept. 5-7

Two Sandians will read a technical paper at a meeting of the American Physical Society in Boulder, Colo., Sept. 5-7. G. W. Anderson and F. W. Neilson are co-authors of "Effects of Strong Shocks in Ferroelectric Materials."

The paper discusses a means of transducing high explosive energy into electrical energy. It is a summary of work done in Sandia Corporation's Weapons Research Division I 5132. Mr. Anderson is Division supervisor.

Calendar of Cool Music, Cool Water Announced By Club

Cool music and cool water are the basic ingredients for entertainment at the Coronado Club in the next two weeks.

Billy Morris and his orchestra will play tunes at an informal dance at the club tomorrow night from 9 to 1. Leigh Sprague and his orchestra will supply the rhythm following the buffet Sunday night.

Swimming and pool-side dancing featuring the music of the Billy Morris orchestra is planned for the Swim and Patio Party on Tuesday evening, Aug. 13. Swimming is from 7 to 9, dancing from 9 to 11.

Topping off the entertainment is the Summer Swim Carnival at the club pool at 1:30 p.m. Sunday, Aug. 18. This event will include exhibition swimming and diving, races, and swim contests.

Standard features on the calendar include Social Hours tonight and next Friday night, with O. Wagner's orchestra this evening. Bingo night is scheduled for Wednesday, Aug. 14 and a Teen Dance is planned for Saturday, Aug. 17, from 8 to 11. Ladies Bridge on the 21st and Duplicate and Party Bridge on the 15th and 22nd fill out the calendar.

New Regulation For Sandia NCO CLUB

Management of the NCO club on Sandia Base has announced that in compliance with Army regulations the club facilities are now open only to club members or their guests.

Previously Sandia Corporation employees were allowed to use the club's cafeteria.

The club management hopes that by September plans will have been formulated whereby civilians with GS ratings equal to that of the first three grades may join the club as associate members.



Ethel Canady and Lillian Liskovec
—Safety awareness in Section 2231-2—



The Sandia Lab News is an official publication of the Sandia Corporation, Albuquerque, New Mexico

Photography by Photographic and Reproduction Division.

Office: Room 10, Bldg. 829, Employee Services

Telephones
Sandia Base 6-4411
Ext. 25253, 26135



Deadline
Friday noon of week
prior to publication

Member Association of Nuclear Editors, Border Council of Industrial Editors, and affiliated with International Council of Industrial Editors.



Bill Laskar Photographer; Jim Pennington, Asst. Cherry Burns, Don Graham, Assistant Editors Robert S. Gillespie, Editor



Gay Motifs

Among the large number of ads for the shopping center received by the Lab News this issue was the following:

"Free: Hearth decorations in grey fur and smart grey stripes. Male and female models come with automatic purr and built in washing attachment. Call O'Connor, Alb. 4-5136."



HOSTS Georgia and Orville Howard (both 5254) marked Georgia's birthday and return from a three-month temporary site assignment with a patio party at their home. The Howards (above) entertained about 40 Sandia couples including (below) Mrs. R. D. Statler (5254), D. E. Grebe (5213), Mrs. W. M. Snyder (5213) and Mr. and Mrs. R. A. Bice (5200).

Water Sportsman

Water sports have a strong appeal for Bob Costales (2461-5) who is on the swimming team for the Menaul Aquatic Club.

Bob has participated so far in three meets with teams from the "A" Pool, Los Alamos and the Coronado Club.

This is Bob's second year of competition. Last year while attending high school at Los Alamos he won the State Diving Championship and the State Breaststroke Championship. He has worked for the Corporation since March.

Another member of the Menaul Aquatic Club team is Henry Miller, son of J. S. Miller (4135-1).

Section 7311-3 Picnics

A surplus in Section 7311-3's charity fund supplied T-bone steaks for the group's family picnic in the Manzano Mountains July 27.

The volunteer collection is normally used to purchase flowers for ill co-workers, to help a needy family at Christmas, or a baby shower.

Welcome Back

Organization 2711 welcomes back Alfonso Lujan after his recent illness.

New Homes

Felix Gabaldon (2711) and his family have moved into a new home at 9713 Constitution NE. Oscar (2462-1) and Norma (7226) Goodwin moved last week into their new home at 3001 Carolina NE.

Ernestine (7423) and Donald Henderson gave themselves a fine present on their third anniversary on Aug. 3. The present — a home of their own at 614 Charleston NE.

Sandianotes . . .

Co-Workers Honor Al Fine With Decorated 'Pueblo' Chocolate Cake

Co-workers honored Al Fine (1261-3) for his thoughtfulness during the past year with a chocolate cake baked in the shape of an Indian pueblo, pink in color and complete with chocolate colored vigas.

Louise Cernich (1261-2) thought up the idea, Julie Bode (1261-2) baked the cake, and Dick Petersen (1261-1) was responsible for the

many Indians crowding the pueblo roof tops.

A "Historic Marker" in front of the pueblo proclaimed: "In the year 1956 A.D. The Great White Father (Al Fine) began carrying rolls over the rough, rocky roads of the state of New Mexico to feed his many children. This pueblo was named in his honor and is known as the Fine Pueblo."



Louise Cernich, Al Fine, Julie Bode —instigator, big chief, pastry—



AMONG THE CROWD enjoying festivities of the annual Beachcombers Ball held recently at the Coronado Club were these two happy couples. In the photo at left Robert Burgess (5213) and Helen Kinney are costumed as a shipwrecked sailor and a South Sea native girl while Carol Miner and Clyde Northrup, Jr., have gone tropical too. Carol's father, Richard Miner, is in 2553 and Clyde Northrup, Sr., works in 5213. Clyde, Sr., snapped the photograph.



Congratulations

Born to:
Mr. and Mrs. George W. Revels (2711) a daughter, Beth Allison, on July 18.
Mr. and Mrs. J. H. Marks, Jr. (1422) a daughter, Landra Caye, on July 19.
Mr. and Mrs. M. J. McLaughlin, Jr. (7311-1) a son, James, on July 24.
Mr. and Mrs. Haskell Woodall (1626-1) a son, Michael Henry, on July 29.
Mr. and Mrs. George Treadwell (1246) a son, Paul Edward, on July 19.
Mr. and Mrs. Lee E. Heames (5132) a daughter, Cathy Kay, on July 7.
Mr. and Mrs. Stephen A. Silver (2151-2) a son on July 28.
Mr. and Mrs. C. R. Carlsen (1261) twins on July 26, Melissa Fae and Jennifer Jill.

Sympathy

To M. L. Heisler (1611-3) for the death of his father on July 27 in Odessa, Tex.

To Stan Landrith (1626-1) for the death of his father on July 19.

Weddings and Engagements

Wedding bells rang out Saturday, August 3, for Cherry Lou Fellner (3125) and Robert J. Burns of Albuquerque. Attending the couple were Frances Pepmuel-



Mrs. Burns

ler (7225) and James Ryan (2461). The ceremony was held at the Holy Ghost Church. They are now at home at 946 Nashville SW. Mrs. Burns has been assistant editor of the Sandia Lab News since last June.

One of Sandia's newest employees, William Barlow (1411) will be married August 12. His fiancée and her family are coming from Maryland and his parents from Missouri for the event. It will be the first trip to the Southwest for all.

Bride-To-Be Honored

Sylvia Killgore (5513), who will become the bride of Si Gormley on Aug. 10, was honored with a dinner at the Fez Club and miscellaneous shower given by her friends and fellow-workers in the 5500 organization on July 24.

Speaking of Reporters

Electrical engineers usually talk about hi-fi systems and transistors but Sandia Lab News reporter T. J. Williams, Jr. also gets them to tell about mountain hikes, picnics and babies.

"T. J." is an electrical engineer himself and has been the Lab News reporter for organization 1450 since January.

He has been with the Corpora-

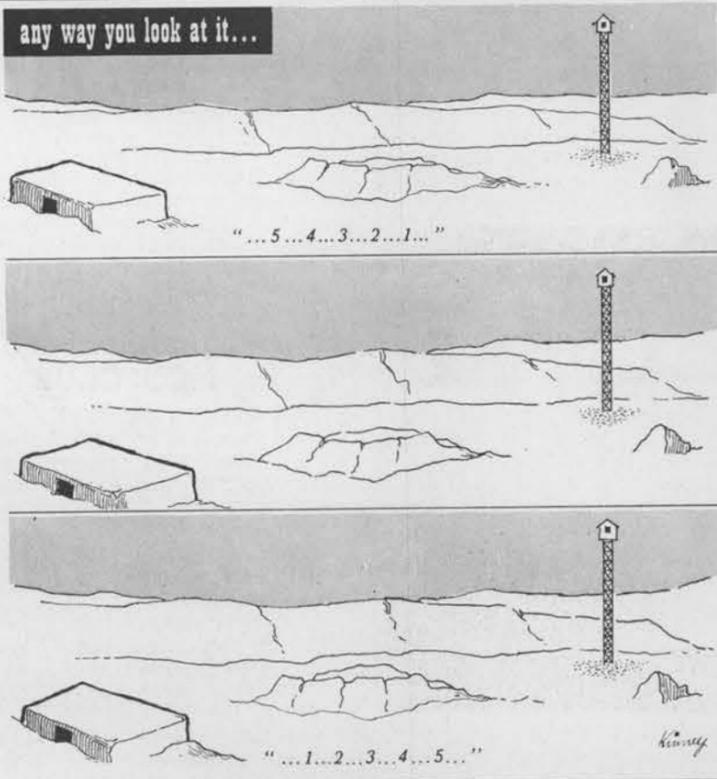
tion two and one-half years. A native of Albuquerque he graduated from the University of New Mexico in 1952, then served in the Army Ordnance Corps. His only previous journalism experience was on a high school newspaper.

T. J. and his wife, Carolyn, both enjoy climbing, horseback riding, camping and fishing. They have a son three years old and a daughter four months.



T. J. Williams and Martha Routh —good excuse to interview pretty girls—

any way you look at it...



News from Military Sandian
From Fort Belvoir, Va., comes word from Lt. John A. Anderson (on military leave from organization 1246) that he is now an instructor and security officer in the Nuclear Engineering Branch, U. S. Army Engineer School.

John also announces the birth of a son, Gordon Andrew, at the Army Hospital in Fort Belvoir on April 25.

Camping Trip for Mountain Club

Annual summer outing of the New Mexico Mountain Club begins today with club members gathering at the base of the Gore Mountain Range near Dillon, Colo. The group will spend nine days at the campsite fishing, swimming and hiking in surrounding peaks, Zelma Beisinger (5126-1) reports.

Beachcomer Costume Winners

Audience applause named the winners of the costume competition at the recent Beachcomers Ball at the Coronado Club. Judged best costumed couple was Jim Jordan (son of J. B. Jordan, 2521) and Caroline Dalby of Albuquerque who dressed as fuzzy aborigines. Dick Strome (2463) copped the men's costume prize representing the epitome of beachcombing.

Kay Pepper (2222), dressed as a hungry cannibal, tied with Dottie Chavez (wife of Tommy Chavez, AEC) in a gay calypso ensemble for women's honors.

Sandianotes . . .

Often Delayed - But With Good Alibi - Wandering Sandian Worries Wife

If Mrs. Ripberger looks a little worried these days blame it on her husband, Eugene (5132).

Last month "Rip" and their five-year-old daughter Emily set out from Juan Tabo Road at 3:30 one Sunday afternoon to climb to Sandia Crest, where Mrs. Ripberger was to meet them. At midnight she was still waiting.

The men at the TV tower notified Sandia Police and agreed to wait in the area in case Rip came out before daylight.

Mrs. Ripberger returned to town and Dave Williams (5131), Warren Taylor (5131), Allan Beck (5132) and Frank Neilson (5132) were notified and started up the mountain.

At dawn Rip and Emily came off the mountain none the worse for their trip. Rip explained, "We were never really lost, but just ran out of daylight due to misinformation about the time required to make the climb." They had a canteen of water and were able to get some sleep huddled under a tree.

But Mrs. Ripberger's worries weren't over yet. Three days later Rip was working in Area III when an arroyo ran, cutting off the road back to the Base. It was dark before Rip walked in his front door.

Celebrate Anniversaries

Wedding anniversaries set to be contagious in Division 2711.

Dollen C. Wall and wife observed their 18th anniversary on July 15; Ralph G. Carmichael and his wife their 19th on July 17; the Joseph Brooks marked their 17th on July 28, and Eduardo M. Chavez, Jr., and his wife celebrated their 12th wedding anniversary on Aug. 1.

Mr. and Mrs. Stan McCommon (2721) celebrated their 30th wedding anniversary on June 22.

Another couple marking their 13th anniversary was Mr. and Mrs. Floyd Hursh (2721) on July 24.

Noting their 11th wedding anniversary on Aug. 1 were Lyndall (7423) and Gene Carter (1455).

Niagara Falls will be the romantic spot where Jim Hay (2153-2) and his wife will celebrate their 22nd wedding anniversary on Aug. 12.

Dinner at the airport was the order of the day for Gene Gardner (2154) and his wife on July 31 when they celebrated their 9th wedding anniversary.

Get Well Wishes

Get well wishes are extended to Marie Large (1624), who has been ill the past month, and to Alice Gates (5500), who is convalescing at home after an operation.

Wishes for a speedy recovery are extended to Jimmy Murray (7421) who underwent surgery at VA hospital on Aug. 1.

Employees of 2150 send best wishes for a speedy recovery to Bill Costales (2152-1), who is in the hospital.

Special Occasion

H. B. Young (7422) and his wife entertained 60 friends at their home at 424 Sycamore NE on July 14 to mark their silver wedding anniversary.

Recovering from Vacation

It was a relief for Frances Rinn (7211) to report back to work after a vacation spent entertaining a house guest from Washington, D. C.

The first week of their vacation fell during Albuquerque's "heat wave" and the second week they suffered food poisoning and spent most of the time in Presbyterian Hospital.

Wins Safety Contest

Safety-mindedness has resulted in financial gain for Willis M. Jobe (2411), who recently won the monthly limerick contest sponsored by the National Safety Council.

Opera and Offspring

Edith (7225-5) and Max Miller (2414-2) recently returned from the opera performance of "Rigoletto" at Central City, Colo., to be greeted with vocal sounds of a different quality — those of their newly-born second granddaughter.

Sandia Consultant Presenting Series Of Systems Lectures

A series of lectures is being given this month in Bldg. 802 by a Sandia summer consultant, Gerald L. Thompson, who is regularly an assistant professor of mathematics at Dartmouth University.

The talks, which started this week, are presented in room B 4-6 from 1:30 to 3 p.m. and are available to interested Corporation employees.

The schedule of future lectures is: August 12, Regular Markov Chains; Aug. 14, Absorbing Markov Chains—the Open Leontief Model; Aug. 16, Semi-Martingales; Aug. 20, Matrix Games; Aug. 22, Games in Extensive Form; Aug. 27, Matrix Games and Utility Functions; Aug. 29, Mathematical Economics and Game Theory.

Dr. Thompson has a PhD in Mathematics from the University of Michigan, a MS in Math from Massachusetts Institute of Technology and a BS from Iowa State in Electrical Engineering.

Recent Tax Ruling On Moving Expense Appealed by U.S.

The federal government has filed notice of appeal of a recent ruling by U. S. Judge Carl A. Hatch that reimbursed moving expenses paid by firms to new employees are not taxable. The appeal will be taken to the 10th U.S. Circuit Court of Appeals in Denver.

It is estimated that nearly \$100,000 in taxes is involved for the 700 Corporation employees now working for Sandia and some 200 others who are former employees. All were hired since 1953 and were reimbursed for traveling and moving expenses incurred in coming to Albuquerque.



PALACE OF GOVERNORS in Santa Fe was built in 1610. It is the oldest public building in America and was the seat of government in New Mexico until 1901—nearly 300 years. It is now part of the Museum of New Mexico which contains many historical exhibits.

Weekend Vacationer

Santa Fe—City of Perpetual Fiesta—Good Trip For Time-Scarce Traveler

To visitors, Santa Fe always has house colorful historical displays. The Palace of the Governors on the Plaza exhibits archaeological and historic displays of New Mexico and the Southwest.

The capital of New Mexico integrates its history, customs, and traditions into a modern air of relaxation and casual enjoyment. Many fine restaurants, hotel and motel accommodations plus interesting and unusual places of interest make Santa Fe the ideal location for an enjoyable weekend vacation.

In addition, many special events are scheduled through the summer that add to the city's appeal.

Horse Show Set

The Santa Fe Horse Show is scheduled Aug. 16-18, and will feature horses of all classes in action.

Labor Day weekend is the date of the famous Santa Fe Fiesta—parades, dancing in the streets, ceremonies, religious processions and Indian dances. Starting Friday night, Aug. 30, with the burning of Zozobra (Old Man Gloom) in Fort Marcy Ball Park and the Coronation of the Fiesta Queen in the Plaza, festivities will continue through Saturday, Sunday and Monday.

The fiesta observes the reconquest of New Mexico by Governor De Vargas in 1692, a bloodless victory after a massacre of Franciscan friars by rebelling Indians 12 years earlier. The Spaniards returned south to gather up colonists to resettle the land and came back to Santa Fe the following year.

A second uprising occurred but the Conquistadores were victorious. Both victories have been celebrated in Santa Fe since 1712.

History Abounds

The Santa Fe Plaza was the market place and end of the journey of the old Santa Fe trail. The Palace of the Governor's on the north side of the Plaza is the oldest public building in America dating from 1610. The Mission of San Miguel is the oldest church in the U. S. with three centuries of tradition.

Five branches of the Museum of New Mexico located in Santa Fe

Employee Services Needs Help in Forming Car Pools

Numerous requests from Sandia Corporation employees for rides and share-driving to and from work are still on hand in the Employee Services Division.

In addition to being economical, the car pool plan also cuts down the number of automobiles on Base and makes available additional parking spaces. Roseanne Bascom (3122-1), Ext. 26149, is matching drivers with riders. Anyone desiring a ride or wishing to list a ride available should contact her.

Several of those in need of rides include:

Roy Lavin (2414), working the second shift from 4 p.m. to 12 midnight, ride from 5900 N. Fourth to Bldg. 887.

William Feldman (4135), ride from 3707 Comanche NE, to Bldg. 880. Call him at Ext. 42256.

Jean Bergquist and two other Sandians need rides from the vicinity of 5913 Central NW to Bldg. 840. Call Jean at Ext. 31156.

Sandia Radio Hams Contact Others in Foreign Countries

Organization 1451 has a group of amateur radio operators who have made contact with other "hams" in most parts of the world.

Almost every night Gene Glaze, Charles Cumley and Cedric Senter are on the air tuning the dials to bring in foreign radio amateurs.

Gene Glaze, who operates on 20-meter CW band using a DX-100 Heathkit transmitter, has contacted such countries as Hungary, Poland, Russia, Norway and most other major European countries.

Charles Gumley operates on 20, 15 and 10 meter CW band and has contacted such countries as Viet Nam, Russia, Sweden, and most of South America. He has also reached the Argentine expedition in the Antarctica for the Geophysical Year activities.

Cedric Senter uses a Collins 32-V3 transmitter with a quad antenna. He has contacted Laos, Baherien in the Persian Gulf, Liberia, and the New Zealand and United States expeditions in Antarctica.

Personnel of Livermore Branch Go All Out for Second Annual Picnic

The second annual picnic of Sandia Corporation's Livermore Branch was held last month at the Alameda County Fairgrounds in Pleasanton.

J. P. Brock (1842-2), R. H. Richards (1821-1) and W. A. Maupin (1822-2) were kept busy cooking hot dogs, hamburgers and beans for the 300 employees, wives and children attending the Saturday outing.

Those who could budge after the meal played volley ball, games or danced.

Picnic committee members were: R. J. Tockey (1822-1), general chairman; R. H. Richards

(1821-1), finance and publicity; G. J. Miller (1812-2) and C. O. Erickson (1812-1), in charge of cuisine; V. M. Field (1811-1), entertainment and direction of contests and games for the children, and J. P. Brock (1842-2), master of ceremonies and head chef.

Prizes were won by Mrs. Dewhurst (wife of Robert Dewhurst, 1841-2), Mrs. Paine (wife of E. L. Paine, 1822-2), Estra Hill (1832-4), Mrs. Field (wife of Vernon Field, 1811-1), Mrs. Erickson (wife of Clifford Erickson, 1812-1), Mrs. Howard (wife of Jack Howard, 1800), and Aggie Van Brocklin (1841-1).



CHEF JIM BROCK was kept busy stirring and serving beans for 300 employees, wives and children at Livermore Branch second annual picnic at nearby Pleasanton.



SOFT MUSIC was provided by W. J. Howard, Director of Systems Development at Livermore. A visitor contributed violin harmony. Others joined in dancing.



"COME AND GET IT" combined with delicious aroma was all that was needed to form a long chow line. Ball games followed the Livermore Branch picnic.



Thelma and Henry Durlinger
—planning, planting and pleasure—

Supervisory Appointments

VERNE E. BLAKE, JR. to supervisor of Project Division 1225, Engineering Department.



Verne has been a development engineer since he came to Sandia in Dec., 1947. For the past six years he has headed Section 1245-1.

Prior to employment here he was a field engineer for the research and development division of New Mexico School of Mines, located then in Albuquerque.

Verne received BS and MS degrees in Mechanical Engineering from the University of New Mexico.

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

CARTER D. BROYLES to supervisor of Full-Scale Experiments Division 5113, Weapons Effects Department.



Carter has worked in weapons effects during his five years at Sandia.

He came to Albuquerque from Vanderbilt University in Nashville, Tenn., where he had a research fellowship, a teaching fellowship and where he obtained his PhD in Physics.

His Bachelor's degree was from the University of Chattanooga. Carter served three years in Army Intelligence and in the Infantry, both here and in Europe.

He is a member of Sigma Xi, scientific research honorary, the American Association of Physics Teachers and is a fellow of the American Physical Society.

JAMES A. MAULDIN to supervisor of Electrical Inspection-Production-MC & SA Equipment Section 2711-7, Receiving Inspection Division.



Jim has been with the Corporation since April, 1956, as a manufacturing engineer in organization 2542.

Immediately prior he attended Central Technical Institute in Kansas City where he received an associate in science degree.

Jim served two years in the Army principally in radar work in the Far East.

For three years before that he was assistant manager of a grocery store and market in Wellington, Tex.

JAMES J. KANE to supervisor of Project Division 1247, Engineering Department.



Jim has been at Sandia in project design since Dec., 1949, and has been a section supervisor for six years.

He was previously a year at The Texas Company's Beacon (N.Y.) Laboratories where he helped design test instrumentation.

For three and one-half years prior Jim was with the Alexander Engineering Company in Cincinnati, O.

During World War II he was in the Army three years as a combat engineer and served part of the time in Italy.

Jim has a Bachelor's degree in Mechanical Engineering from the University of Cincinnati and also a "professional degree of Mechanical Engineering"—an advanced degree given by the same school.

He is a member of Phi Eta Sigma, scholastic honorary, Pi Tau Sigma, mechanical engineering honorary, and Tau Beta Phi, engineering honorary, and is a registered professional engineer in New Mexico.

Gardening Tips

Sandians Tell How They Converted Mesa to Garden in Three Short Years

Walking into the living room at the home of Thelma and Henry Durlinger (2553-1) it seems almost unbelievable that the lovely garden and dense grass viewed through sliding glass doors was mesa land only three years ago.

However, careful planning, a definite schedule of feeding and spraying, plus lots of hard work have resulted in both back and front yards which belie their short existence.

The Durlingers moved into their Northeast Heights home in the winter which gave them time to plan their garden. Thelma worked as a draftsman during war years so their landscaping plan is drawn to scale and is precisely plotted.

The first step is to locate the sprinkler system (if you plan to have one) and plant large shrubs and trees as they are slow-growing. The soil must be prepared for

grass, flowers, and vegetables usually with the addition of fertilizer and peat moss, depending upon type of soil and its deficiencies.

Thelma had a little initial bad luck. She said, "Although I had gardened extensively in Michigan before we moved here I lost seven bushes the first winter. I didn't realize that even though the weather is dry the bushes still must be watered when temperatures are low."

Thelma and Henry recommend talking with nurserymen about your preferences as individual treatment makes some flowers incompatible with others.

They explained: "We set out 50 varieties of iris but have them in their own corner because iris require a drying out period after blooming. Roses are another plant that do best in their own bed, with perhaps some lightweight shrubbery mixed in, as both need lots of food and water."

At the present time half of their backyard is in grass (they used a mixture of 10 per cent clover and 90 per cent blue grass) with a border of flowers around the edge. A few steps lead down to the back half of the yard which is a service area. The Durlingers have a small grape arbor, three fruit trees, a cutting garden, a small protected corner for Henry's tuberous begonias, an all-important compost bed, the start of an herb garden and native plant plot, and space for a future tool shed.

When the Durlingers aren't working in their own garden they are off to the mountains taking colored slides of wild flowers or exhibiting the results of their joint hobby before garden clubs.

Disney Film Set For Noon Movie Program

A Walt Disney color documentary film, "Beaver Valley," will be shown during the coming week on the Corporation's noontime movie program.

Aug. 20-30 the program will feature "Soviet Union" in black and white, and another color film, "Birds of America."

The movies are shown in the basement conference room of Bldg. 802 on Wednesdays and Fridays and in Bldg. 849 on Tuesdays and Thursdays. All showings start at 12:10 p.m. and are free.

No job is so important and no service is so urgent that we cannot take time to perform our work safely.

Welcome Newcomers

July 22-Aug. 2

Albuquerque	
Priscilla B. Archibeque	7226
Justine Bassett	7225
Samuel M. Bragg, Jr.	2721
Frances E. Candelaria	4135
J. Helen Cowan	7226
John R. Crye, Jr.	2418
E. Mary Gallegos	7225
Isaac R. Griego	2464
Dean A. Harrell	2415
Sharon R. Hedges	3153
David A. Jensen	2461
Mildred J. Johnson	4135
Robert E. Lee	2112
Paul F. Martinez	2461
Pedro A. Martinez	2461
Mary G. Mayginnis	2151
Willie J. McCabe	2711
L. Mae Miller	7226
Joan S. Moeld	3153
Sabrina G. Rimbart	2731
Louis F. Roybal	2711
Fernandez G. Sanchez, Jr.	2461
Thomas H. Sheldon	2461
Ingrid R. Skelton	3123
Eleanor E. Smith	7225
Jeni L. Sweley	4112
Donald P. Uselman	2742
M. Diane Ward	2461
Stanley Whittet	2353

California	
Barbara L. Johnson, Livermore	5512
Carol G. Kolb, Hayward	1832-4
Ruth Martinez, Pleasanton	1832-4
Robert P. Pardee, Altadena	1621
Howard N. Pennypacker, West Covina	1463
Connecticut	
William G. Weinbecker, Stratford	2154
Andrew C. Wilken, Bristol	1421
Illinois	
John A. Laster, Chicago	5222
Leland M. Stone, Chicago	5215
Iowa	
Robert L. Sullivan, Ames	1624
Kansas	
Eugene H. Cox, Caldwell	2742
Kentucky	
Melvin H. Weiss, Fort Thomas	4111
New York	
John E. Northrup, Elmira	1451
New Mexico	
Daisy W. Moyer, Los Alamos	2343
J. D. Jones, Los Alamos	7221
Ohio	
John T. Geohagan, Dayton	2542
Oregon	
Donald F. Rauber, Eugene	7223
Pennsylvania	
Benjamin W. Albert, Banjor	2542
South Dakota	
Ray R. Jensen, Vermillion	5242
Virginia	
Robert E. Esterly, Arlington	4141
Washington	
Charles D. Johnson, Seattle	1821-2
Edward L. Patterson, Pullman	2721
Wisconsin	
Thomas A. Kanneman, Green Bay	1262

Service Awards

10 Year Pins



Crawford E. Luker
2417-2
Aug. 21, 1947

Five Year Pins



Donald D. Wader
2231
Aug. 11, 1947



Ray L. Bishop
2124
Aug. 11, 1947



Arthur R. Eiffert
1831
Aug. 19, 1947

Aug. 9-15
Carl Endres 1613, George W. Randle 1225, Howard C. Sieberman 7123, Orelia Montoya 1625, James B. Petrie 7241, Helen L. Keeney 4135.

Aug. 16-22
Ethel T. Hooten 2419, Thomas H. Martin 2114, D. Maxwell Elliott 1620, Dean B. List 5233, Lasiter M. Spivey 1811, and Herbert O. Howe 2711.

Aug. 16-22
Gustave W. Krause 2532, Fred G. King 1215, John R. Ames 1423, Winifred R. DeWitt 2224, Conrad S. Pickens 7241, Chester A. Corbin 2124, Donald E. Hinman 7221, Eugene R. Helz 2544.

Aug. 16-22
N. R. Scalzitti 2414, C. C. Rounds, Jr. 4161, Dorothy A. Matlack 2464, V. L. Messersmith 2741, Violet L. Foderaro 2511, Willie E. Petty 5513.

Aug. 16-22
W. L. Morehouse 1243, Ruth E. Gustin 2231, Evelyn L. Stewart 3120, Wilfred Sanchez 2414, Robert C. Ruttell 2111, Baltazar G. Romero 2417, Seferino Sanchez 2234, and Barbara B. Smith 2521.

Aug. 9-15
Geoffrey J. Lynch 5511, Phyllis E. Gruver 7232, Charles D. Herndon 7132, Pedro S. Ortega 2232, Patricio Garcia 2415, Robert L. Parker 1456, George W. Stricker 3151, Elaine M. Schivley 2461, and Dorothy V. Wright 4151.

Aug. 16-22
Vlasta E. Hruska 7225, Stoughton Bell, II 5122, Lee A. Daily 7411, Alice B. Robinson 1261, and Richard H. Berg 1455.

L. J. Paddison Will Present Quality Talk At Inyokern Aug. 13

"The Sandia Laboratory Quality Assurance Program" is the title of a talk to be presented by L. J. Paddison Aug. 13 at the Naval Ordnance Test Station, Inyokern, Calif. Mr. Paddison, Director of Quality Assurance (5500), will outline activities of the 5500 Organization as the Quality Assurance Agency for the AEC with respect to weapons material of Sandia design.

He will discuss the Agency's job of providing the AEC with assurance that weapons material accepted by the AEC from its prime contractors is of satisfactory quality and in conformance with design intent.

Mr. Paddison will describe the five related activities in performing this function—verification inspection, field reporting, quality engineering evaluation, quality surveys and quality reporting.

The talk will be part of a Technical Lecture Series conducted by the Naval Ordnance Test Station.

4,608 Employees Covered in Group Insurance Plan

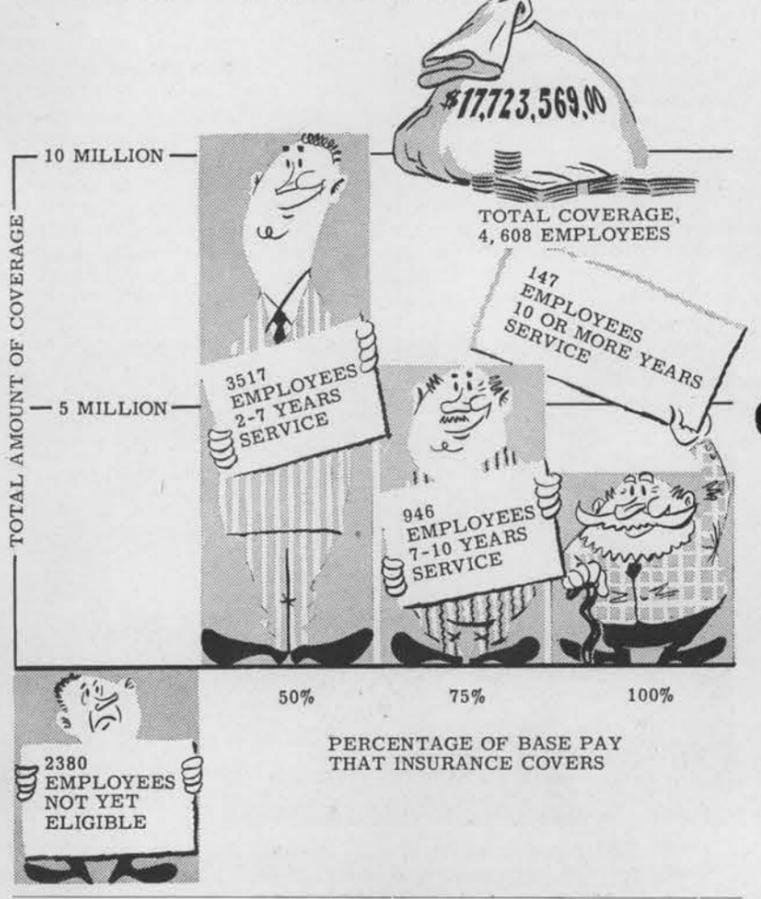
With 6,990 persons on the Sandia Corporation roll at the end of June, 4,608 are covered in the Group Life Insurance program. Total coverage for the employees is \$17,723,569.38.

After two years of service with the Corporation coverage is automatic and at no cost to the employee. Premiums are paid by the Corporation. Amount of the policy is determined by an employee's annual base salary—between two and seven years service the amount is 50 per cent of his annual salary. Between seven and 10 years the amount is 75 per cent and over 10 years of service the amount is 100 per cent of an employee's base annual wage.

At the present time 2,382 employees do not have the required two years service and are not eligible for the coverage. In the 50 per cent category are 3,517 employees, in the 75 per cent category are 946 employees and 145 have 100 per cent coverage of their base salaries.

An employee may change his beneficiary of the insurance policy at any time. He is required to bring his policy certificate to the Employee Benefits Section in Bldg. 829 and fill in the proper forms.

Sandia Corporation Group Life Insurance Plan





Mary Lou Butler
—worth the practice and energy—

Mary Lou Butler Wins Third Place in State Women's Golf Tourney

The New Mexico Women's State Golf Tournament held recently in Farmington ended with Sandia's Mary Lou Butler (1261-2) in third place.

She took the final round 7-6 in match play against Marian Perkins of Los Alamos and won a Navajo bracelet—a blue ribbon winner at last year's Gallup Indian Ceremonial.

Top spot in the long driving contest also won Mary Lou eight navaajo iced tea spoons.

Mary Lou was Albuquerque City Women's Champion in 1955 and runner-up in the same contest three previous times.

U of California to Publish Technical Paper by G. P. Steck

A technical paper by George P. Steck (5125) was published last month by the University of California Press. "Limit Theorems for Conditional Distributions" is the title of the paper. The bulk of the material is from Mr. Steck's thesis written for a PhD degree in Statistics from the University of California in 1955.

Mr. Steck earned his BA in February 1945 from the same school, spent 18 months as a naval electronics officer and then earned his MS in Physics in 1948 from California Institute of Technology.

He has been employed at Sandia Corporation for two years.



CLIMBING HIGH in the Sangre de Cristo Mountains on their way to Truchas Peak these three Sandians were part of a New Mexico Mountain Club expedition. L to R are Dick Novaria (1251), Dick Martindell (1422) and Russell Hankins (5112), club president.

Livermore Little League Teams Place in District Competition

The Little League baseball teams sponsored by personnel of the Livermore Branch finished second and third in the recent district championship playoffs.

The Sandia Dukes dropped their final game of the season—to the Pleasanton Boys' Club, winding up in second place.

The Sandia Thunderbirds captured the third spot in final league standings.

Livermore Softball Team Tied For First Place in Radiation Lab League

The Livermore Branch softball team is tied for first place in the U.C.R.L. league. The Sandians, who must play a total of seven games, so far have won three and lost one in the second round of play. Coaching and managing the team are Dick Cook (1811-1) and Bob Tockey (1822-1).

Eight teams compete in the league.

The players of both teams are between 8 and 10½ years of age: Twenty sons of Sandians played in the league, but only six were on the Sandia-sponsored teams.

The Dukes were coached by Chuck Peterson (1832-5), assisted by Billy Pontsler (1811-2), Leo Gutierrez (1811) and Bob Verdier (1811-2). The Thunderbirds' coaching staff included Ed Daugs (1811-1) and Kermit Cooper (1812-1).

Personal Picture Taking Permitted in Los Alamos

Visitors to Los Alamos may now take pictures with personal cameras according to a recent announcement in the LASL Bulletin. Pictures are permitted any place in Los Alamos that is not enclosed inside a protective guard station even though the background may show an area or building inside a security fence.

Softball League Could End In 3-Way Tie; 1400 Leads

Championship of the Sandia Employees Softball Association will not be determined until the final hour—Monday, Aug. 12, at 6:45 p.m. on Diamond B. League-leading 1400 with 13 won and 2 lost will meet 2500 currently in third place with 10 won and 3 lost.

Team 1400 by defeating 2500 would be undisputed champ of the League. If 2500 wins then the league might be thrown into a three-way tie for first place between 1400, 2500 and 1200. Team 1200 is currently in second place with 12 won and three lost.

The 3100 team proved to be the giant killers last week by defeating 1400 a resounding 17-6. Previously 1400 had won 11 straight games to lead the league most of the season.

Team 3100 is also the obstacle to 1200 in gathering league honors. Team 1200 must defeat 3100 in order to stay in the running or

else tie for third place. Record of 3100 is 10 won and 4 lost.

Schedule for the final games Monday is as follows:

- 1400 vs 2500, 6:45, B
- 2300 vs 5200-1, 6:45, D
- 7200 vs 7400, 8:30, B
- 2200 vs 5200-11, 8:30, D

LEAGUE STANDINGS

Team	Won	Lost	Pct.
1400	13	2	.867
1200	12	3	.800
2500	10	3	.769
3100	10	4	.714
2100	9	4	.692
AEC	10	5	.667
7400	9	5	.643
5200-1	7	6	.538
1600	6	7	.463
2200	8	7	.533
7200	6	7	.462
5500	5	10	.333
4100	4	11	.270
5100	4	11	.270
2300	3	10	.230
5200-11	2	12	.143
2400-1	2	13	.134



COUNCIL OF WAR—Manager Art McMullen (right) gives a pep talk to members of the 1400 team after their defeat last week 17-6 at the hands of 3100. Team 1400 still leads the league with a 13 won-2 lost record. L to R are Leo White, short stop, Gene Glaze, catcher, Ken Gillespie, pitcher, and manager McMullen.

SHOPPING CENTER

CLASSIFIED ADVERTISING

Deadline: Friday noon prior to week of publication.

RULES

1. Limit 20 words
2. One ad 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.

FOR SALE

- '51 PONTIAC, 4-door Chieftain, low mileage, new tires, will trade. Ward, Alb. 6-9286, 2909 Valencia NE.
- '49 PLYMOUTH engine and transmission, complete, make offer or trade for machine tools. Pliner, Alb. 6-1907.
- RIDING SADDLES, used, blanket and bridle; 1/2 H.P. electric motor. Fletcher, 6614 Cochita Rd. SE, Trailer No. 17.
- BABY'S CHESTROBE, 38"x46", \$15. Luna, Alb. 9-2488, 2805 Vermont NE.
- AIR CONDITIONER, 1/2 ton Gibson refrigeration type, 110 AC, used one month, \$100. Ayers, Alb. 9-1055.
- AUTOMATIC WASHER, matching dryer, Westinghouse, \$250; 16" GE TV and iron stand, \$50. Mills, Alb. 9-2130 after 5 p.m.
- CABIN, Sandia Mtns., north end, on running stream, national forest homesteaded land, three miles from Sandia Cave, \$2400. Gowdey, Alb. 8-8216.
- 2 BR. HOUSE, large expandable, large landscaped lot, close south valley location, \$13,500, assume 4 1/2% loan. Amnette, Alb. 3-8928, 1827 Near Lane SW.
- ELECTRIC RANGE, GE deluxe model, deep-well, etc., \$125. Allen, Alb. 9-1747, 9509 Snow Heights Blvd. NE.
- UMBRELLA TENT, 9 1/2'x11 1/2', w/floor, \$60; 3-burner stove, \$16.50; oven, \$10; 3 down sleeping bags, \$20 each; air mattresses, \$7 each. Ross, Alb. 9-1526.
- WASHING MACHINE, semi-automatic Bendix Economat. Steputis, Alb. 6-9066 after 5:30 p.m.
- WURLITZER SPINET piano, \$300; solid maple dining room furniture, \$175. Furman, Alb. 2-9317.

SHOPPING CENTER

- GAS RANGE, apartment size, large oven and broiler, \$45. Rust, Ext. 31150, 2637 Alvarado Dr. NE.
- RED DACHSHUND male puppies AKC registered, 8 weeks old, \$50 or over. Stoeber, Alb. 6-2439.
- '53 DODGE, 24,000 miles, \$650 or make offer. Creveling, Alb. 2-3790.
- '54 FORD, 6 cylinder pick up, \$725. Pritchard, Alb. 6-5667.
- 20 METER ANTENNA, 4 elements, full size, tuned T-match includes transmitting condensers, will demonstrate, going multi-band. Kerner, Alb. 6-4513.
- 26" BICYCLE, boy's, new tires, kickstand and basket, \$20. DeSelm, Alb. 5-2634, 513 Carlisle Blvd. SE.
- GARAGE DOOR, wood overhead w/hardware, \$20. Shea, Ext. 28258 daily between 12 and 1.
- PICNIC TABLE, large, w/attached benches. Shoemaker, Alb. 5-8820.
- '50 MOTORCYCLE, Harley-Davidson "45", \$200. Connolly, Alb. 6-3275.
- BABY BUGGY and stroller, \$20; 7" TV set, \$15. Hansen, Alb. 6-1216.
- RECORD PLAYER, 78 RPM portable, \$8. Long, Alb. 6-9112.
- SAMOYEDE female dog, spayed, only 1 year old, needs children to play with, \$20. Rettinger, Alb. 4-2237.
- '51 BUICK Riviera, R&H, Dynaflo, 2-tone paint, \$495. Schaefer, Alb. 9-2826.
- 3 BR. MOSSMAN, hardwood floors, carpeting, pitched roof, covered patio, recently painted, beautifully landscaped, many extras. Bennett, Alb. 4-5577, 3023 Manzano NE.
- ENGLISH BULL DOG w/papers; Has had all shots, 1 1/2 years old, male, good pet, \$50. Hill, Alb. 3-3493.
- WRIST WATCH, Lady Elgin, yellow gold, expansion band, original cost \$75, worn 1 year, \$30. Chavez, Alb. 6-2447.
- VHF 152A CONVERTER; 26-1U meter; six meter transmitter; four element Beam and Rotor. McClure, Alb. 8-0720.
- '56 CUSHMAN Scooter, \$250. See at 7605 Euclid Ave. NE. Ouellette, Ext. 33248.
- WINDOW FAN, 2 speed reversible with timer, used 4 months. Eversert, Alb. 8-0945.
- HEILAND STROBONAR IV, 2 years old, new \$400, our price, \$160. Davis, Alb. 2-2724 after 6 p.m.
- ENGLISH BICYCLE, girl's, \$45. Davis, Alb. 9-0472 after 5 p.m.
- PAINT SPRAYER and accessories, electric, cost \$85, will take \$35. Weimer, Alb. 6-0327.

SHOPPING CENTER

NEXT DEADLINE FOR SHOPPING CENTER ADS FRIDAY NOON, AUG. 16

- '52 FORD, Customline tudor, will trade for later model. West, Alb. 3-9819.
- '56 MOTORCYCLE, Indian Woodsman, just had 500 mile check. Feliciano, Alb. 4-3143.
- SIAMESE KITTENS, registered, 10 weeks old, \$10. Williams, Alb. 9-5176.
- MODEL 94 WINCHESTER carbine, Cal. 30/30, \$60; luggage rack w/cover, \$10; apartment size stove, 4-burner w/oven, broiler, \$15. Holmes, Alb. 9-1344.
- 2 BR. HOME near bases, \$5,500, \$600 down, \$60 monthly; or \$1200 cash for equity, \$49 monthly. Gutierrez, Ext. 23897 or Alb. 7-9740.
- DINING ROOM SET, 6 piece, mahogany finish, \$50. Chavez, Alb. 5-7749.
- DETROIT JEWEL STOVE, \$25. Taylor, Alb. 6-3774.
- WINDOW FAN, 20" w/2-speed reversible motor and automatic timer, used only 3 months, \$50. Cannon, Alb. 9-7330.
- EBONY CLARINET, "B" flat, case, music stand and music, \$35. Good for school band. Banks, Alb. 5-2544.
- DINETTE SET, 5 piece, solid oak, red plastic seats, \$25. Kubiak, Alb. 6-1513.
- SPINET PIANO, Winters, mahogany, full key board. Kelley, Alb. 6-4982.
- WARDROBE, fiberboard, used only six months, 5 ft. high, 29 in. wide, \$5. Coon, Alb. 5-6545.
- LAMBRETTA SCOOTER, '55, windshield, 2 new tires w/spare, 80 to 100 MPG, 2 seats, \$225 or best offer. Dickerson, Alb. 9-3449.
- FEMALE PUPPIES, 3, small breed (Chihuahua, Dachshund, Pekinese), \$5 each. Davis, Alb. 9-0770.
- GAS RANGE, O&M, full size, chrome top w/cover, fully automatic, \$175. Nunez, Alb. 6-3492, 608 Madeira NE.
- 3 BR. HOME, large, East Heights, den, 2 baths, will trade for smaller house, same location, or car. Smith, Alb. 8-2335.
- BEAGLE PUPPY, female, champion sired, AKC registered, \$35. Davis, Alb. 3-1524.

SHOPPING CENTER

- RELOADING TOOLS for .357 Magnum and .257 Roberts plus powder scale, all for \$25. Roth, Alb. 3-0522.
- 2 STUDIO COUCHES, one modern, plaid; one conventional, green with beige trim, box pleating, \$20 and \$35. Cooper, Alb. 9-4260.
- HOLLYWOOD BED, single, \$9; double bed, \$14; blue studio couch, \$14. Weber, Alb. 5-6811.
- MOTOR SCOOTER, '52 Cushman, new piston, rings, drive belt, varimatic drive, \$85; Bendix automatic washer, \$20. Mofat, Alb. 25134, evenings, Ext. 20173.
- '48 OLDS, 4-door sedan, heater, hydramatic, good second car, \$125. Roper, Alb. 4-2938.
- BABY CARRIAGE, Storkline, car bed or seat; photo flood lights; metal Venetian blinds, other miscellaneous. Richter, Alb. 9-0409.
- ELECTRIC RANGE, Westinghouse, deluxe 42", 2 ovens, 4 surface units (automatic, high speed, large deepwell), \$195. McGeehe, Alb. 6-3486.
- FISHING TACKLE, fly and bait casting rods, reels, creel, boat net, minnow bucket, flies, plugs, miscellaneous equipment. Kodol, Alb. 6-0096.
- DAVENPORT and matching chair, \$65; dinette set, table and four chairs, \$60. Lautner, Alb. 3-7498.
- 7 FT. REFRIGERATOR, gas or butane; dinette table. Want outdoor motor over 12 hp., under \$50, can be repaired condition. Dallahan, Alb. 6-3784.
- WIRE HAIR TERRIER, 1 year old, AKC registered, \$50. Hurlford, Ext. 46281.
- TENOR BANJO, Kay professional type, case, extra strings, \$45. Daut, Alb. 5-2529.
- AIR CONDITIONER, window type, 3500 CFM, \$40. Pitti, Alb. 6-1629.
- TRANSMITTER, Viking Valiant, \$300. Gommel, Alb. 6-9098.
- MAHOGANY DESK, 20x42x30" high, 9 drawers, \$15. Dauphine, Alb. 5-6367.
- 3 BR. HOME, excellent location, available now with a good deal on price. Gorry, Alb. 6-5878.
- AQUARIUMS and fish, 10 gallon tank, \$8; 15 gallon tank, \$10. Newman, Alb. 6-6660.
- ENCYCLOPEDIAS, 15 volume set, \$15; 1/4 h.p. motor, \$10; grinding arbor, \$4. Want bunk beds, baby bassinette. Boag, Alb. 9-5939.
- DEER RIFLE, Winchester Model 94, \$25 or trade for gun books. Smith, Alb. 9-1096, 8607 Menaul NE.

SHOPPING CENTER

- .22 RIFLE, new Marlin, \$55 or trade for old guns; one-wheel trailer w/hitches, \$65 or trade for guns. Lane, Alb. 9-3962.
 - MOTORCYCLE, Harley-Davidson Model 165, 3000 miles, has extras, total \$275. Hodyke, Alb. 5-3393.
- ##### WANTED
- HOMES FOR KITTENS, 3, housebroken; one puppy; all free. Delivery anywhere in New Mexico. Tatum, Alb. 2-9021.
 - TO TRADE STAMPS. Have Thunderbird stamps and Safeway tapes, need green stamps. Cafferty, Alb. 6-4090.
 - RIDER WANTED to Pennsylvania or intermediate points on August 30 or 31. Karnovsky, Alb. 7-9501, Ext. 40, between 6 and 6:30 p.m.
 - HOMES FOR KITTENS. Housebroken. Osterby, Alb. 9-4606 after 5 p.m.
 - FURNISHED APARTMENT within walking distance of University for between \$50 and \$60. Schwid, Alb. 5-9168.
 - FILL DIRT AVAILABLE. You haul it away. Sutton, Alb. 9-0384, 2616 Vermont NE.
 - WILL TRADE two ton Chevy truck for pick up in good condition. Redlinger, Ext. 3-5152.
 - WILL TRADE Winchester 30-30 for motor scooter or motorcycle. Edwards, Alb. 9-5496.
 - HOMES FOR KITTENS after July 27, trained, healthy, all colors, two-angora type. Bell, Alb. 6-4064.
 - INFANT CAR BED. Force, Alb. 6-0122.
 - CHILD CARE in my home 5 days a week, pre-school age. Russell, Alb. 3-1552.
 - USED KIRBY CLEANER, must be in good condition and reasonable. Hayes, Alb. 9-1200.
- ##### FOR RENT
- MOUNTAIN COTTAGES, modern, one bedroom, on North 10; one house trailer space. Rent, \$55 cottages; \$15 trailer space. Souder, Ext. 34161.
- ##### LOST AND FOUND
- LOST—Cigarette lighter w/Masonic emblem, sun glasses, glasses w/black rims, safety glasses w/bifocals, earring w/dancing girls, cuff link w/design in black on sterling, 5 year pin, 18-year-old penknife, 4 keys on chain (2 Ford), glasses w/clear frames. Lost and Found, Ext. 26149.
 - FOUND—Medico pipe, safety glasses, single key on snap. Lost and Found, Ext. 26149.

Coyote Canyon Crew Fires TNT Studying Atom Blasts



HIGH EXPLOSIVE magazine for storage of 250,000 lbs. of TNT is entered by (l to r) "Deacon" Palmer, section supervisor, Herschel Waldorf and Bob Fay. Facilities include four such magazines.

"In comparison to a nuclear explosion a TNT blast is a drop in the bucket," D. G. "Deacon" Palmer, Coyote Canyon Section (5112-2) supervisor, says, "but it takes a big bucket to contain it."

Deacon might be referring to the 35 square-mile Coyote Canyon Test Site as his "bucket" where his section of a dozen skilled and versatile men each year detonate about 50,000 pounds of TNT while conducting blast tests. These blasts are scientifically scaled to duplicate in miniature the blast effects of nuclear devices.

The Coyote Canyon Test Site was set up in 1950 when physicists first began studying atomic blast wave effects. Strategically it was important for the military to know exactly and to what extent nuclear blast waves would destroy targets. The physics of blast effects were not well known at the time and to conduct complete full scale tests would be both time consuming and phenomenally expensive.

It was felt that conventional explosives in scale ratios to nuclear blasts could do the job on model targets; so the Coyote Canyon Test Site was the answer.

Site Expands

The test site was originally confined to the mouth of Coyote Canyon between Sandia Base and Cibola National Forest, about one square mile in area. Experiments since that time have caused the Site boundaries to be extended south to Isleta Indian reservation

and east into the Cibola National Forest to cover 35 square miles. Blast limit of the field has been set at 100,000 lbs. of TNT although the largest charge ever fired in the Canyon was 6 tons.

Steep hills surrounding the Canyon offer good vantage points for the location of cameras to record tests and cold air currents spilling into the canyon from these hills help in conducting fall-out tests.

Deacon and his section are studying the micro-meteorology of the test field to a fine point. Careful surveys of wind velocity, temperature and air currents are being made. In testing for fallout patterns, conventional explosives with a chemical tracer replace radioactive dust. About 1,200 fallout collector stations criss-cross the field and record the extent and shape of the fallout pattern.

Study Blast Diffraction

Another continuing type of test conducted at Coyote Canyon is an intensive study of blast diffraction. Model structures representing buildings of many types of construction are built and used as targets during the tests. These studies reveal how a blast wave wraps around structures, the various pressures exerted on the targets and the speed and force with which the wave moves.

To record this information is a project in instrumentation. The Coyote Canyon Section develops and designs special instruments to fit their unique requirements. A laboratory in the basement of

Bldg. 802 is maintained for this purpose.

Currently under development is an automatic digital recording system capable of recording more than three million bits of information per second. The section is also concerned with the development of new systems and techniques for measuring the velocities and temperatures of gasses in the mushroom cloud accompanying explosions.

In addition to conducting explosive tests, the section is charged with the responsibility of destroying any explosive device the Corporation finds obsolete, hazardous or damaged. Functional and environmental tests are performed on Sandia designed hardware.

"We wanted to find out, for instance," Deacon said, "what would happen to a weapon in an accidental aircraft fire."

Flaming Aircraft Fuel

In these tests a model weapon or special test version is placed in a thousand gallon tank of flaming aircraft fuel.

It is a tribute to these experts in high explosives that in nearly eight years of operating the test field the Coyote Canyon Section has never had an injury resulting from explosives.

To perform the many types of tests and fulfill the special requirements of each requires that the personnel of the Section be highly versatile. In a field situation mechanical engineers might fabricate tools and string wires as well as design special construction projects. An electronic technician might develop instrumentation and operate heavy equipment.

"We have to be jacks-of-all-trades," Deacon says, "with at least one specialty."

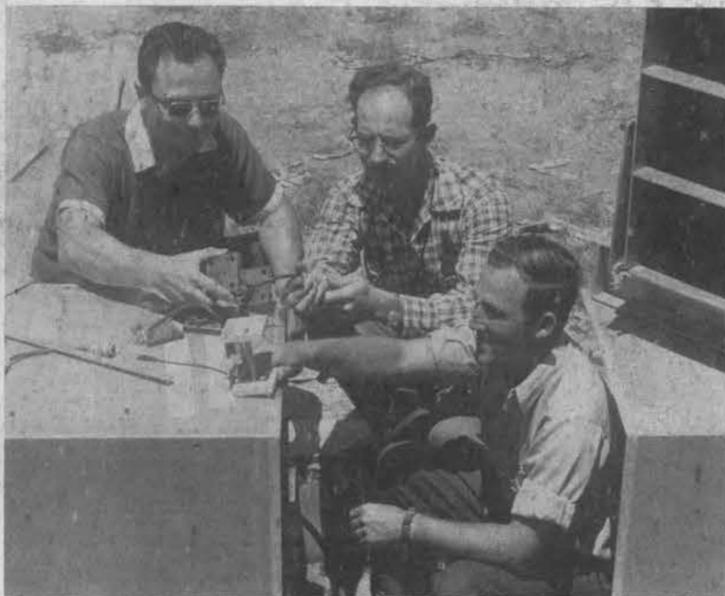
Prior to a test there are days of intense activity for the section. Detailed plans are made and carried out. Special instrumentation is devised. Explosives are carefully removed from the storage magazines and transported to the site.

Many tests are fired in the early morning hours and the section works through the night readying the operation. Tests average six per month and range in size from 250 lbs. to six tons of TNT.

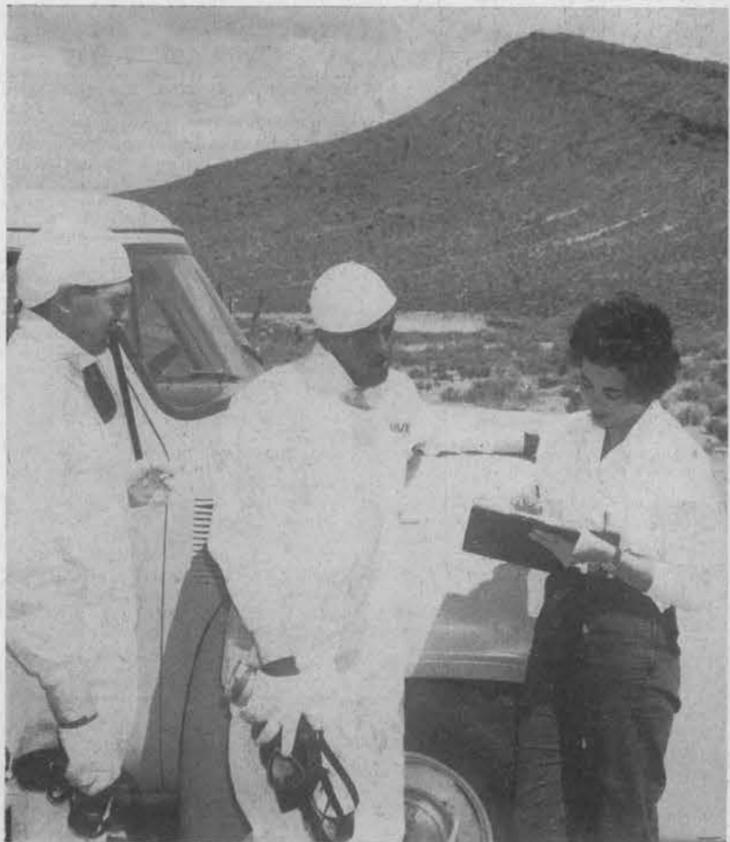
"Our work would not be possible without the support of other Sandia Corporation organizations," Deacon says, "Transportation, Security, Field Test photographers, Plant Services, Drafting, Machine Shops and many others . . . all have given us invaluable help."



DATA RECORDING SHELTER at Coyote Canyon houses instruments that record blast effects. Jim Smith and Ed Vulcan (standing) with Jack Hughes (foreground) make adjustments on sensitivity recorders prior to an impending test shot.



INSTRUMENTATION equipment to record blast effects on a model three-story building is installed by (l to r) Tom Vance, Bob Foster and George Burnside, of the Coyote Canyon Section.



SANDIANS RECORD DATA at Nevada Test Site to correlate with model fallout tests at Coyote Canyon. Tests at Coyote Canyon are conducted with chemical tracers substituting for radioactive dust. L to R: Ormand J. Birdsong, James D. Shreve (Model Studies Division Supervisor) and Maxine Laidlaw, all of Division 5112.



SCALED BLAST at Coyote Canyon almost duplicates the mushroom cloud of a nuclear explosion. This shot was six tons of TNT, the largest ever exploded at Coyote Canyon, and duplicated in scale the effects of a 20 kiloton atomic explosion. Blast diffraction studies continue in the Canyon.