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ALBUQUERQUE, NEW MEXICO

May 18, 1956

42 Engineering Students to Do Summer Stint With Sandia

Forty-two engineering students from 21 colleges and universities throughout United States will be employed this summer at Sandia Corporation.

Arriving the early part of June, they will start work immediately on various engineering and scientific assignments which are awaiting them.

Most of the men are ending their junior year in their engineering colleges. Some are graduate students in engineering.

This summer's technical program is greatly expanded over the program of last summer when 10 students were employed.

Twenty-three of the students will be assigned to the organization of the Director of Component Development, 1400, headed by L. A. Hopkins. There will be 10 students working in the organization of the Director of Research, 5100, under S. C. Hight.

Four students have been assigned to J. R. Townsend's Materials and Standard's Engineering organization, 1600. The Director of Field Testing, R. A. Bice, 5200, will employ three students. Two men will work in the Systems Development group, 1200, under R. W. Henderson.

Following are the students who will be here this summer:

University of New Mexico: Charles A. Bankston, Howard C. Chandon, James A. Cooper, Carl D. Longerot, and Christian F. Schroeder.

Stanford University: Willard F. Gillmore, G. R. Miller, Dennis Holiday, Robert E. Lindsay and Lewis M. Terman.

University of Oklahoma: Kenneth R. Cook, J. W. Ellis, Donald C. Kelley.

Oklahoma A&M College: John C. Hamilton, James A. Herring, Gary R. Basham.

Massachusetts Institute of Tech-

nology: William T. Walter, Eric G. Johnson, Jr., Paul H. Jolly, Jr.

Princeton University: Michael Marcus, Peter M. Pruzan, Martin A. Uman.

Cornell University: Robert T. Braden, Robert A. Lynch.

University of Illinois: Richard W. Henry, Richard D. Luders.

Yale University: W. Kenner Rawdon, Dallas W. Sasser.

California Institute of Technology: John F. Kennedy, Walter A. Specht.

Larry C. Hunter, University of Oregon; Edward T. Kornowski, Pennsylvania State University; Stuart L. Meyer, Columbia University; Leonard M. Magid, University of Pennsylvania.

Robert Koval, Polytechnic Institute of Brooklyn; Richard Malmgren, Purdue University; Ray Aylesworth, Texas Technological College; Anthony J. Arnold, Purdue University.

Larry E. Efferding, Iowa State College; Wade T. Parker, North Carolina State College; Richard S. Steele, Texas A&M College; Luther D. Rudolph, Ohio State University.

Plan New Warehouse For Sandia Tech Area

Plans and specifications are being issued for bids on a new building for the Sandia Corporation technical area. Known as the Base Spares Warehouse, Bldg. 884, it will be constructed south of Bldg. 880.

The project consists of a Butler-type steel building with concrete slab flooring, insulation, utilities, sprinkling system, access paving, and area lighting. Cost of construction is estimated to range from \$75,000 to \$90,000.

Bids are scheduled to be opened June 7.

Credit Union Tops Million and Half In Total Assets

The million and a half dollar mark in assets was topped at the end of last month by the Sandia Laboratory Federal Credit Union, Dale Bellamy, manager, announces.

With 3,705 members belonging to the credit union, the \$1,500,000 represents an average deposit of \$395 for each member.

Almost \$4,500,000 has been loaned in the 7½ years since the credit union was organized in October, 1948. Assets at the end of the first month totaled only \$535.75.

"Since that time," Bellamy reports, "our credit union has grown to be the largest in the state, representing one fourth of all the membership and assets in credit unions in New Mexico."

The \$500,000 mark was topped in December of 1953 and one million in deposits was reached Sept. 30, 1955. Almost \$84,000 has been paid in dividends since the credit union was organized.

Sandia Corporation Story Appearing in Booklet Racks Today

An illustrated booklet featuring Albuquerque and Sandia Corporation, reprinted from the current issue of New Mexico Sun Trails Magazine, is available today in the booklet racks.

The booklet reviews 250 years of Albuquerque progress from the days of the Conquistadores to the atomic marvels of today.

"Sandia Corporation: On the Frontier of Engineering" is the title of the article that describes Sandia as "Albuquerque's Biggest Business." It also tells of Sandia's history and gives a general discussion of the Corporation's present work.

Employees who wish to send a copy of the booklet to a friend or candidate for employment may obtain extra copies from the Employee Records and Processing Division 3153.

Armed Forces Day Observed Tomorrow At Sandia, Kirtland

Firepower demonstrations, a Nike guided missile and aerobatic displays are part of the celebration Sandia Base and Kirtland Air Force Base plan for the public tomorrow as the nation observes Armed Forces Day.

At Sandia, displays will be at the parade grounds and in the Base gymnasium from 8:30 to 12:30 in the morning. The firepower demonstration will be at the firing range at 10 a.m.

The flight line at Kirtland Field will be open for inspection beginning at 12:30 through 4:30 p.m. Many types of aircraft will be on display including latest jet models and an early "museum piece" as aerobatic teams zoom overhead.



FASHIONS OF TODAY AND YESTERDAY—Wearing modern fiesta ensemble, Mary Placek 1284 (standing) reminisces on the mode of a bygone era modeled by Joan Fullerton 1461. (Dresses courtesy of Latsha)

But they rolled their own

Ankle-Length Dresses, Square Heels, Shawls Were Stylish 250 Years Ago

Albuquerque is observing the 250th anniversary of its founding this year, if anyone hasn't heard. To add to the nostalgia of the occasion Sandia Lab News Reporter Juanita Bridge, 2464-1, "researched" the following information.

The well dressed and well-to-do woman of New Mexico in 1706 wore her dress to the ankle. An everyday dress would be of silk—perhaps a silk or velvet skirt with a white long-sleeved blouse, richly embroidered.

She wore square heeled shoes with pointed toes and carried a shawl, for even the aristocrats didn't wear hats but used their shawls for warmth and to cover their heads. Her stockings were silk, heavy and opaque.

She used zinc oxide powder on her face so that the New Mexico sun would not tan it.

In the evening she chose velvets and satins—a ball gown with her favorite necklace which might be of diamonds or emeralds. She placed decorative, often jeweled combs in her hair. Her hair was powdered, resembling the head-dress of Madam Pompadour.

The peasant girl wore her skirt to her ankles with several petticoats under it. Invariably one of them was red. She put on red stockings when going to church or to a fiesta, but while working she went barefoot.

Her skirts were of cotton and her blouse white with a light sleeveless jacket which laced up the front added for femininity. She used lots of jewelry.

Both classes of women applied plenty of makeup and rolled their own cigars, long and slender. Cigarettes were not used.

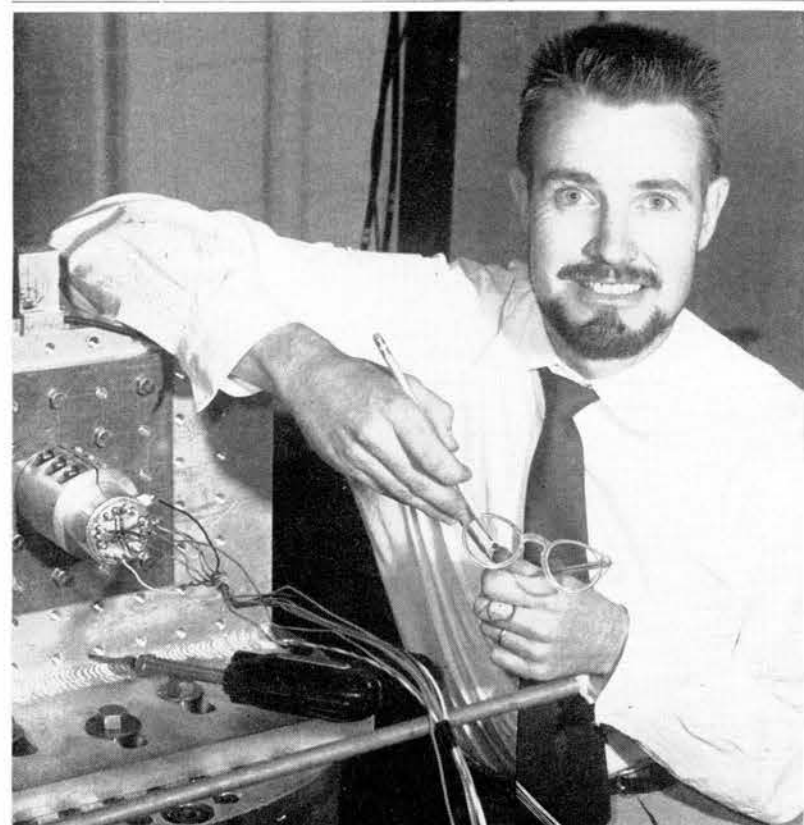
The aristocrat gentleman companion wore knee-length britches made of satin, velvet or silk. His shirt was fancy, very lacy, and his waistcoat was of silk, satin or velvet and heavily embroidered. He wore black pumps with silver buckles. When "dressed" he powdered his hair.

If he were going riding he dressed in cotton britches with a heavy cloth waistcoat and riding boots which came up to his knees. His hair was long and tied with a bow for riding.

The peasant man wore white duck trousers with a white shirt open to the waist, a wide leather belt and padded leather jerkin when he had to go off to fight. He went barefooted most of the time but wore huaraches when attending church or a fiesta.

Date Stickers Issued To Sandia Employees Through Company Mail

Automobile insurance stickers are now being issued by Employee Services, 3120. About the middle of the month in which your insurance is due, you will receive a form to fill out concerning your insurance renewal. Upon completion of the form, return it to the company via mail to 3120 and your sticker will be forwarded to you.



SAFETY GLASSES, a spot of splattered solder on the lens and the smile on the face of Ernie Graves, 1611, tell this safety story. Ernie probably owes the sight of an eye to the precaution of wearing the safety glasses before melting solder to remove wires from this switching device. He always wears the glasses in the shop, and as he says, "It's a good thing!"



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"Safety... A Daily Habit"

"An occupational accident, in the factory, on the farm, or on the construction site, has three certain results — Human suffering to the victim and his family, economic loss to his employer, and waste of precious skills to his country. There is another certainty about such accidents — they are preventable."

So wrote President Eisenhower when he announced Job Safety Week which is being observed now.

In telling of the responsibility of accident prevention at work the President added, "This is a work in which all of us must share. An injury anywhere is a loss to the nation as a whole. Safety must become a daily habit in all our workplaces if we are to reach our full potential of strength."

Speech Therapy Degree

Mrs. Elizabeth S. Hirsch, wife of Dr. Fred G. Hirsch, Sandia Corporation Medical Director, will graduate this June from the University of New Mexico with a Master's Degree in Speech Therapy. Mrs. Hirsch already has a Bachelor and Masters Degree in Chemistry from the University of Wisconsin.

Mrs. Hirsch will enter into private practice in speech therapy in Albuquerque and will also continue her work with the University clinic of speech therapy working with Dr. Fred Christ.

To Naval Academy

Allan P. Gruer, Manager of the Instrumentation Services Department, has received word that his son Earl has received a Fleet Ap-



pointment to the U. S. Naval Academy. Earl has been in the Navy for two years and qualified for the appointment after four competitive examinations.

New Home

Enjoying a new home at 1019 Parsifal NE is Joe Hankins, 5124.



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

Harry M. Sanderson Retires at Salton Sea

Harry M. Sanderson, Section 2483-2, Salton Sea, retired from Sandia Corporation May 4. He had been employed at the Test Base since September, 1953.

Sanderson and his wife Lavurn are parents of three sons, and two daughters. Their future address will be 12271 W. Camille, Santa Ana, Calif.



Wedding Luncheon

A luncheon and personal shower was held May 1 at Leonard's Restaurant honoring Kay Flood who was married to Earl Sadler, of Albuquerque, May 6. A gift certificate was also presented by the following in attendance:

Pat Higgins 5200, Winifred Sandusky 5210, Emily Whittingham 5211, Janet Currie 5212, Georgia Howard 5213, Maxine Laidlaw 5215, Gertrude Stephens 5220, Elsie Robinett 5222, Maxine Babcock 5223, Shirley Hicks 5224, Clara Taylor 5230, Maridel Dyke 5231, Ann Barrett 5240, Esther Vigil 5242, Dorothy Miller 5250, Barbara Hammond 5252, Jean Kristensen 5254, Winifred Fellows 7225-1.

Kay, who is supervisor of Section 7222-3, Technical and Standards Records, has been an employee of the Corporation since 1947.

Magazine Recognition

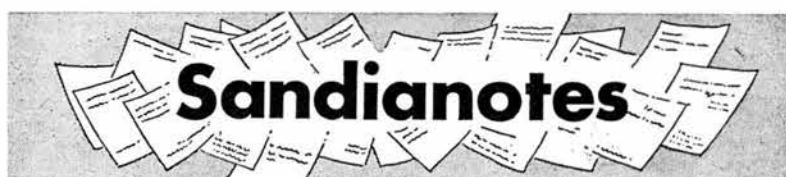
Recently mentioned in The Linking Ring, magazine of the International Brotherhood of Magicians, was Will Scranton, 2583. He is an amateur magician who recently took up the hobby. Says the magazine, "Will, ably assisted by Mrs. Scranton, can make experienced magicians take notice with his well routine act in perfect time to taped music, slow, sure and polished."

H. J. Wallis Promoted

H. J. Wallis, who was Sandia Corporation's Superintendent of Development Staff Services 1951-1953, has been named Assistant Vice-President of Bell Telephone Laboratories in charge of General Staff.

New Home

Norma Lee, 7225-3, and Vernon Brewster, 5211, recently moved into a new home at 1105 Chama NE.



FOUR GENERATIONS OF FORTMANS pose for family photograph. Standing is Kenneth R. Fortman 5221 (left), his son Gordon K. Fortman. Seated is Floyd J. Fortman (father of Kenneth) holding David Wayne, seven-month-old son of Gordon.

Vacation Pictorial

Alan Pope, 5142, and family vacationed recently at Guaymas, Mexico, and, to preserve memories of the trip, Al recorded it with photos and words. The result is a pleasant multi-page travelogue of high lights and sidelights. Young Pattie Pope, the family philosopher, contributed the closing sentence when they arrived home in a dust storm. "Albuquerque's terrible on the outside but, oh boy, on the inside..."

Sick List

Fast recoveries from recent illnesses are wished Jack Harper and Clyde Green, both of 2231. Returning from a three-week hospital sojourn is H. J. Brown, 2331.

Division 1611 welcomes James A. Perry back after a serious illness of several weeks. Frances Wright, 4135-2, recently underwent major surgery. Illness is also confining Clyde Green 2231, to his home. Gene Aas's daughter who was recently struck by an auto is recovering. Gene is section supervisor of 1246-1.

On Duty With Air Force

B. N. "Chuck" Charles has completed two weeks of active duty as a Lieutenant Colonel in the Air Force. He worked with the Analysis Division of Research Directorate at Kirtland Air Force Base during his tour of duty.



VARIETY SHOW to be presented May 27, 6 p.m., at the Coronado Club by the Sandialiers will include a Dixieland jazz band, comedy acts, vocal solos, sweethearts duet. Standing L to R, front: Rex Elder—director 5531, Bill Stephens, Thomas Burke, William S. Daniel, Bill Bailey 2723, George Stephens, P. E. Stephens AEC, Herb Howe 2711, Gene Medina 1614. Back, H. E. Pierce, Wilbur Stearns, Dwayne Fry 2553, J. C. Russell 1621, John Dobias 2231, Daril Gutscher 5531, George Eddy, Jr., Erlon Giddinge. Marilyn Wright is accompanist.

April Wedding

The marriage of Mary Ann Mares, 5216, to Ray Melo, employee of Kirtland Air Force Base, took place Apr. 28 in the home of the bridegroom's parents, Mr. and Mrs. Manuel Melo, 1223 Iron Ave. SW. Mrs. Melo is a former Sandia Lab News reporter and has been with Sandia Corporation for five years.

She received an electric blender from co-workers and was also entertained by secretaries in 5210 at a luncheon-shower at Leonard's Restaurant Apr. 26.

Secretaries Officer

"Spike" Coombe, 7410, has been elected Public Relations Director of the Albuquerque chapter of National Secretaries Association for the 1956-57 term. All secretaries at Sandia Corporation interested in the organization's monthly meeting. For further information contact "Spike," ext. 22256.

Instructors Meet

A meeting of first aid instructors will be held tonight, 7:30 p.m., in City Commission Room, City Hall, to organize an instructors mobile first aid unit. Any instructor willing to maintain an approved first aid kit in his car may attend and join. The unit, sponsored by the Bernalillo County chapter of the American Red Cross, will serve only in major disasters.

For further information, contact D. C. Robertson 2581-1, ext. 20153.

Candlelight Bingo — Almost

A recent crisis at the Coronado Club was met by Bob Culley 5213, the club's bingo director. He speedily made arrangements for bingo enthusiasts meeting May 9 to play by candlelight after a transformer burned out leaving the building in darkness. Bob was relieved when lights switched on five minutes before the games started.

Speaking of Reporters

This is another in a series of articles telling of the work of the volunteer reporters of the SANDIA LAB NEWS.

The Livermore Branch's first Sandia Lab News reporter — the Corporation's first local hire in the Livermore area — is a girl who savors versatile interests.

Marguerite J. Mihoevich, a life-long Livermorian who is appreciatively watching her home town boom, is secretary for Division 1251.

Already an enthusiastic Sandian, she has been in the Atomic Industry for about four years, first with the Research Division of the California Research and Development Corporation which operated at Livermore, and more recently with the Nuclear Physics Group at UCRL.

Her advice to young women looking for work: "If you like fascinating jobs, this (the Atomic Energy Industry) has them. You learn something new every day. Never a dull moment."

But no matter how interesting the job, variety of interests after working hours is her keynote. These include ceramics, classical music, travel, "clothes, and spending money."

Perhaps foremost is traveling. A few years ago she flew to Lima, Peru, and Santiago, Chile. She made the month and a half trip primarily to see her uncle, a Do-



Marguerite J. Mihoevich

minican priest, who she said was forced to flee Yugoslavia or forfeit his life. He is now continuing his work in Santiago.

Her next trip will be to Europe — a trip covering as much of the continent as time and money will permit. As a reminder to her desire, the wall behind her desk sports colorful pictures of England, Germany, France, Holland and Mexico.

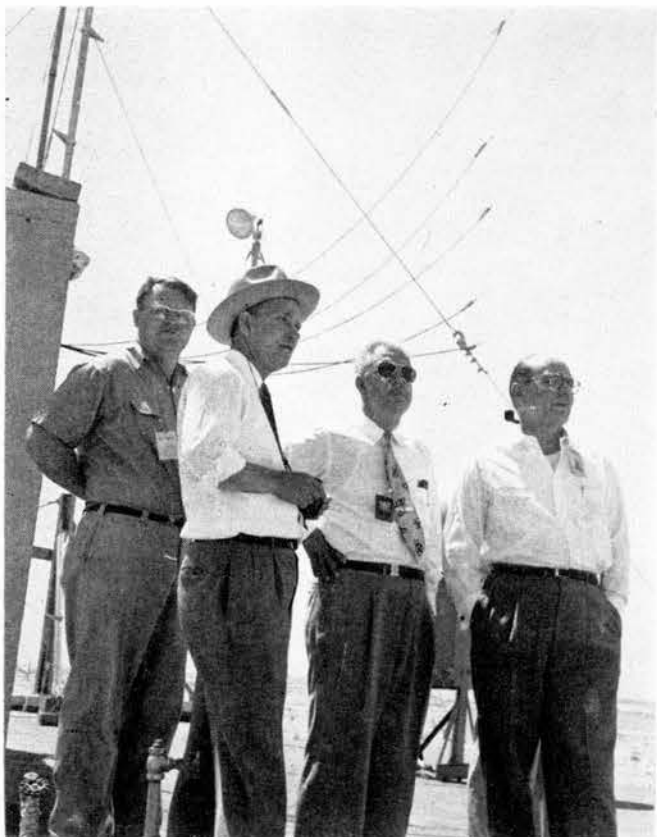
"Lots of adventure makes life just that much more fun," Marguerite asserts.

Salton Sea Test Base

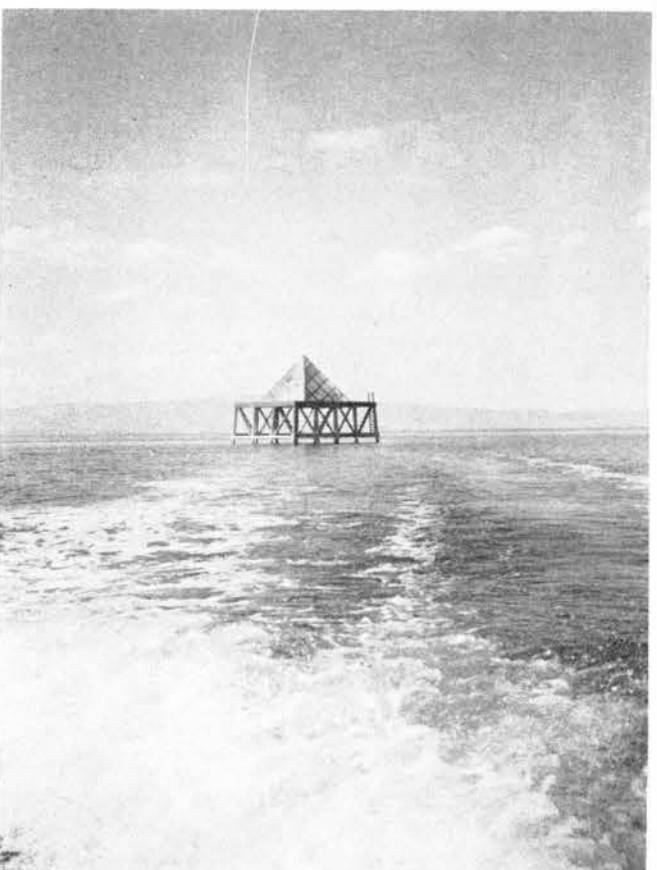
Sandians See Busiest 'Drop Day'



APPROACHING drop plane is watched by R. P. Lutz, Vice-President Operations; F. E. Burley, Superintendent of Operations Engineering and W. G. Funk, Manager, Employment and Personnel Dept.



VANTAGE POINT—From atop the main building at Salton Sea Test Base tech area a good view may be had of most drops. L to R: Howard Austin, 5214; Allan P. Gruer, Manager, Instrumentation Services Department; T. A. Sprink, Manager, Salton Sea Department; Robert E. Hopper, Superintendent, Plant Services.



A "drop" at Sandia Corporation's Salton Sea Test Base is almost an every day event, but commonplace as it is to the crew at SSTB, it is a complex, intricate operation which is fascinating and colorful to the observer.

Recently men in the Field Operations Division of the Instrumentation Services Department, 5210, had one of the busiest days on record at the Sea.

"There were more drops in an eight-hour period," Department Manager Allan P. Gruer reported, "than ever before." Some of the drops were Sandia test and some were target practice drops by Air Force training crews.

It was a successful day, operationally speaking. Even the weather cooperated with a mild 80 degree temperature and no wind. In the summer, day after day, the thermometer reaches 120 degrees in the shade in the Salton Sea area, and shade is mighty scarce.

On this particular drop-filled day several Sandia Corporation officials were on hand to observe operations. The party included: R. P. Lutz, Vice-President Operations; Kimball Prince, General Attorney; F. E. Burley, Superintendent of Programming and Manufacturing Engineering; R. E. Hopper, Superintendent of Plant Services, and William Funk, Manager of Employment and Personnel Department.

It was coincidental that their visit to Salton Sea was on the Base's busiest day. But this fortunate coincidence allowed them to see an outstanding demonstration of ballistic instrumentation.



A Salton Sea "drop" is instrumented by the Sandians at SSTB to record what an experimental bomb does between the time it leaves the airplane and the moment it strikes the earth's surface, in this case the water.

The bombs contain no explosives, but the space inside the casing may contain a good deal of electronic telemetering instrumentation.

Behavior of the bombs is recorded through use of optical instruments such as cine-theodolites, tracking telescopes and ballistic cameras as well as the electronic multi-channel telemetering devices.

The plane itself is tracked by radar from the Salton Sea technical area. The bomb may even be released by a man on the ground, by triggering an electronic pulse. Close radio contact by voice is maintained with the crew of the drop plane to check the flight path of the plane as it nears the target.

Instrumentation operators on the ground and the Air Force crews long ago developed the teamwork necessary for successful drops.

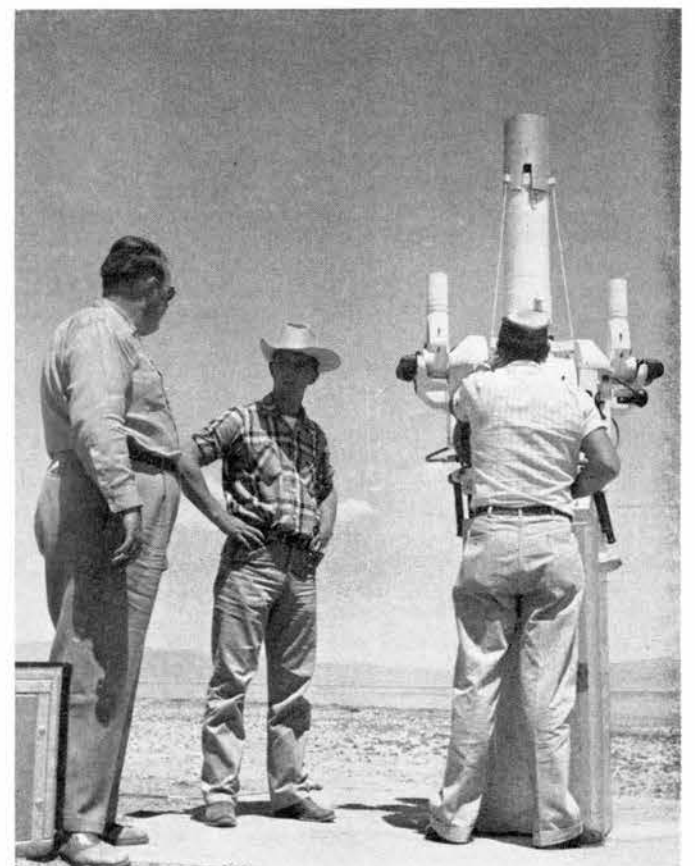
This long-time familiarity with the task at hand has helped make Salton Sea Test Base a highly important ballistics laboratory.

The record setting day was just another busy day for the men in Salton Sea's Field Operations Division. In a modest way, history was made. But no one paused for a celebration, for the next day at 8 a.m. another test was due. In the afternoon, another. The next day . . . the next week . . . next month . . . ballistic tests continued.



LEFT: Target at Salton Sea Test Base stands high above the water of the Sea.

ABOVE: Radar plotting is done in Bldg. R-2. The airplane is directed onto its bomb run by the operator of this plotting board. L to R: Howard Austin, T. A. Sprink, Davis Danielson, Kimball Prince, R. E. Hopper (back to camera), Elmo Hirni (behind Mr. Hopper) and F. E. Burley.



SEARCHING for the drop plane is Harvey Hartter who will locate the high flying bomber and bring the tracking device to bear on it. He and Bob Wallis, center, will then manipulate controls to keep the lens centered on the falling bomb and in that way record on film the ballistic behavior of the weapon. John Keller, left, discusses the "drop" with Bob Wallis of his section.

Sandia Vice-President Tells N.M. Council Of Needs in Field of Adult Education

Sandia Corporation's three greatest needs in the field of adult education in New Mexico today are (1) expansion of opportunities for post graduate technical education, (2) expansion of vocational educational facilities, and (3) expansion of cultural education as it most directly affects industry.

These points were stressed by M. H. Howarth, Vice-President and General Manager of Sandia Corporation, in a speech last week before the annual spring meeting of the New Mexico Council on Adult Education in Santa Fe.

Post graduate technical training in New Mexico "is a real problem," Mr. Howarth emphasized. Young engineers and scientists interested in coming to New Mexico to work in the atomic weapons program frequently ask, "What opportunities are there for me to continue my formal education if I come to New Mexico?"

Most engineering graduates realize that in four years of college, about all they can obtain is a reasonable grounding in the fundamental principles of mathematics, physics, chemistry, electricity, etc., he said.

To apply these fundamentals in the specialized areas of their day-to-day jobs requires additional years of advanced study. "They want opportunities to continue their education and consider opportunities to do so as one of the important factors in selecting a job," Mr. Howarth pointed out.

In alleviating the problem in this area, Sandia Corporation officials and other leaders of industry are consulting with educators, explaining to them the need for post-graduate study in specialized fields.

Several faculty members are being employed by Sandia Corporation as consultants and for regular employment during the summer vacations. These actions not only enlarge the educator's knowledge as to information his students will need and supplement the educator's earnings, but he also brings to us a fresh viewpoint on solutions to important problems, Mr. Howarth said.

In addition, industry is determining areas of interest among scientific and technical employees for advanced courses and is helping the University of New Mexico and other schools organize classes to fit these needs, Mr. Howarth explained.

Sandia's technical staff members are being encouraged to lecture on specialized subjects to students at the colleges and universities. Specific projects for research are being assigned to universities on a subcontract basis, Mr. Howarth added.

Another area of adult education of special interest to both the managers of industry and to its workers is the field of vocational education, Mr. Howarth told the council. There is a great need for



Max H. Howarth
"—they want opportunities—"

adult vocational training, he said, because "the economy of New Mexico until recent years has not required substantial numbers of skilled technicians who know shop mathematics, blueprint reading, elementary mechanics, basic electrical theory, etc."

It is still necessary to "import" trained people to fill some of the specialized jobs, Mr. Howarth said, "but if we can provide sound technical and vocational courses, it will only be a question of time until most of the higher skilled jobs are filled by local men and women."

Discussing the third point, expansion of cultural education, Mr. Howarth stressed the need for broader training and more emphasis on the humanities.

Increasing emphasis on specialization in both technical and liberal arts courses results in the graduation of many highly trained specialists but not enough "generalists," he said. He defined a "generalist" as one "who can coordinate and pull together all the specialists into a smooth-working productive team."

The qualities of leadership and understanding of inter-group relationships involved in working together are not stressed sufficiently in today's college and university courses, he said. It is the "generalist," the person with a broader knowledge of human factors, who plays a vital part in leadership at all levels in any organization.

"Furthermore," Mr. Howarth said, "people who cultivate a rich and varied life outside the job will have little trouble keeping busy when it comes time for retirement."

"Industry has found that financial provisions for retirement are not enough. Education for retirement is now a definite part of the program in many companies. Education for a full life in later years has become increasingly important since our average life span

has been extended through medical research."

Evening Classes to Be Offered at KAFB by St. Joseph's College

The College of St. Joseph has announced a series of classes to be presented on Kirtland Air Force Base this summer.

The schedule will include courses in Mathematics of Finance, Principles of Economics, Public Opinion and Propaganda, Persuasive Speech and possibly a fundamental mathematics course.

Registrations will be taken at Sandia Corporation June 4. Location will be announced in the June 1 issue of the Sandia Lab News.

G. A. Fowler New Chairman IRE

Glenn A. Fowler, Vice President, Research, 5000, is the new chairman of the Institute of Radio Engineers. He was elected last week at the IRE annual dinner meeting. Gene Newlin, 6010, was elected vice chairman.

Sheldon Dike, 5123, was named secretary and Bennett Basore, 1412, treasurer.

The new officers will be installed at the IRE's annual picnic scheduled June 16 at Hyde Park, near Santa Fe.

Seeking 200 Sandia Employees, Families For Anniversary Show

The call is out for 150 to 200 Sandia Corporation employees and their families to be part of the cast of Albuquerque's 250th Anniversary "Enchantorama." The Sandia employees will be in an episode on the Civil War.

Dick Strome, 2463, is the recruiter for the historical pageant and he reports that there will be no speaking parts, costumes are to be furnished, practices will be evenings one hour each week until the show is presented in mid-July.

Running for nine evenings, July 4-14, the Enchantorama will highlight the anniversary observance here. Further information may be obtained by calling Dick on ext. 20241.

Two Division Supervisors Change Jobs in 7200

Two changes in supervisory positions in the Technical Services Administrative Department and Technical Services Department have been announced.

A. D. Pepmueller has been appointed supervisor of the Technical Information Division, 7223, replacing H. M. Willis. Mr. Pepmueller was formerly supervisor of the Library Services and Special Studies Division.

H. M. Willis has been named supervisor of the Scheduling and Ordering Division, 7241, the position vacated by A. R. Eiffert recently when he transferred to the Livermore Branch as head of the newly created Services Division, 1253.

ISA Elects Officers—4 Are Sandia Employees

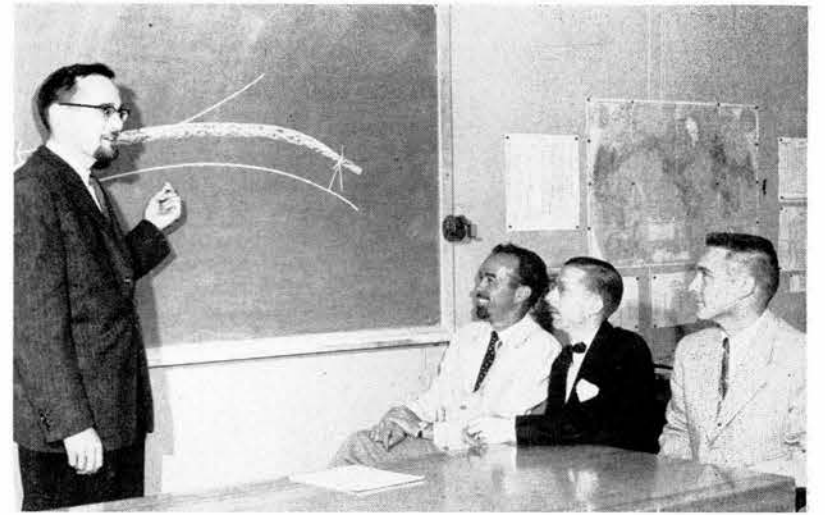
Four Sandians are among the newly elected officers of the Albuquerque Chapter of the Instrument Society of America. Nicholas Sannella, 1422, was elected secretary, H. D. Chambliss, 1651, treasurer. National delegate is E. L. Deeter, 1440, and alternate delegate is A. R. Charlton, 5213.

Congratulations

BORN TO:
Mr. and Mrs. H. J. Brown, 2331-4, a son, Robert Keith, May 7.

Mr. and Mrs. J. K. Rutledge, 2331-4, a son, Michael, Apr. 12.

Mr. and Mrs. George Treadwell, 1248, a son, Michael, May 4.



GROUP STUDY SESSION—Jack Ames, 1412, explains how microwave transmission may be diffracted by action of a meteorological duct to members of the PGAP and PGMTT. Listening are A. L. McMullen, 1412, Sheldon Dike, 5123, chairman of the PGMTT, and John McLay, chairman of the PGAP.

IRE Professional Study

Two IRE Groups Meeting Jointly Help Broaden Knowledge of Membership

One of a series of articles on Professional Groups in the Institute of Radio Engineers.

Two professional groups of the Institute of Radio Engineers have combined efforts to produce a stimulating method of group study, according to John McLay, chairman of the Professional Group on Antennas and Propagation.

Members of the PGAP and the Professional Group on Microwave Theory and Techniques have held joint meetings for more than a year and a half. Each meeting features a speaker, a discussion session, and a business meeting. "It is mutually desirable and a pleasant way of exchanging knowledge in these fields," McLay said.

Topics for discussion have ranged from the effect of the Aurora Borealis on radio waves to the advantages of various shapes and materials for controlled transmission of radio waves.

Speakers have included William B. Wilkens of Sander Associates,

Nashua, N. H., who discussed Stripline Techniques for VHF and UHF. William Stearns, 1432, presented a summary of papers from the IRE Symposium on Microwave Techniques from the Philadelphia meeting. Jack Ames, 1412, recently presented a paper titled "Microwave Telemetry: Advantages and Problems."

One of the outstanding papers prepared by members of the group was titled, "Automatic Tracking Array for 217 MC Telemetry Band (APOTA)." It was co-authored by George Oltman, 1412, and B. J. Bittner, 1412, and presented at the IRE national convention in New York.

Dr. Sheldon Dike, 5123, is chairman of the PGMTT with Frank Janza, 1412, vice chairman. George A. Arnot, Jr., 5413, is secretary. Vice chairman of the PGAP is George Oltman, 1412, and Dean Yearout, 1412, is secretary.

I Professional R Group E Activities

U. S. Health Service Engineer Appointed To Serve With ALOO

Roscoe H. Goeke, a U. S. Public Health Service sanitary engineer, and specialist in biophysical safety, has been transferred for detached duty with the AEC's Albuquerque Operations Office.

He will serve in the ALOO Test Division as staff advisor on radiological safety, fallout predictions, contamination problems and other radiological matters related to nuclear test activities.

Gertrude Herring Killed In Auto Accident May 12

Gertrude G. Herring, 7225-5, was killed in an automobile accident on U. S. Highway 285 near



Gertrude G. Herring

Encino, N. M., Saturday evening, May 12. Also killed were her husband, Milburn, and 14-year-old daughter, Margaret. A son, Jimmy, 10, received minor injuries.

Mrs. Herring, an editorial assistant, had been in Sandia Corporation employ since April, 1953. The Herrings lived at 428 El Paraiso Rd. NW.

Sympathy

To W. R. "Bill" Russell, 2315, for the death of his infant son May 4 in Albuquerque.

To Lois Barney, 2464-1, for the death of his father Apr. 13 in Brownfield, Tex.

2-5-10 Years

—Sandia Corporation Service Awards—

TWO-YEAR CERTIFICATES

May 18-26
Robert C. Ezell 2462, Harrison W. Young 7231, Carl W. Kochmann 2124, Anne E. McCullough 5512, Donadieu Sonnier 7232, C. J. Kentfield 7412.
Samuel M. Cummins 5523, Jean A. Rowland 2461, Fred A. Drummond 2122, Julianne S. Gabriel 2713, Fredericka L. Weber 7225, Julia Terlesky 2571, John W. Budlong 1235, Edward J. Kurpiers 2722.

May 27-31
Dale R. Hanely, 2122, Isabel L. Baca, 2419.

FIVE-YEAR PINS

May 18-26
Ora J. Crum 2411, Rolland R. Pyetzki 2522, Dorain H. Dickinson 4152, Alfred J. Brady 2112, Clyde P. Howard 1612, James L. Coursey 7313.
W. Rappleyea, Jr. 2151, Reuben J. Montoya 2452, John Martinez 2353, Juan S. Sanchez 2232, Frank Lucero 7224.

May 27-31
Herschel W. Rogers 2553, Max McWhirter 1612, Willard E. Prekker 4152, Lawrence I. Ratliff 2151, Grover W. Edwards 3161, Joseph E. Tilley 2411.
Richard A. Rael 2221, John F. Berger 2452, Roy L. Buckner 1641, Tony M. Lopez 2461, Reynolds R. Moore 1283, Clory M. Valdez 6021, Havis H. Black 2452.

10 YEAR AWARDS



James Karo, 2460
May 21



C. R. Dogue, 7240
May 27



W. E. Treibel, 1230
May 31

Bridey Murphy Case Prompts 'Confessions of a Hypnotist'

The Bridey Murphy case and accompanying theories of reincarnation floating the country are "a lot of hokum," says amateur hypnotist Art Perry.

"An individual can be projected into a particular situation by hypnosis and his subconscious memory will conjure up a logical story, even improvise or imagine events to fit the situation."

Art, who is supervisor of Printing Section 2462-3, has undertaken an exhaustive study of the science of hypnosis during the past 20 years, and literally hundreds, possibly several thousand subjects have succumbed to his "mystic powers."

He rationalizes that "hypnotic suggestion" empowered the Pueblo, Colo., housewife to "recall" during a trance a previous life as Bridey Murphy in early 19th century Belfast and Cork, Ireland.

Stored Impressions

Bridey's adeptness at dancing an Irish jig (though in real life she is a poor dancer) and her reference to archaic Irish words and places (some authentic) may stem from impressions stored in her mind, he says. Or they may be merely her own interpretations based on observations and knowledge of Irish folklore.

Art does emphasize that he believes the author of current best-seller "The Search for Bridey Murphy" to be sincere in his writings but that he has incorrectly interpreted the results of his experiment.

Declares the modern Svengali, "You can be hypnotized and told you are Cleopatra. Based on fragments of information you have learned about the Egyptian queen, even though your conscious mind may have forgotten them, you could mimic some of her characteristics, might adopt her speech habits.

"Depending upon how imaginative you are, you might dream up your own version of Cleopatra's adventures more exciting than her own. And it would be a plausible tale, some details being true."

Hypnotize Almost Anyone

Any normal person, according to Art, can be hypnotized, although not necessarily by one person or in any given time. Certain individuals go into deep trances by the mere suggestion of the hypnotist. Some take three seconds to five minutes while others have to tire to the extent of wanting to go to sleep.

A person may become hypnotized easily because he is trying too hard not to be, or he may be difficult because he is too willing. Art explains this as the law of reverse effect.

The individual's attitude toward and his confidence in the hypnotist is one determining factor.

The person actually hypnotizes himself, he maintains. The hypnotist does not possess any superior powers. He is merely the medium for making suggestions.

Hypnotized Crew

"Back during World War II," Art continues, "I hypnotized the crew of an Air Force plane. Actually the men were seated at desks in a classroom, but I created a situation by suggesting they were flying in combat and I was the control tower.

"Each man performed his duties automatically with imaginary controls and equipment. The navigator sighted a Zero coming in at 9 o'clock, and he grabbed an intercom, warned the crew. Machine gunners manned their posts, went through the actual motions of shooting down the enemy.

"Then they were told they'd have to crash land. The co-pilot sighted an island below, actually described it to the pilot, who slow-



Aubrey Perry

"dream up your own version of Cleopatra"

ly and deliberately maneuvered the plane to a landing."

While the hypnotist can assume the role of a dictator in enticing his subject to follow instructions, he can not compel a subject to act contrary to strong convictions or training, for the subject will find some logical reason for refusing.

Neither can the hypnotist inject into his subject any super human strength or abilities to perform feats he could not normally do. The hypnotist can, however, alleviate feelings of fatigue or pain which may hinder the individual's normal capabilities.

Danger of Hypnosis

This is one of the dangers of hypnosis, Art believes, for pain and fatigue are nature's preservatives which discourage over-exertion and bodily injury. Without these sensations, a person may suffer physical harm by disregarding his limitations, especially through recklessness or ignorance on the part of the hypnotist.

"The hypnotist should also at all times refrain from instilling fear in the individual for this can incur deep and lasting psychological effects. Other serious problems can arise if the hypnotist loses control of a situation and can not sufficiently free his subject from a trance."

This points up an important rule in the practice of hypnosis, Art says. It should never be attempted except by one with a thorough knowledge of the field and with a defined code of ethics.

Asked about the use of props such as lighted candles in inducing sleep, Art considers these only focal points for concentration and not really necessary for hypnosis.

Their value was questioned back in the 18th century, he explained, when F. A. Mesmer first introduced in Vienna his theory of animal magnetism—the use of magnets in "drawing out" illness from the body. Although his theory was disproved when it was discovered he was really hypnotizing his patients until they didn't feel pain, it did aid in the evaluation of hypnotic therapy.

Special Study Field

Art considers this an entire

Community Chest Agency

YWCA in Albuquerque Fills Recreation Needs for Many

This is another in a series of articles telling about the agencies of the Albuquerque Community Chest, and the help Sandians are providing in the year around work of these organizations.

Currently in the process of a face-lifting operation at its building at 315 Fourth SW, the Young Women's Christian Association, an agency of the Albuquerque Community Chest, serves recreational and guidance needs of large numbers of girls and adults in the Albuquerque area.

YWCA organizations offer activities for girls, young adults, and persons of advanced age.

Two youth organizations are the Y-Teen Group which has study sessions in crafts and music and organized games and the Teen Dance Group which studies ballroom and square dancing.

Another youth group, the Junior Camp Counsellors, provides leadership for camps.

The Y-Wives, an organization for young married women, meets regularly for luncheons and study projects. Members recently completed a course in ceramics.

Two organizations for older persons, men and women, are the Elderberries Club and the 50-50 Club. Both clubs offer social recreation with the 50-50 club primarily interested in square dancing.

The YWCA also sponsors organized service courses in art, painting, ceramics, bridge, beginning and intermediate folk dancing, Spanish, exercise and nutrition.

During summer months the YWCA offers camp activities from

its lodge headquarters in Tijeras Canyon. The Day Camp offers facilities for 50 girls and 28 can be housed overnight.

Housing for girls away from home is one of the major functions of the YWCA. Facilities for 26 girls are provided by the YWCA plus a five-bed dormitory for transient girls.

The YWCA operated on a budget of \$31,000 in 1955. Of this, \$18,450 was secured through the Community Chest.

A 21-member board of directors governs the YWCA and an executive director supervises the operation of the "Y." Mrs. J. W. McRae, wife of Sandia's president, is first vice-president of the organization.

The face-lifting now being done at the YWCA building includes painting, redecorating, planting the patio, etc. All labor and materials were donated by "Y" members and local business firms.

BTL Engineer Speaks To Research Colloquium

Jack Morton, Director of Device Development, Bell Telephone Laboratories, will address a meeting of the Sandia Research Colloquium Monday, May 21, at 9:30 a.m. in the basement conference room, Bldg. 802.

The topic of Mr. Morton's discussion will be "State of the Transistor Art."

Today's Engineers Tell Youths Of Tomorrow's Science Careers

Sandia Corporation needs 375 engineers, 100 electronic technicians, 150 draftsmen and 30 electrical and mechanical inspectors. This is a good illustration of the critical need for scientific and technically trained personnel

Individual counseling throughout the student's educational period will be another valuable way in which professionals may help, Henderson said.

"There are many hazards in a technical education," Mr. Henderson cautions, "and the willing professional who can encourage students past these hazards might prevent the loss of many potential scientists." The hazards include exacting scholastic work, longer training, tough competition.

The committee sees a 10-year program of counseling to step up the scientific education program. The first step will be a compilation of a list of lecturers and counselors representative of all the technical fields. Speakers will be made available to science education departments throughout the state, to work with and through them.

It is this point that concerns Mr. Hight. The scientific professions are aware of the shortage of technical personnel and are enthusiastic to help ease the situation, but finding the right method is a problem at the moment.

He has conferred with representatives of the New Mexico Education Association and has attended several meetings of science educators in New Mexico in his study of the subject.

Mr. Hight has lectured to several classes in recent months on applications of solar energy. He participated in the recent Career Day program at the local high schools.

In July he will deliver two talks to a select group of high school science instructors at a Colorado College Seminar in Colorado Springs, Colo.

Progress is being made, Mr. Hight believes, and as more people participate in the program more opportunities will appear to get the story of science to the students.

field of study in itself. He has seen hypnosis used in extracting teeth or in minor surgery where anesthetic was not available. It has aided the cure of annoying habits such as smoking, excessive drinking, insomnia. The psychoanalyst's use of age regression—the mind's return to a younger age—to uncover mental disturbances is well known.

Austrian psychoanalyst Sigmund Freud, says Art, was one of the first to see some of the drawbacks of its use in these fields, however. The hypnotist does not have absolute control over every patient. In some cases, conscious suggestion may be better than hypnosis in creating a state of well-being and confidence.

For these reasons, and also because it is beyond the realm and skill of the hypnotist, Art emphatically warns, hypnosis should never be used as a curative agent except under the guidance of a licensed medical or psychiatric practitioner.

No Longer "Evil Eye"

The acceptance of hypnotic therapy by men of science has, none the less, enhanced the stature of hypnosis and the hypnotist himself. No longer is he associated with the evil eye, sorcery, witchery.

"And the hypnosis craze created by the Bridey Murphy episode," concludes Art, "has also served to arouse public recognition and appreciation of the art of hypnosis. This will remain long after the present fad has passed."

Recorded Jazz Concert At Club Tomorrow Night

Bill Previtti, an Albuquerque disc spinner and jazz enthusiast, will present a jazz concert and variety show at the Coronado Club tomorrow evening from 9 to 1.



R. W. Henderson S. C. Hight

which is being felt throughout the entire nation.

For some time, Sandia Corporation, along with most of the nation's industries, has been working to alleviate this crippling shortage. It's not an overnight job, but a long range project which calls for cooperation among the nation's students, parents, educators, scientists and employers.

R. W. Henderson, Director of Systems Development, 1200, and S. C. Hight, Director of Research, 5100, are currently engaged in educational and guidance activities to encourage high school and college students to enter scientific fields.

Mr. Henderson is chairman of a recently organized Education and Guidance Committee of the New Mexico Council of Technical and Scientific Societies. He is being assisted by one representative from each of the Council's 15 member organizations.

After a series of conferences between Mr. Henderson and top level state educators, it was determined that professional scientific people could give valuable assistance to students by introducing first hand information of the actual "how" of earning a living in the scientific fields to the student.



"... another fellow bought a square balloon."



"One story... has never been told."



"Mr. Laurence left out one thing—hard work."



"A time of great frustrations... excitement."

Many Fascinating Anecdotes Found In Atomic Weapons History Sandian Relates

When a Sandia Corporation scientist stands before other scientists to talk on "Some Experiences With Atomic Weapons" he is bound to relate some mighty interesting anecdotes.

And there were some fascinating facts told by Dr. Alan Pope, supervisor of Sandia Corporation's Experimental Aerodynamics Division, when he spoke before the Atlanta, Ga., chapter of the Institute of Aero Sciences recently.

Here are a few episodes in the atomic phase of history contained in Dr. Pope's talk:

"Possibly the most poetic description of 'Trinity' (first atomic explosion, New Mexico, July, 1945) was given by observer William L. Laurence: 'With the flash came a delayed roll of thunder heard... for hundreds of miles... sounding as though it came up from the bowels of the earth. The hills said yes and the mountains chimed in yes... It was fascinating and terrifying, uplifting and crushing, ominous, devastating, full of great promise and great forebodings.'

"Mr. Laurence left out one thing—hard work. For the blast, more than any other single achievement of man, was the result of the hard work of thousands of people; hard work, heartbreaks and rarely, laughs."

Jumbo Story

"One story that has never been told about the first explosion concerns a tank named 'Jumbo'; probably the strongest tank in the world. It had steel walls more than six inches thick.

"Its duty was to contain the chemical explosion if the uranium didn't fission, since in 1945 there wasn't a great deal of fissionable material in existence, and the prospect of spreading what little we had all over the desert was too horrible to contemplate.

"But the tank was never used. In the last few months it became a mathematical certainty that the bomb would fission. The hard work and heartbreaks that went into Jumbo were just necessary backup to a program frequently operating on the boundaries of knowledge."

Dr. Pope told the tale of the early day security regulations when the word "uranium" was taboo.

"There has always been a use for uranium. It was used by glass manufacturers to color glass yellow. Well, one day a scientist, who dared not whisper the word 'uranium' called a glass dealer for some yellow glass tubing.

"He was told by the dealer that he had 'uranium glass.' Forgetting himself entirely, and rising to the full height of great indignation, the scientist said, 'if you're going to discuss classified information over the telephone, I can't do business with you,' and hung up."

Great Excitement

Many times, Dr. Pope pointed out, he wishes that he had par-

ticipated in the program during those years.

"It must have been a time of great excitement and frustrations.

"One of my friends told me of the early assembly problems, and how it was pointed out that a steel chain hoist was inadvisable as it might spark. Of course, the manufacturer pointed out that the brass chain was many times weaker and many times more expensive, and there wasn't any sense in making one, but my friend stood his ground.

"He finally got a brass chain, along with lots of looks that clearly questioned his sanity.

"Another fellow had to buy a square balloon."

Memorable Occasion

To Dr. Pope, and to thousands of others who have seen it, the atomic burst is pretty memorable.

"The fireball sits there and the gasses roll and tumble and grow without a sound. Then they turn red brown and you think bromine? bromine? where's bromine come from? Someone says no, it's nitrogen dioxide.

"Then as you stand there the millions of cubic feet of brown gas turn into other oxides of nitrogen, some invisible, some white. Probably a few thousand feet of laughing gas are manufactured in the process.

"As the great white cloud reaches into the stratosphere the loud speaker says the shock wave will arrive in about 30 seconds and then you feel like somebody struck two firecrackers in your ears and let them go."

Ultra fast movies of the atomic explosion have been seen by Dr. Pope. "First, there is a blue flash, and then the whole cab of the tower is atomized into a ball of gas. Streamers of flame shoot down the legs of the tower and out the supporting cables as the rate of propagation in steel exceeds that in air.

"Then a fireball forms and grows with a brilliance that defies description. Finally a shock wave detaches itself from the fireball and travels outward. While all this has been going on the ground beneath the tower has exploded from the heat, and the fireball, lighter than air, has been rising slowly."

Secret, Secret, Secret

In recalling some of the old days when security in the Manhattan Engineering Project was at a peak, Dr. Pope said, "In the old days... they'd get on a rooftop (no microphones) and ask you to come out to New Mexico to work on a 'secret project.' Then when you got there you learned you were an atomic scientist, and your address—along with thousands of others, was P.O. Box 1663, Santa Fe.

"This was so your mail could be censored. Your magazines came

via General Delivery, Los Angeles, as even the simplest mail clerk would get alarmed at sending 500 copies of the *Physical Review* to one box number."

Sandia Story

In telling his Georgia audience of Sandia Corporation, Dr. Pope acknowledged that he was well aware that the name meant little to his listeners until he spoke to them.

"... our Corporation," he explained "is engaged in the development and production of atomic weapons, a highly secret project. Yet our scope is immense.

"It reaches into nearly every state in the Union. We have more or less permanent branches in Nevada, in California and out in the Pacific—besides our main plant (5600 people) in Albuquerque. But the only advertisement we ever write appears

in the help wanted columns in our never ending search for scientists."

In closing Dr. Pope acknowledged that the area in which he works is an unusual one. "I know that the world of so-called atomic scientists seems strange and remote, perhaps a little long-haired, and reminiscent of the cloak and dagger boys."

AWS Members to See Cutting Exhibition

The American Welding Society will meet tonight at 7:30 p.m. in the Industrial Arts building, UNM. The program will be presented by Robert Scott and Verne Havo, representatives of Linde Air Products, Denver, Colo.

A movie and demonstration on inert gas cutting of aluminum will be presented. Refreshments will be served; members and guests are invited.

Sandia's Local Purchases to Reach \$3 1/2 Million this Year

More than \$16,000,000 was spent by Sandia Corporation in purchases during the first quarter of 1956, R. P. Lutz, Vice-President of Operations, 2000, told members of the New Mexico Manufacturers Association last week.

Six Per Cent Local

Six per cent of all purchases were made in the Albuquerque area. Based on these figures, about \$3,500,000 will be spent locally this year, Mr. Lutz said.

He was discussing vital factors common to industry and the community—the people, the plant, and dollars spent.

Sandia Corporation currently employs 5724 persons with an annual payroll of \$35,000,000. Of these, 1201 are engineers and scientists, 710 are professional and managerial, 1519 are office and clerical, 2115 are tradesmen and manual laborers and 179 are protective, guards, firemen, etc.

Seek 600 New Employees

The Corporation hopes to employ about 600 more persons in 1956. Mainly they will be engineers, scientists, draftsmen, technicians, and clerical employees needed as replacements and additions to the work-force.

Of all Sandia's personnel, Mr. Lutz said, 26 per cent are college graduates. Of these 1600 college graduates, 57 have PhD's and 240 have Masters degrees in various engineering and professional fields.

The value of Sandia Corporation's plant is currently \$60,000,000. Equipment is valued at \$29,000,000 and the remaining \$31,000,000 represents the value of buildings, land and services. The building program planned for the next four years in the Tech Area will increase this valuation considerably.

In return for its contribution to the community, the Corporation expects the following, Mr. Lutz said:

A friendly acceptance of the

Corporation and its people as neighbors. This is being done, he added.

Visionary planning to keep streets, water, sewage and power systems adequate for the anticipated growth of the city and its industries.

Attract high grade industries and businesses and the skilled labor supply necessary for these industries and businesses.

A continuous understanding by the community and its officials of what is required for sound industrial growth.

Industrial Engineers Start New Chapter for New Mexico Members

A new professional engineering society for New Mexico was formed last week with the election of officers and filing for a charter from the national organization.

The Albuquerque Area Chapter of the American Institute of Industrial Engineers elected Fred Bentz, 2514, president and Joseph Brubaker, Kennecott Copper Co., Silver City, vice president.

Treasurer is Al Kaping, 2514, and Russ Freyermuth, 2524, is treasurer.

Current membership in the organization numbers 35; 29 are employees of Sandia Corporation.

A membership drive is currently underway. Secretary Kaping urges anyone interested in joining the organization contact him at ext. 34244.

Cerebral Palsy Telethon Coming This Weekend

Top local talent from all fields of entertainment will throw their collective shoulders to the charity wheel May 19-20 as they donate



their time and efforts to produce a 16-hour long telethon to raise money for Albuquerque's Cerebral Palsy Clinic.

The telethon, to be staged at the Ice Arena, starts at 10 p.m. Saturday and runs through 2 p.m. Sunday. Bill Previtti and Victor Izay are in charge of talent procurement and direction. Bob Watson, Channel 7 TV program director, is overall director.

All money raised remains in Albuquerque to pay for operation of the Cerebral Palsy Clinic and the CP Day School which operates an out-patient clinic for many of Albuquerque's physically handicapped children.

Promotions

LEWIS M. LARSEN to supervisor of Tool Made Sample Engineering - Electrical Section 1624-1, Materials Standards Department.

As a staff member Lew has been assigned to this section since August, 1954.

Lew came to work for Sandia Corporation's Quality Assurance Department in January, 1953. Previously, he was employed by Montana-Dakota Utilities Co., Bismarck, N. Dak. for two and one-half years as a distribution and transmission engineer.

In June, 1950, he graduated from North Dakota State College, Fargo, with a B. S. degree in electrical engineering. He was a member of Tau Beta Pi, engineering honorary, and Phi Kappa Phi, scholastic honorary. He now is a member of American Ordnance Association.

He served three years as an Army radio operator in the European theater.

BYRON H. WECKETT to supervisor of Tool Made Sample Engineering - Mechanical Section 1624-2, Materials Standards Department.

Byron began his Sandia service in October, 1952, as a staff member in Standards Engineering, where he remained until his transfer to Materials Standards in August, 1954. Before coming here he was a tool and machine designer two years with National Automatic Tool Co., Richmond, Ind.

He worked three years part-time for this firm as a student engineer while attending the University of Cincinnati, where he received his B.S. in mechanical engineering.

He was elected to Pi Tau Sigma, mechanical engineering honorary, and Tau Beta Pi, engineering honorary. At present, he holds membership in American Society of Tool Engineers and American Ordnance Association.

He spent three years with the Air Corps weather service during World War II.

Zunis Win Roll-Off to Earn Top Spot in Bowling League

The Zunis, top team of the Coronado Club Indian League, defeated the champion teams of the three other Coronado Club men's teams in roll-off play recently.

Sparked by Charlie Mills, 2211, high roll-off man, the Zunis tumbled the Reds of the Coronado Club Major League, the Lobos of the Jungle League and the Wisconsin team of the Allstate League.

This was the fifth annual roll-off for the Coronado Club Men's Leagues. Four out of five of the roll-offs were won by teams from the Indian League. The Zunis repeat as two-time winners, having won the roll-off in 1954.

In regular league play J. K. Wichlens, 4112, Apache team, Indian League, rolled the highest individual game score. His 254 was highest in his league. A. E. Willett 2311, of the Mustang team was high man in the Jungle League with a 245 individual game score. Lloyd Todd 2152, topped the Major League with a single game score of 241. U. S. Urton, AEC, was tops in the Allstate league with a one game count of 240.

The Zunis easily led the Indian League with a 71 won, 41 lost rec-

ord. Hardest fought battle was the Allstate league where the champion Wisconsin team squeaked by the Oklahoma team with only a 1/2 game lead. Pins for the Wisconsin team totaled 2785 with the Indiana team trailing by only a single pin.

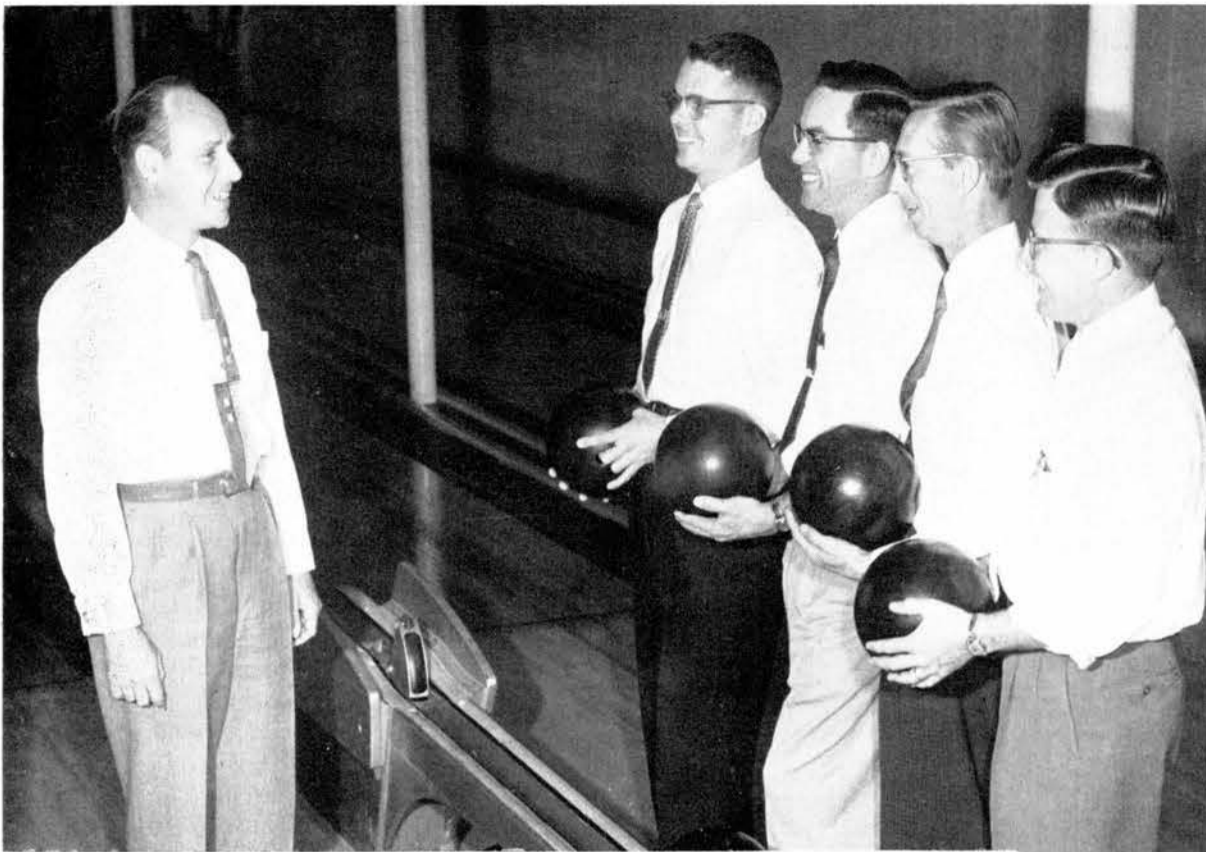
In the Major League the Reds came out first with a record of 69 won and 43 lost. Second team in the league was the Dodgers with 67 won, 45 lost.

The Lobos of the Jungle League won 70, lost 42. Closest rivals were the Wildcats with 67 1/2 won, 44 1/2 lost.

Bowling Jackpot

Arnold Dulz, 2711, and Jerry Sherman, 5242, racked up a doubles score of 1317 pins to walk off with the \$161 Coronado Club open bowling jackpot. Dulz was also high scorer in the men's singles while Mamie Burg, AEC, was first in the women's singles.

A new open bowling jackpot began May 5. It will terminate in September. Open bowling at the Coronado Club is during weekends, 1 to 6 p.m.



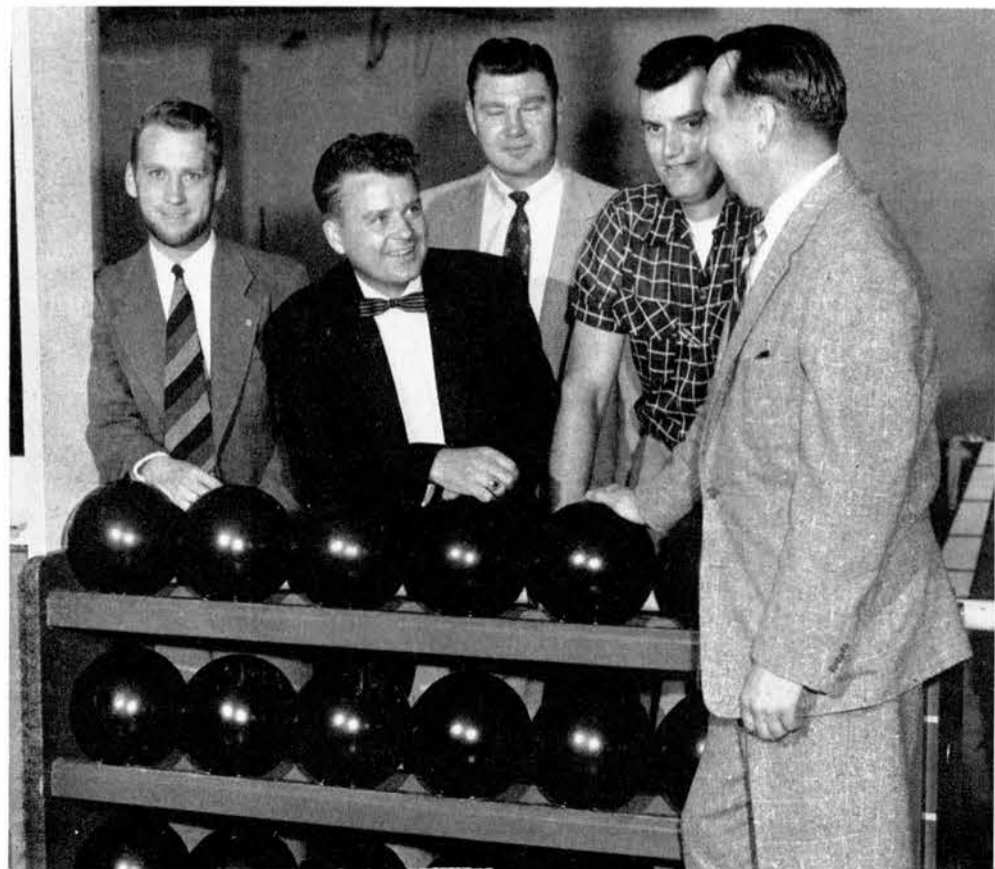
MEN'S LEAGUE CHAMPS of the Coronado Club Bowling Leagues are the Zunis who defeated the champions of the three other leagues in roll-off play last week. The Zunis were tops in the Friday night Indian League. Getting the good news from Chuck Roehrig, captain, (left) are George Horne, Jr., 4153, Jack Reynolds, 1410, Ted Swanson, 6021, and D. J. Hillard, 4113. Not shown is Charlie Mills, 2211.



TOP TEAM in the Majors, Thursday night bowling league, is the Reds. Left to right are Ken Campbell, 2123-1, Lloyd Todd, 2152-3, Don Atkinson, 2153-2, George Peel, 2151, and John Cotch, 2111-3.



JUNGLE LEAGUE LEADERS are the Lobos, high team of the Monday night league. Seated are Vern Sawyer, 2414, and Larry Baines, AEC. Standing are Bill Hereford, 5241, Tom Cook, AEC, and R. W. Heuer, AEC.



THE WISCONSIN TEAM shown here defeated all other teams in the Allstate league, Coronado Club Wednesday night bowlers. Left to right are John Wichlens, 4112, Al Kaping, 2514, Homer Mellroy, 2511, Al Schonberg, 7241, and Neil Hansens, 7216. Not shown are Bob Spence, 5222, John Stott, 7411, Bob Knudson, 3164, and Bill Martin, 2512.



QUEENS of the women bowlers are the Onyx team. They are champions of the Tuesday night Jewellette. Seated are Mamie Burg, ALOO, Julia Sensel, ALOO, and Rose Hainlen, 4152. Standing are Lillian McCullar, wife of J. B. McCullar, 2582, and Pat Horne, wife of George Horne, Jr., 4153.

