

Nevada Test Site Oral History Project
University of Nevada, Las Vegas

Interview with
Dorothy Grier

January 3, 2005
La Jolla, California

Interview Conducted By
Mary Palevsky

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Dorothy Grier Recollections

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Based on interview of
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Early Life

My name is Dorothy Whitcomb—Grier now. I was born in Hayden, Indiana, a little town in southeastern Indiana, in 1922, and grew up in another small town nearby, Butlerville. My parents were both schoolteachers and I have two siblings, a brother Robert (Bob), now deceased, and a sister Betty. I probably had the normal life of that time in a small town, which of course included being a child of the Great Depression and the events leading up to and resulting in World War II.

In our tiny town, everyone was very aware of the depression, of course. Many were out of work, farm prices hit bottom, nobody had any money. But it was sort of the idea that everyone was in the same boat, at least among our acquaintances. We did not see the abject poverty or bread lines that you heard about in the cities. But it did affect our values—at least, it did mine—both in what basically mattered and economic values. (In retrospect, very much skewed, I fear.)

On the first day of my senior year in high school, September of 1939, Hitler marched into Poland and the future seemed very uncertain. By this time, many people felt we would eventually be involved in the war. My father had been in France in World War I and had stayed in the Reserves afterward, going to training camp every summer. He didn't talk much about the war, but there were some books around with rather graphic scenes depicted; I remember that he was always very disappointed that the League of Nations idea did not turn out as had been

hoped. Drafting young men for military service was being talked about though I can't remember when this was actually activated.

I had always liked school, made excellent grades, and it was taken for granted that I'd go to college. But during my senior year I became very unsure about this; partly because of the general uncertainty of the times, partly because I was in love (I thought) but not quite ready for marriage, partly because of those economic values. I had seen how my parents had sacrificed to send my brother to Purdue during the depths of the depression (and he had a scholarship, too). My sister took a year's business course in Cincinnati and got a job in a bank, marrying soon after that. I finally decided to go to a teachers' college near Indianapolis—my parents had met there and it was dear to their hearts. For me, I guess it was the line of least resistance; I didn't want to be a teacher but could get a scholarship and take what was called a "Commerce" course which would, I thought, allow me to achieve independence and get out in the big wide world.

There was, you know, this sense of immediacy—the world was crumbling about us and we wanted to live life to the hilt. (Sound familiar?)

I was just finishing my third term (one year) at Central Normal College when Pearl Harbor occurred. By this time my father had been called back into the army and was stationed in Indianapolis. I decided I wanted to quit school and get a job, so I worked for awhile for a printing company in Indianapolis as a steno/bookkeeper/clerk with the magnificent salary of \$15 a week. I'd taken a Civil Service test for a CAF rating (clerical/administrative/fiscal) while at CNC, and soon received a job offer at the Wabash River Ordnance Works, a facility which the government was building near Terre Haute, IN. And at this time, I married my high school sweetheart, Alex (we were both 19) and we both worked at the ordnance works for a few

months, went to Austin, TX, where my brother was working, and lived there for a time, then my husband was drafted, all this within the space of less than a year.

After a few weeks of basic training, Alex was sent to Ireland, then England, later France. Daddy was then stationed at an Induction Center in Fort Thomas, KY, just across the Ohio River from Cincinnati, and I went to live with them.

All during the war I worked in Cincinnati for the (then) Army Air Force—the Ferrying Division of the Air Transport Command—as secretary to the Inspector General. This was a period of my life which affected me probably more than any previously. From a small town to a city with a vibrant culture, meeting many new and interesting people and encountering so many new ideas; and then of course the conflicts and doubts and uncertainties for what the future held.

Then came V-E Day in June of 1945, and in August the news of the bombing of Hiroshima and Nagasaki and the awesome weapon which ended the war in Japan. I had had an inkling about the possibility of such a bomb (but not where it was being developed) from my brother, who had introduced me to science fiction way back when I was a child. I had read a fair amount, in such magazines as *Astounding Science Fiction*, and Bob told me about the incident when that magazine had planned to publish a story about nuclear fission, and the government had interceded to have it squelched. I suppose a lot of people knew about the possibility of such enormous amount of energy being released, but few about what was really being accomplished. At any rate, our first reaction on hearing about the atomic bombs being dropped on Japan was jubilation that the war was over, then horror as we saw pictures of the devastation, but still the war's end seemed to justify it. Many of my friends and relatives had husbands or boyfriends in the Pacific—and of course Alex might have been sent there, too, after V-E Day—so the good news prevailed.

When Alex came home in early 1946, after almost three years of being apart, we were together for a year or so (living in Indianapolis), but couldn't seem to make it work so we finally called it a day. I went briefly to stay with my brother and his wife and their two small children in New York, just to try to sort out where I was going next.

Westward Ho

At that time my brother Bob, an electrical engineer, was working for a construction company which had a contract at Los Alamos, and he decided to go there to work. He flew out to see about housing and I drove out with my sister-in-law and the two babies, since I was at loose ends and could help a little. When we arrived it seemed like a very interesting place, so I put in my application at the Los Alamos Scientific Laboratory, just as sort of an ace in the hole. Working at Los Alamos required me to get a Q-clearance, which took some time to process. I had always wanted to see San Francisco, and since the Q-clearance would take a few weeks anyway, I went on out to that fascinating city. I loved it there, got a government job (fairly easy, then, with a civil service rating) in the Labor Department but was just making a pittance and living was expensive. So when I got a letter advising me that my clearance had come through and offering me a job at LASL, I came back since I could live more reasonably there, although my brother and family were just about to move on to another job. This was in 1948. (Bob later worked at Oak Ridge, Tennessee, and later still at NASA's Jet Propulsion Laboratory, where he was involved in some very interesting things.)

Los Alamos, New Mexico

The West in general, and this area in particular, were a revelation. My first impressions were the vastness, the difference in the countryside, the geography. The mountains were so high and so different from what I had pictured. Those I'd seen in the East were gentle, rolling hills compared to these. I just couldn't believe the Sangre de Cristos. Another delight was the blue sky (city skies in Midwest winters seemed eternally leaden, particularly with all the soot from the soft coal that was burned at that time). The West was so beautiful and clean and lovely, a new world.

As I became more familiar with my surroundings, I came to appreciate more and more the rich history of New Mexico, the Indian pueblos, the Spanish influence, the present day culture. It was and is fascinating, and I learned so much.

I lived in a dorm room at first, later on it was a kitchenette apartment, and then the ultimate (for my job level)—an Iris Street Apartment. (Incidentally, the graduate student apartments here at UC San Diego are identical to those, at least from the outside. Of course, the Lab was run by the University of California.) This wasn't really discrimination, at least to my mind. None of the housing was very grand. There are stories about the early days at Los Alamos, when the houses on Bathtub Row were the greatest because they had bathtubs and all the others just showers.

Santa Fe was just an hour away, and we'd go down whenever possible. It was a wonderful city, with all that history. And the shops—art of all kinds, jewelry, ceramics, all those Indian treasures, clothing—what a lure they were. La Fonda (*the* hotel then). Fiesta time, when they burn Zozobra, Old Man Gloom. Restaurants with fascinating food. (Los Alamos maybe had one dress shop, a movie theatre, a cafeteria, drug store, etc.) Visits to the Indian pueblos, their dances, trips to Taos, Bandelier National Monument. Land of Enchantment, indeed.

Los Alamos Scientific Laboratory (LASL) – now Los Alamos National Lab

I was hired as a secretary/typist for what was supposed to be a temporary assignment to J-Division, to type reports of the just completed Operation Sandstone at Enewetak. (In those days spelled “Eniwetok.”) After the reports were done, I was supposed to go to another Division.

J-Division had been formed as a temporary entity to carry out the Sandstone Operation in the Spring of 1948, and was to be disbanded after the reports were done, with its members going back to their original divisions in the Lab. Dr. Darol Froman, who had been the Test Director for Sandstone, was Division Leader, Dr. Alvin C. Graves his Assistant Division Leader. When I started working there the scientists were just trickling home from the Pacific. Then the decision was made to continue testing, planning was started for Operation Greenhouse (also to be at Enewetak) in 1951, and J-Division became a permanent division. Darol went back to P-Division (and later to the Director’s Office under Norris Bradbury), and Al became Division Leader.

A revelation from the very beginning was the democracy of the place, with everyone addressed by his first name (no titles) from top scientists on down. Quite a contrast from the formality I had been used to in my former jobs, particularly with the military.

My first boss was Dr. John C. Clark (Jack), a physicist who was working on the planning for the next test. Jack was affectionately known as “The Mayor of Eniwetok.” I’ll never forget all those map cases in his office, filled with USGS maps of atolls in the Pacific. In addition to secretarial work, several of us were typing the reports, editing and proofreading them as we went along. Mine was for the Blast Effects experiments performed by Drs. Greg Hartmann and Curt Lampson of the Naval Ordnance Laboratory.

I'd like to mention some of my co-workers in the early days. Mary Monk, Al Graves' secretary, was a treasure. She supervised us, helped with editing, and in general smoothed our paths. Another friend was Jan Morse (now Betts), who was hired at the same time as I was and who became Al's secretary after Mary left. Then there was lovely Elise, who also supervised and helped us; a real dear, she always reminded me of Tenniel's illustration of *Alice in Wonderland*. And Betty Sexton, who helped me proofread the Blasted(ed) Report and whose sense of humor brightened many a day. Later there were Dorothy Frenz (now Jones), who worked with another division involved in test work, and Lee Hasse (now Felt), who later worked for Jack Clark. I still keep in touch with the latter two. And so many more—J-Division was always made up of such dandy people, even as it grew and grew.

As our current work increased the reports got relegated to evenings and weekends, but they were finally finished. And partly because I could take fairly good shorthand to record meetings, I was assigned to Group J-7. My first boss was Dr. Frederick (Fred) Reines, a brilliant theoretical physicist who later won the Nobel Prize for his work on neutrinos. Group J-7's members played dual roles in that group and other divisions of the Lab and were concerned with planning the specific diagnostic and effects tests, supervising and maintaining liaison with the subcontractors who performed them, and in some cases conducting experiments themselves. The group also included several members of the military who were involved in the experimental work.

Some other names of interest: Fred, as noted, from T-Division; Bill Ogle from P-Division, Physics; Wright Langham from Health; Les Seely from GMX; Berlyn Brixner from M-8, Optics; Bob Watt, Dave Hall and John Malik also from P-Division, I believe; Jerry Suydam from T-Division. There were also Gaelen Felt, who headed another J-Group; Herman Hoerlin,

concerned with photography; and later Lee Aamodt and Al Embry, administrative and logistic. Working closely with J-7 were Rod Spence from Radiological Chemistry and Clyde Cowan who worked on electromagnetic effects and neutrons. Some of our military members from various units with acronyms like AFSWP (Armed Forces Special Weapons Project): Ed Zadina (Army; concerned with blast effects); “Rojo” Adamson (Navy); Paul Galentine (Air Force, I believe); Dick Houghton.

At some point Fred wanted to devote more time to his T-Division work, and Dr. William (Bill) Ogle became Group Leader. He was from P-Division, as noted, had done neutron experiments on Sandstone, and had been in J-7 since its inception. The interplay between him and Fred was truly remarkable. I can’t express how much I admired them both, as well as the others of the group who all worked so well together. Bill was absolutely tops as a boss, a great mind along with a terrific sense of humor. Fred was also no slouch in that department. They are both dead now.

I did secretarial work for everyone in the group, with some very helpful assistance—first “Tiny,” then Lee Klein, formerly a WAC on the Hill [Los Alamos] in the early days who had been one of Oppenheimer’s drivers and still worshipped “Oppie.”

Later there were also an Air Force Sergeant, Marvin Smith (Smitty), and Navy Noncom, Joe Valles, who did clerical work, especially for our military members.

Somewhere along the line we adopted the Walt Kelly comic strip figure Pogo as our logo, and became the Pogo Staff. Dave Self, who worked down the hall for Bob Campbell in Engineering and Drafting and was doing the drawings and equations for the reports, introduced

me to the strip which was running in the *Albuquerque Journal*; I pinned it up on the bulletin board, and we were hooked.

With regard to trying to understand the work there without a scientific background: of course at first it was just Greek to me, although by that time I knew a little bit about the work there. But it becomes easier as you go along, and you at least learn to spell the words, or where to look them up. (And people were kind! I can still remember my embarrassment after typing a letter for Les Seely full of references to “doors” instead of “Dewars.” He actually apologized, saying he had a cold and hadn’t enunciated clearly, bless him.) A very nice lady physicist, Lucille, gave us (the clerical help) classes in what she called “Conversational Physics.” And we could attend the weekly seminars where the Lab’s work was discussed.

For Math, I had studied only Algebra and Plane Geometry in High School, and Biology for my Science. (Chemistry wasn’t offered, my father taught Physics, and while he was a great teacher, you know how it is with kids.) So I knew very little about these subjects. Later at Los Alamos I took Beginning Physics and Chemistry classes which were taught at night by members of the Lab as UC extension courses, and a couple of math classes given as extension courses on the Hill by the University of New Mexico.

Then during Operation Castle in 1954, most of the Group’s scientists were overseas so I took a leave of absence and enrolled for a semester at the University of California in Berkeley. I was going to study all these things—Physics, Chemistry, Math, etc.—but then at the end of the year Herb [Grier] and I got married and there went my career as Madame Curie.

I should confess that taking notes in the J-7 meetings each week, as well as some others on occasion, was a real challenge. I wasn’t really that swift and half the time was out of my depth, but somehow Fred and later Bill always managed to take my mangled scraps and make

readable and informative reports out of them. One of the most interesting was in August of 1950, during which conducting continental tests in Nevada was discussed, although I surely didn't realize all the implications for the future. [LASL Report LAMS-1173, dtd 1 Sep 50, "*Discussions of Radiological Hazards Associated with a Continental Test Site for Atomic Bombs*," based on Notes of Meetings held at Los Alamos 1 Aug 50, by Frederick Reines.]

Actually, the things I remember most about that meeting are first, of course, the importance of all the participants, and then the talk about the prevailing winds (a primary factor because of fall-out)—and a meteorologist patiently explaining to someone that a northwesterly wind was from the northwest.

These were some of the most exciting and fulfilling times of my life. I worked with brilliant, stimulating people who were also just super individuals. My only complaint was that I couldn't go to Enewetak (no facilities for women). How jealous I was of Smitty when he came back from Operation Ivy crowing, "I saw Mike!" So it was a great day when I learned I was one of the two women picked to go to the test site in Nevada (then called Nevada Proving Ground) as clerical workers for Operation Ranger, the first continental tests since Trinity. The other girl was Mary Minshall, who worked for Armand Kelly in J-1, Administration.

Nevada Test Site

We went out for Ranger in January of 1951. Again I worked for Jack Clark, as he was the Test Director, but Fred and Bill were also there as well as others of the group, including Smitty and Joe Valles. I did work for anyone who needed dictation and typing. It was indeed an exciting time (what an understatement!). Camp Mercury was not there yet, so we just stayed at the Control Point, which was near Frenchman's Flat, up to and during the shots. These were air

drops, the plane (“Bullpup”) coming from Kirtland Field in Albuquerque. When a shot was over we’d go back to Las Vegas. We stayed at the Hotel Last Frontier, which is no longer there.

I guess this is when I really came to know Herb Grier, my future husband. I had met him in 1948—he was one of the experimenters coming back from Sandstone that summer, and often came out from Boston during the planning for Greenhouse. But he was just someone who came into the office and seemed very gentlemanly and polite; I had typed a letter or two for him but that’s all. Out in the CP, seeing the interactions among him and others, I became better acquainted with him as a person.

Las Vegas, in those days, had just begun to grow. El Rancho Vegas, the first hotel on the Strip, was there, as were the Desert Inn, Thunderbird, Sahara, Flamingo—I remember seeing the Sands during construction either later that year or the next. Bill Ogle was a native of Las Vegas—his father was an engineer on the railroad—he grew up there and remembered when the whole town would go on a picnic in a park down on North Las Vegas Boulevard. I found it completely fascinating, of course. When we came in from the site—we’d have been up all day and the shots were like three or four in the morning—we’d go sleepily through the casino to our hotel rooms and all those people would be standing around gambling. It was so amazing, so different from Los Alamos. I should mention that our *per diem* was six dollars a day for a hotel room (nice ones, too!) and the food on a comparable scale. Remember, that was 1951.

There were five air drops on Ranger. For me the most exciting one of all was of course the first shot. I had seen numberless pictures of the fireball going up, but just to be there—there’s the countdown—on these shots we went outside the CP to watch, were told to put on dark glasses or face away from the blast. And then comes this awesome, indescribable sight, and later you feel the shock wave. And your heart starts beating again after awhile.

The Control Point for Ranger was a temporary one. Later a heavily reinforced concrete building was erected overlooking Yucca Flat.

Another exciting time was when a shot was aborted and the plane had to turn around and go back to Kirtland Field. One of our Group members, Gaelen Felt, was riding in the plane on that trip. Still another was on a later operation, where 300-ft towers were employed to hold the gadget, which was armed before the shot by EG&G's [Edgerton, Germeshausen & Grier] timing and firing crew (including Herb). When a shot had to be stopped at the last minute because of a crucial experiment, the firing party had to climb the tower to disarm the bomb.

After Ranger's last shot, a helicopter pilot took Mary and me for a ride up and around the area. (My first helicopter ride, too.) It was a great ending for an unbelievable set of experiences.

So we came back to Los Alamos and then Greenhouse took place in the Pacific. There was another shot in Nevada in the Fall of '51, Operation Buster-Jangle. And then Tumbler-Snapper in '52. Then Ivy at Bikini in '53—that was the one where they tested Mike, the first thermonuclear. Then Upshot-Knothole in Nevada, and Castle at Bikini in '54.

I was present at all the shots in Nevada until I left the Lab in September, 1954. As for our routine, we would type the readiness reports and details about the experiments if necessary, sometimes early reports of results. And we sat and waited for the weather to clear. There were always weather briefings right up until the decision was made to go. At first the shots, as you know, were air drops, then later they were on towers, even some on balloons. The underground shots came after I left (except that Buster-Jangle included, I believe, some exploratory work with conventional explosives. Uncle, 11/29/1951 first underground nuclear test at NTS.). Only much, much later did I see the famed Sedan Crater.

Before and after the shots, we could go out into the area to see the preparation and some of the results of the experiments (e.g., those for civil defense), if radiation levels were all right. By the second operation, Camp Mercury had been built and we no longer had to stay up until a shot was over. Actually, on shot nights we usually did stay up, or go down to the basement of the CP where there were some cots and catch a few winks before the event (usually around 4 AM, just before dawn). Otherwise, we'd spend the evenings in the dorm.

Then Herb and I were married and I left the Lab. We lived in Boston for a little while and then came out to live in Las Vegas in December of 1954. (EG&G had established an office there previously.)

EG&G and Las Vegas

With regard to the extent to which I could know the particulars of the work Herb was doing in view of my background at the Lab, early on he was not involved in anything I didn't know about from working in J-Division. When I left the Lab my clearance was revoked, of course, and there were some later matters which he could not talk about to me—and of course I didn't ask. His work in still later years did not involve security so there really wasn't an issue.

As for the work of Herb's company, EG&G, in bomb development and testing, Peter Zavattaro's book, *EG&G: Historic Involvement in the Nuclear Weapons Program* [Las Vegas: Nevada Test Site Historical Foundation], is the best source for information about this. Dr. Harold Edgerton (Doc) was an Electrical Engineering professor at Massachusetts Institute of Technology. Both Herb and Kenneth Germeshausen were his students. Doc perfected the stroboscope, and it was the basis for some of their work, along with other things which I'm not very savvy about. They formed a partnership (Edgerton, Germeshausen & Grier, later

abbreviated to EG&G) at MIT to do some work for various companies. Then came World War II; Herb went to the Manhattan District and Germeshausen to the MIT Radiation Lab. Doc was also doing work connected with the war; he and Herb did some things together, including night aerial photography. Herb's chief contribution initially was the design and development of the firing sets for the Fat Man device. How Barney O'Keefe became involved with EG&G, and his work during the war and since, is described in Pete's book as well.

After the war, EG&G was asked to design and operate timing and firing units for the test operation planned for 1948 which became Operation Sandstone. MIT wished to return to non-military-related research, and so the decision was made to incorporate and move off campus. As planning proceeded, the company became involved in developing more and more instrumentation for the experiments which assessed bomb performance: photographic and other techniques for measuring alpha (rate of growth of the nuclear reaction), yield, etc., and after a few operations were responsible for just about all the diagnostic experiments. Later, they also acquired Reynolds Electrical and Engineering Company (REECO) which was doing construction, maintenance and housekeeping for the site, and thus became the custodian of Mercury. They also did work for the Lawrence Radiation Laboratory (LRL) after that Lab's formation.

To clarify a bit the reference to "timing and firing": in addition to the firing circuits, EG&G designed and installed circuits which would turn the experiments on at the critical moment before the blast. Since the idea of the tests was to get data, if an experimenter's gear for a crucial experiment was not functioning, a signal could stop the test. ("Go/no-go".)

Doc Edgerton was always interested and an inspiration in EG&G's work, but in later years was not so deeply involved. (Whenever he was, he made an impact; witness his famous

“Ivy Tower” photograph which caught the device at an unbelievably early stage in detonation.) But he had so many other interests as well—underwater photography and diving with Costeau in the Mediterranean, teaching undergraduates and graduate students at MIT, a host of things. He was one of the most delightful persons I have ever met. Just interested in everybody and everything—one of those people who make you feel worthwhile no matter how insignificant you might be. And a great inspiration to his students; at MIT they still worship his memory. His wife, Esther, was a dear, also. She outlived him for quite a long time, but died recently. Germeshausen (Herb called him “Germs” with a hard G, his wife Polly called him Ken) was an admirable person, too. A brilliant man, very reserved and quiet. Barney O’Keefe was a dynamo, taking the company into commercial ventures and acquisitions. I have great admiration for all of them.

As to our feelings about working in the field of nuclear development, I have already mentioned my reaction when the atomic bomb ended World War II. When I was at Los Alamos the Cold War was just developing, and many felt that we were saving the country (others, of course, the contrary). I don’t think Herb felt a sense of guilt, he thought the work quite necessary and defensible. But that does not preclude the regret that we and most people felt, that such a terrible weapon *was* necessary in our supposedly enlightened civilization. I do still hope that we won’t give up the quest for developing the concept for renewable energy—it could save our planet rather than destroy it—and someday power our spaceships to the stars.

Return to the Pacific

In 1989, Herb accompanied a group who had worked on the Pacific tests on a trip arranged by Los Alamos to Eniwetok and Bikini, where the natives had been allowed to return

after the government had restored those atolls to a habitable state. The US was, of course, concerned about how the people would adjust or adapt to going back. Herb thought that the US had done an excellent job of returning the islands to the way the natives wanted them. But he was disturbed by the fact that their lives did not seem to have much incentive, that it was essentially a welfare state.

I'd like to say a little here about Roger Ray, for whom Herb had so much admiration because of Roger's concern for the Marshallese. Roger was assigned to J-Division as an Army Major in 1953, and participated in several overseas operations thereafter. As I learned later (I quote from his e-mail of 8-15-05): "My last military assignment was as Deputy Assistant to the Secretary of Defense for Atomic Energy. Then came assignment as Operations Director of the Nevada Test Site, and then a second retirement. Somewhere in there I learned of efforts to re-settle the former inhabitants of Enewetak in their ancient home. It was my good fortune to have the opportunity to organize in behalf of both the Defense Dept and the Atomic Energy Commission, their efforts to rehabilitate this native homeland of a kind and gentle people who were so deserving." While he expresses frustration for "having been less than a success in improving our official stewardship," he says, "I have tried to at least leave a record for those who might at some time later pick up that challenge."

Roger's story will be told elsewhere. It is an important part of our testing history.

Las Vegas – La Jolla

Herb and I lived in Las Vegas for 23 years, watching it grow and grow. EG&G grew as well, in Las Vegas and elsewhere. In 1964, Herb became president of a consortium called CER (Continental Oil Company, EG&G, Reynolds Electric), part of the Plowshare program to

develop peaceful uses for atomic energy, in this case for oil exploration. He retired from EG&G in 1976 at the age of 65—when the partners formed the company they all agreed to set that retirement age so as to give the younger people room to take over—but stayed on the Board of Directors for several years thereafter. Before and after retirement he served on a NASA Safety Advisory Panel. He also did consulting and was active on several other boards. In 1989 he was awarded the Presidential Medal of Science.

After our son David reached second grade (the fast-growing population was requiring double sessions at schools until then), I became a perennial student at the then-fledgling University of Nevada at Las Vegas, finally indulging my love of going to school. It was wonderful to watch that institution grow, too, from “Nevada Southern,” an adjunct of the University at Reno, to a degree-granting school with all the trimmings. Initially, my idea was just to take classes I liked, but I finally got ashamed when people asked me when I was going to graduate, and finished up with a BA in English, then a second baccalaureate in Philosophy, since I had the most credits in those. (Also took a lot of Music, Art and Math; wish now I’d studied computers.)

Since this was also a second marriage for Herb, I have two stepchildren, Joan who lives in San Luis Obispo, CA now, and Herb III who’s in Parker, CO, near Denver. They have children, too, so I’m blessed with five grandchildren (including David’s two boys) and two great-grandchildren. We are all very close.

In 1977 we moved to La Jolla, CA, and found much happiness in our new environment. Herb died in 1999. While a longstanding and increasingly debilitating peripheral neuropathy hampers my activities, I am fortunate to have excellent care and be able to enjoy friends, family and my garden. The recently opened Atomic Testing Museum in Las Vegas, made possible by so

many dedicated members of the Nevada Test Site Historical Foundation, has been a great source of stimulation, of making new acquaintances and renewing old ones, and reliving memories.

Exhibits to Accompany Interview

- I. Tests of Nuclear Devices - Trinity to Operation Castle
- II. Preliminary Report – Operation Ranger
- III. Photographs:
 - a. Ranger Control Point – February 1951
 - b. Nevada Test Site Scene – Experiment Station
 - c. Photo from Article in Collier’s Magazine
 - d. Photo from Las Vegas Newspaper: Curtains at New Control Point overlooking Yucca Flat
- IV. Poetry:
 - a. Pajarito (Los Alamos)
 - b. Pome Written in Jealousy and Bitterness (Eniwetok)
 - c. The Shooting of Freddy
 - d. “And Wise Men Came from the East”
- V. Certificates of Participation in Nevada Tests
- VI. Memos of Great Import (Evidence of Slaphappy Effect due to Waiting for Weather to Clear)

Tests of Nuclear Devices – Trinity to Operation Castle

Operation	Dates	Location
Trinity	July 1945	Almagordo, NM
Operation Crossroads	June-July 1946	Bikini Island
Operation Sandstone	April-May 1948	Enewetak Island
Operation Ranger	January-February 1951	NTS
Operation Greenhouse	April-May 1951	Enewetak Island
Operation Buster	October-November 1951	NTS
Operation Jangle	November 1951	NTS
Operation Tumbler-Snapper	April-June 1952	NTS
Operation Ivy*	October-November 1952	Enewetak Island
Operation Upshot-Knothole	March-June 1953	NTS
Operation Castle**	February-May 1954	Bikini/Enewetak

* Includes Mike as the first experimental thermonuclear device at 10.4 megatons and King as the largest US fission device at 500 kilotons

** Includes Bravo as the largest US thermonuclear device at 15 megatons

OPERATION RANGER
"FIRST SUMMARY REPORT"

Submitted by:
Dorothy Whitcomb
and
Mary Minshall

St. Valentine's Day
(1951)



View of Target Area





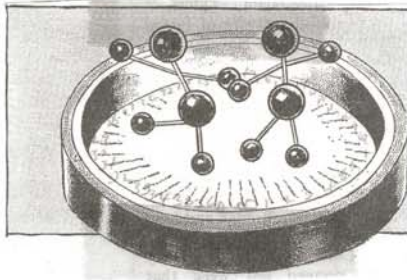
CONDUCTING OPERATIONS

RADIO ROOM

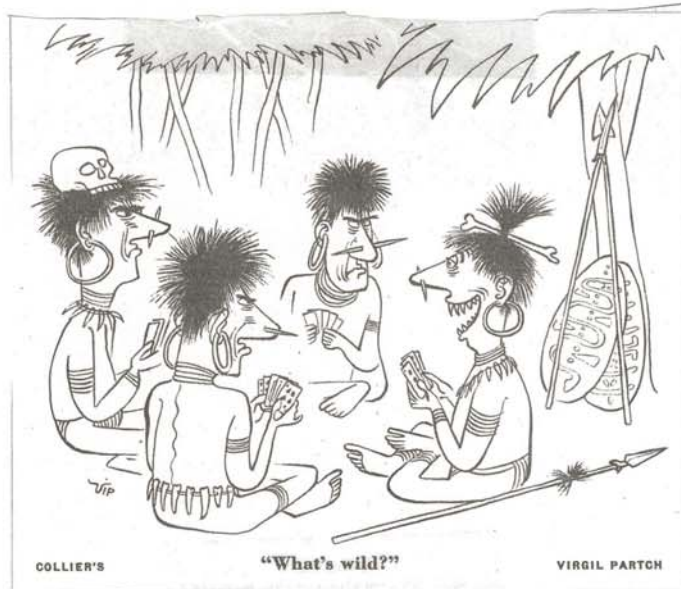


Set of 8
your
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A

"We Can't Make a Dud"

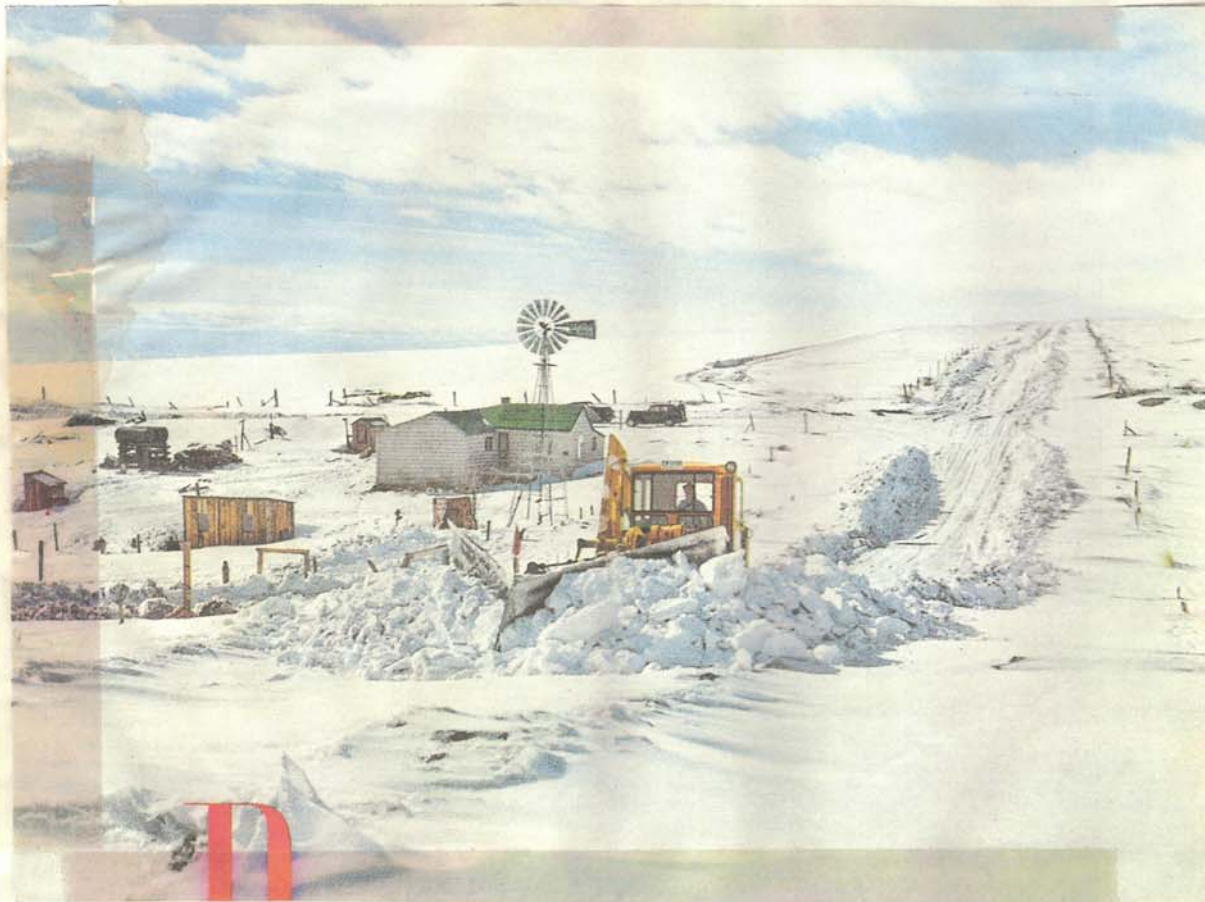


Instrument for Calculating Economic Value of Tests; Return on Investment



"THE NELLIS BOYS"

COME TO NEVADA: THE LAND OF SUNNY DESERT SKIES



THE CP JUST BEFORE A SHOT

Or: Curses! Where did those
Weather Boys Go?



THE WEATHERMAN



"WAITING"

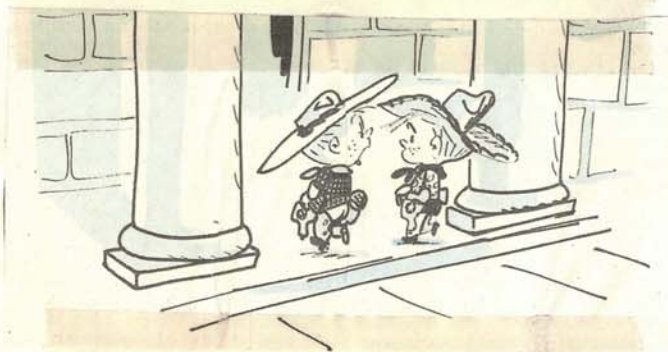
← "HAZARDS OF WAITING"





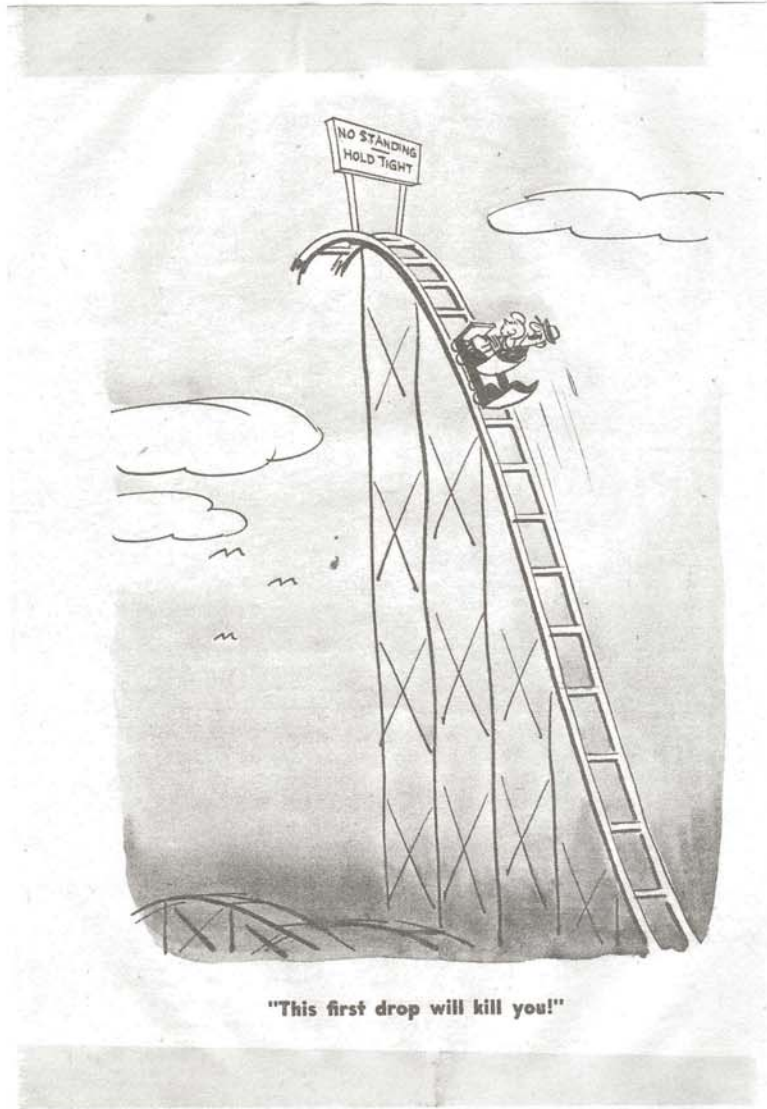
GABLEN FELT

"Riding BullPup"



Ogle and Clark

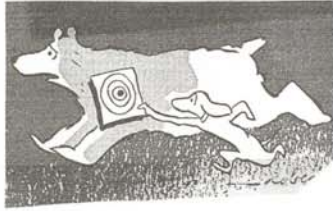
"At the C. P."



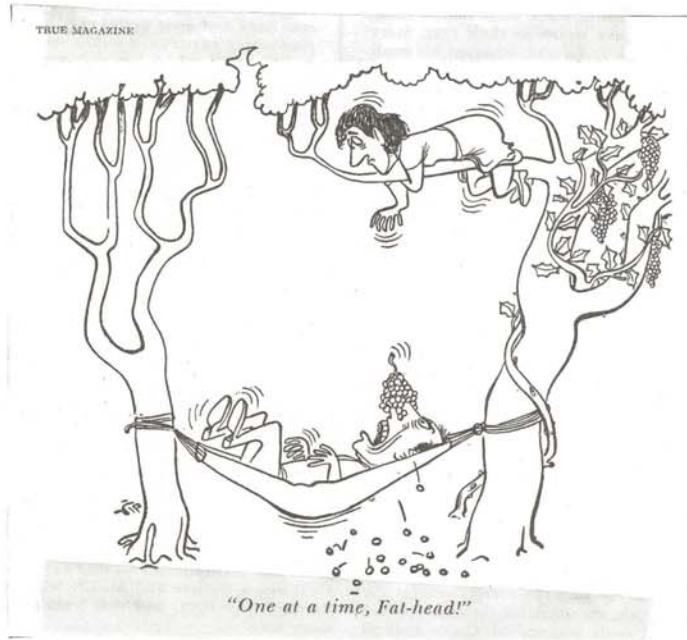
"This first drop will kill you!"



"FORE OLE BULLFUP"



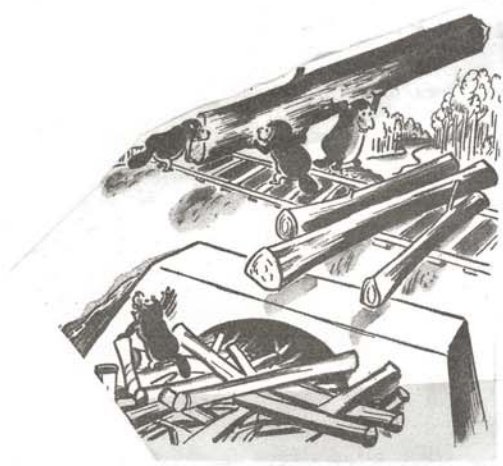
BULLPUP HITTING TARGET



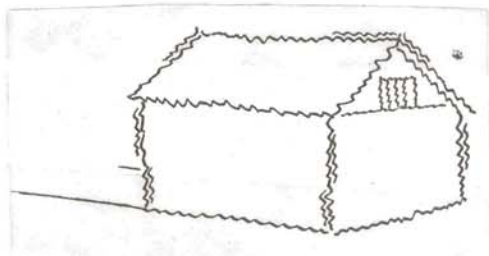
THE LAS VEGAN



"Again?"



REINFORCING THE BLOCKHOUSE



THE C P

"F"

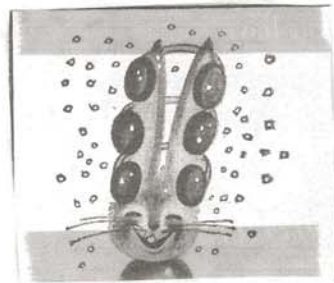
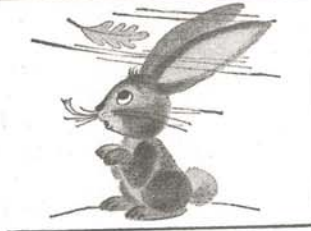


VIP BUS

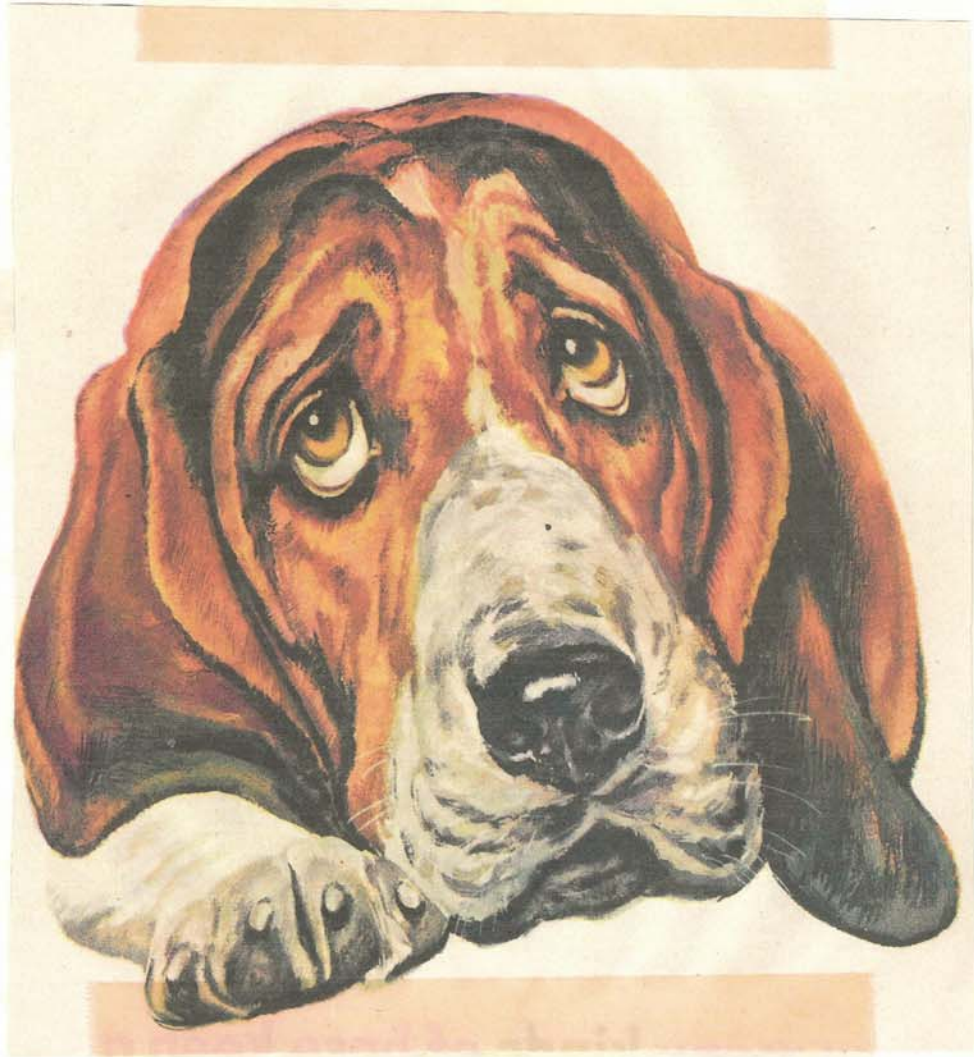


"GOOD OLE BRIX"

LOOKING
for SOMETHING
?



SELF-MULTIPLICATION EXPERIMENT



"But we didn't MEAN to get the coordinates
reversed . . ."



"The latest number for the yield, corrected for air flow, density, and astigmatism, is"

Now... Bostitch brings you a
**NEW, IMPROVED
AUTOMATIC
STAPLING
HAMMER!**



3 TIMES FASTER
*than ordinary tacking or
nailing on many building,
shipping and assembly jobs.*

Intricate instrument used for delicate adjustment to Bhangmeter.



"Technical Photography"

**DID THE A-BOMB
DO ANY GOOD?**

They say it's fine for
Cloud Seeding

Las Vegas Warned of New Blast

Residents Advised
to Avoid Windows
During Desert Tests

LAS VEGAS, Nev., Feb. 4 (P)—Las Vegas residents, already rocked by four atomic blasts at nearby Indian Springs, were advised today by the Atomic Energy Commission "there will be another test in the near future" and warned to stay away from windows.

The AEC did not indicate when the next blast at the desert test ground, some 70 miles north of here, could be expected but said significantly:

"Beginning now residents of Las Vegas and other nearby areas should take these precautions at the appropriate time each day and continue them until notice that the current series of tests is completed."

Each of the four detonations thus far—Jan. 27 and 28, Feb. 1 and 2—came at about 5:45 a.m. (PST).

Broke Store Window

The fourth blast Friday was the most severe and broke a large plate-glass store window in downtown Las Vegas. Residents reported other windows buckled and all but shattered from the concussion. With this in mind, the AEC issued the following statement:

"As was demonstrated Friday, test explosions at our Indian Springs site create sound waves which can break windows in Las Vegas. The greatest risk is to large windows, and there is a lesser risk to smaller windows such as those in homes. Glass may fall inward or outward. Such broken glass can endanger persons in the line of fall.

"Persons should avoid being close to the inside or outside of windows immediately after our test detonations. We particularly caution those persons who see the initial flash not to crowd to the windows nor to stand near them on the outside.

Urges Shades Drawn

"Risks from breaking glass will be materially reduced if shades are drawn. The risk of window breakage may be reduced by such methods as opening smaller windows, sections of larger windows, or doors to permit equalization of air pressure, inside or outside the structure.

"There will be another test in the near future and residents of Las Vegas and other nearby areas are advised to follow the precautions indicated above.

"Beginning now they should take these precautions at the appropriate time each day and continue them until notice that the current series of tests is completed."

The A-Bomb's Light

The Times, Jan. 29, verifies the lights I saw Sunday morning. I was awakened by the white lights flooding our bedroom.

I raised up looking out to northeast, seeing an orange light behind the mountains. I called to the household, "I saw an A-bomb." The light was so brilliant, fantastic, it really alarmed me.

I have asked how far Nevada by air miles is from here, finding it's approximately 180 miles.

I hope I will never see a near A-bomb,
MRS. DONALD ROTHMAN,
Yucca Valley.

1951

19



"DOTTIE AND MARY"



Ranger Control Point



Nevada Test Site Experiment Station



Collier's Magazine Photo



Las Vegas Newspaper Photo

PAJARITO

Here's to Pajarito
A mount that's very high
Its feet are on the mesa
Its head is in the sky.

And when it wants a new chapeau
In wintertime, it gets the snow
In springtime, for an Easter bonnet
White fleecy clouds play tag upon it
And summertime finds rain each noon
(For lunchtime capers, not a boon.)

In autumn, though its head be bare
It looks upon some creatures rare
Who pant and rave and strive to climb
Upon its back in record time.

Poor simple mortals, how they plod
To reach its peak and on that sod
Rejoice and shout and fill the air
With raucous noise and great fanfare.

They thought they'd make it ere the noon
With every breath, "it will be soon"
Alas, the sun was going doon
And lo! behold the rising moon
The top was still as far as ever
(These kids were not so very clever.)

With aching feet
A sad retreat

Within their bosoms (plus V-ette)
Reposes now a vain regret
But you know where hope springs eternal
They're looking now to season vernal
Planning once again to try
For that mountain in the sky.

For weary feet and aching calves
Pajarito sits and laughs.

(Ca. 1950: Betty Sexton & Dorothy Grier trying to climb Mt. Pajarito
to get to the Valle Grande.)

POME WRITTEN IN JEALOUSY AND BITTERNESS

- (or) The Wearin' of the Green
- (or) The Bitter Tea of Thee and Me
- (or) Pull up a Chair and Join Me in a
Cup of Wormwood

Here's to the yoemen
Who go where the women
Can't go.

Heave ho!

Here's to the yoemen
We wish we could go,,men

But no
Can't go.

Oh woe, woe
To the feminine sex
The very apex
When kept in their place.
They're part of the race
They're really quite dandy
They do come in handy --
We think that they're fine
They really do shine --
But out on an island?
Ridiculous! My land!
A hex!

Here's to the sailors
Who come from the tailors
In uniforms neat

How sweet

They're rugged and tough
On the brink they're the stuff

All reet!

Singin' a bell-bottom trousers, coats of navy blue
Let 'em go to Eni -- a man-proof fence won't do.

~~XXX~~ Here's to the seamen
A fine bunch of he-men
We know

They'll go

With a yo ho ho and a bottle of rum
They go out and we stay hum.
Sailing, sailing over the bounding main
We think you're fine but wish that we could flush you down the drain.

(We can't go at-oll!)

Dorothy Whitcomb

~ 1950

THE SHOOTING OF FREDDY

Oh, Jack the Ripper and Al the Ace
They master-minded the crime
And they drank their beer in the Last Frontier
As they planned for the place and time.

'Twas not without a fear and a doubt
That they talked in accents tired
For they knew the foe and they knew the woe
If the delicate plan misfired.

"Oh Freddy is tough and Freddy is rough
He can blow us all sky high
He is big and strong and we might be wrong
And all could go awry."

In a voice that was hoarse, "We will reinforce
Our defenses--we are bound
To make the stand for home and land
We can't have Freddy around."

So they said okay and they set the day
'Twas the following morn at dawn
And they worked all night by the white moonlight
With their faces pale and wan.

'Twas early dawn, 'twas the cold, pale morn
When the dastardly deed was done
Oh they shot him high in the brightening sky
And they then prepared to run.

But it soon appeared ere the dust had cleared
That they'd planned their tactics well
For Freddy was gone in the dim-lit dawn
And the CP tolled his knell.

Oh Freddy was big and Freddy was tough
And he went out with a roar
But the sigh of relief in Vegas town
Was for "Thank God there's no more."

In the Last Frontier as they drink their beer
And the player his cards gets ready
They think much more of a natural straight
Than the shooting of poor old Freddy.

(Operation Ranger - Feb 1951.)

Alnothy Whitcomb

And Wise Men came from the East, bearing Cables and Detectors
Lo, from the North and the South did they travel, with all manner
of Strange Devices.
Yea, even from the West, which is the Land flowing with Milk and Honey,
Arrived Strangers to toil in the Desert Sun,
To Observe, or to report to their Constituents.
And they consumed Exotic Delicacies served up by NG as burnt Offerings.

And there came a Day when a Miracle was brought to pass,
The Dawn was split asunder, and there was a great and raucous Noise.
And a fiery Ball rose from the Earth
Rose and hung, and posed in a Photogenic Fashion.
And a cloud dealing Death and Destruction drifted toward Las Vegas
Bearing Gamma Rays in its Bosom.

And they who stood on the Mountain Tops beheld it in Wonder
And muttered strange Charms and Incantations
To their respective Newspapers.

And a strange Bird of Whirling Blades and Plastic Bubbles
Rose from the CP and went out to do the Monster battle
And hovered near the Scene of Mysterious Awe
Then turned and scurried back to Safety (Rad).

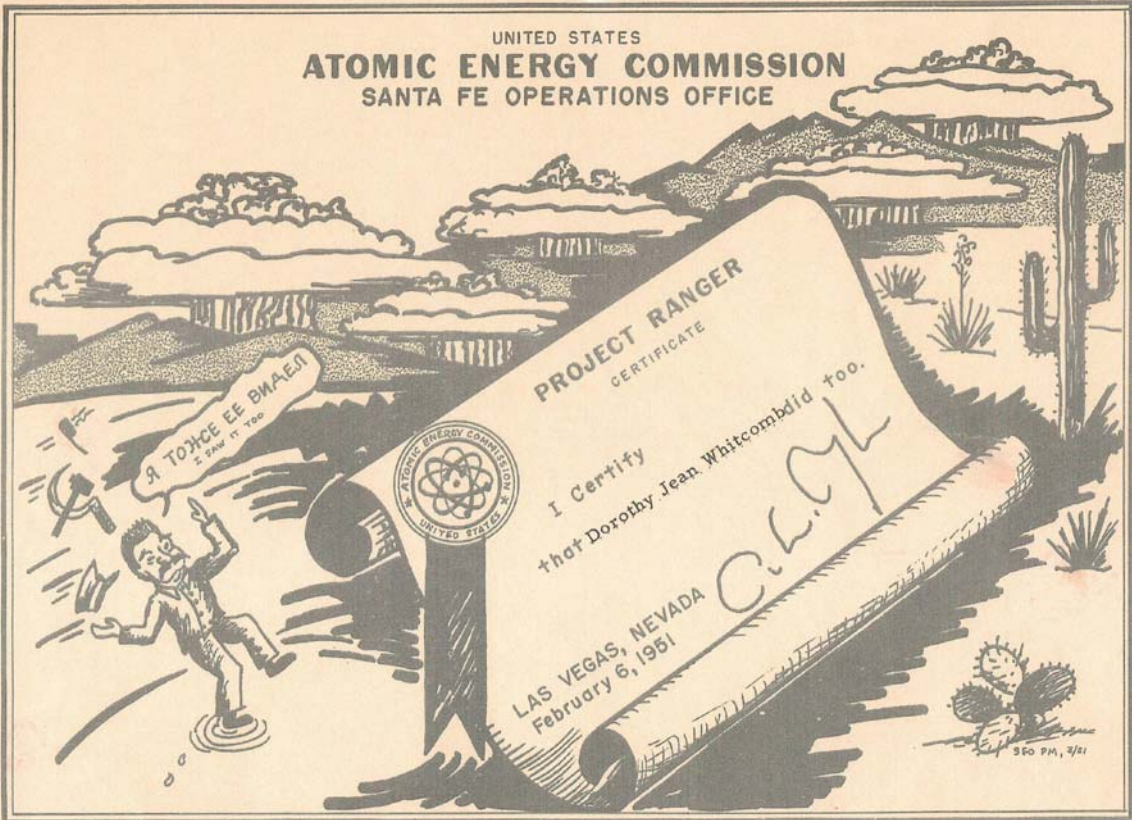
And they of the Measurements Groups decked their limbs about with
foreign clothing
And girded their Loins about with Courage and Film Badges
Then proceeded out into the Area in strange Vehicles
To perform magic rites not to be divulged to the Uninitiated.

And all were filled, yea, even to overflowing, with Wondrous Awe
And marvelled at these Remarkable Sights.

For the day of SNAPPER was upon us
And the voice of the Felt was heard throughout the CP.

(Dorothy Whitcomb)

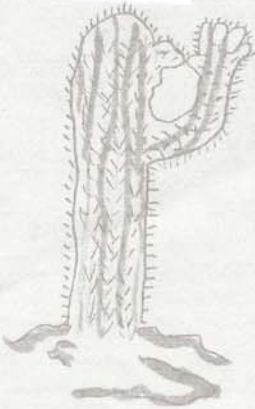
UNITED STATES
ATOMIC ENERGY COMMISSION
SANTA FE OPERATIONS OFFICE



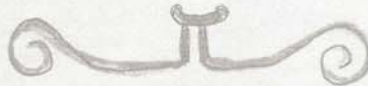




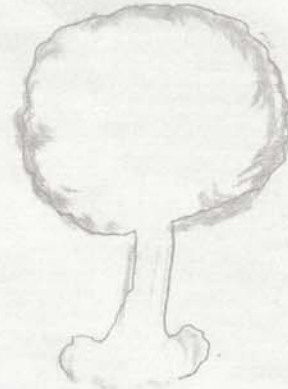




BENEVOLENT ORDER OF THE JOSHUA



ASSOCIATE




KNOW Ye, by all that is atomic that Miss Dorothy J. Whitcomb of the Los Alamos Scientific Laboratory has been scientifically admitted to the Benevolent Order Of The Joshua.

This certificate of admittance is tendered after having undergone the following pre-requisites for admission:

1. Witnessed an Atomic detonation;
2. Subsisted on a diet of coffee and sandwiches;
3. Read the pertinent parts of the Operations Plan, as revised;
4. Had his or her name on at least one Access List;
5. Exceeded the mandatory 50 MPH Speed Limit;
6. Received at least one Security violation;
7. Received at least one "page call" on the Public Address system; and
8. Commuted to Las Vegas at least once; and while there, lost at least \$100.00 or a fraction thereof on the gaming devices.

Having accomplished the above requisites, he or she is admitted into our Benevolent Order and is entitled to wear the Atomic Joshua Tree with one grain of Nevada Sand.


CARROLL L. TYLER
Benevolent Manager


ALVIN C. GRAVES
Benevolent Director

Portable Smoke-filled Room
(Up the River without a Paddle)
29 July 1952

MEMORANDUM FOR: Pogo Staff Commander
FROM: Staff of Pogo Staff
SUBJECT: STATUS REPORT OF POGO ACTIVITIES - Operation Goldbrick
SYMBOL: $\rho\Delta g\Delta$

A. PERSONNEL AND SECURITY

All personnel are secure. 0.1% are on hand. Offhand, the rest are.

B. TECHNICAL PROGRESS

This has mostly been in a forward direction, since most of our personnel are forward. For the rest of us, the relationship

$$s = \omega t$$

is being tested empirically, and we will report progress in the next week or so.

A new technical project has been proposed and is herewith submitted for your approval. It would involve the creation of a sub-section of the Pogo Staff, to be known as the "Schmogo Schtaff", or the Society for the Study of Flying Saucers, Ltd. The best personnel of the Pogo Staff would be recruited for this project, and since this naturally includes all of us, double salaries are suggested.

An alternate suggestion is that bomb testing be temporarily suspended to allow all effort to be devoted to this important new task. In such a case, and in order that progress will not completely cease in the weapon development program, it is felt very likely we can obtain invitations to the forthcoming Russian test of a hydrogen bomb.

C. LOGISTIC REQUIREMENTS

Our motto is: Two Cadillacs in every blockhouse.

D. READINESS

Pogo is ON schedule, probably (depending on what schedule you happen to be talking about).

/s/ Albert

(for) POGO

Who is Out Watching Flying Saucers

MEMORANDUM FOR: Commander Floogle
Alternate Long-Division Leader
in Charge of Quotients
FROM: Paleface McSunburned
SUBJECT: REQUEST FOR LEAVE (WITH PAY)
THRU: Channels

The undersigned respectfully requests permission to take two (2) hours for lunch in order that she may become tanned. She is already tall. Opinions differ sharply on whether or whether not she is terrific.

The undersigned will labor with patience, fortitude, and antlike industry until 6:00 pm in return for this dispensation.

Signed
Under

1st Ind

HQ LONG DIVISION, FLEEGLE SECTION, FLOGLE BRANCH, FLOTSAM
AND JETSAM PROJECT, 14 July 1953

TO: Commander Floogle

It is recommended that the request of this poor, pale, untanned Miss Under (formerly Stood, now Taking) be granted.

Untanned

Signed
μsec Res
Officer in Charge of
Time Clocks