Stars Shine Bright in the Desert

Top Entertainers Perform at NOTS Through the Years

By GWENN EVA

From out of the past to the present, isolated as we are, somehow they still found us! By "they" we refer to world famous entertainers.

Kay Kyser Opens Theatre

Looking back to 1945 — in May, Kay Kyser and His College of Musical Knowledge officially opened the Station Theatre.

In June—a series of monthly "Happy Hours" featuring local talent (of which there was plenty) was started. The Station's first "name band," Will Osborne and his Hollywood Band, appeared in September.

In February of '46, Sammy Franklin and his 10-piece band played to local personnel. Forty girls from the Los Angeles USO were special guests. Also in February Alvino Rey entertained at the NAF Ball. Arrangements were made by a former Armitage Field pilot, actor Wayne Morris. Then, Florence Chadwick's "Million Dollar" Water Ballet appeared at the Station Pool.

Earl "Fatha" Hines played for the big dance in May. Ella Mae Morse appeared at a special show.

1949 Was Big Year

During 1949 some outstanding artists entertained local residents. Leading off the list was Alvino Rey and his orchestra, appearing for the second time. Next Harry James and his "Music Makers" played to a capacity crowd at the theatre. The Concert Series featured the noted pianists Artur Rubinstein and Alec Templeton. Ish Kabibble drew lots of laughs when he appeared at the station gym.

Finishing up the year, Red Nichols and his "Five Pennies" played for the Christmas Dance.

1951 started off with "hope". Bob, that is. Also on the same star-studded bill were Hy Averbach, Les Brown, Peggy Lee and Paul Douglas. The Concert series featured John Charles Thomas and violinist Yehudi Menuhin.

Two famous artists completed the 1952 Concert series. Artur Rubinstein in his second appearance and Patrice Munsel, coloratura soprano, thrilled opera fans. Jan Peerce, famous tenor opened the 1953 series. Eddie Bracken was featured at a variety show at the theatre and Joe E. Brown was MC at the opening of the Little League Season.

Things took a "slight twist" in '56 when Capt. Ashworth, ComNots at the time, made a personal appearance on the TV show "Penorama Pacific." This started two years of TV personalities.

Steve Donnan, TV's "Western Marshall" opened the Little League Season in May. In December, a benefit show for the local TV-Booster featurered Art Baker as MC. The show was a tremendous success netting over $5000 towards the improvement of the booster.

"You Asked For It"

In March of '57, Baker reciprocated by featuring NOTS on his TV Show "You Asked For It". Hugh "Wyatt Earp" O'Brian opened the Little League Season for 1957.

The Station's first annual Gem and Mineral Show was held in November of '57.

Hal McIntyre Starts '49

Hal McIntyre and his band started off 1959 playing at the Community Center.

The local male metabolism took a sharp rise in May when Jayne Mansfield dedicated the new EM Club, then made a special appearance at the "O" Club.

The Vienna Boys Choir highlighted the second of the Concert series in February, 1960. Alan Hale, Jr., opened the Little League Season.

August proved to be a busy month with Robert Cummings and Jeanne Crain as surprise guests at Supply Department's "Roaring Twenties" party. The Ink Spots and Chuck Cabot's Orchestra entertained the entire station.

'Oh, Johnny, Oh, Johnny'

Chuck Cabot brought his orchestra back again in July of '61 along with Wee Bonnie Baker to play at the Community Center.

1962 was another highly entertaining year. Mary Costa and Byron Janis appeared at the Concert series. Robert Young paid a personal visit to renew acquaintances with Captains Blenman and Quense.

The Station Theatre took on a Broadway flavor when June Wilkerson and Dick Patterson appeared in "Will Success Spoil Rock Hunter." And in October the first "Neptune Ball" played to "Standing Room Only" crowds, of which all proceeds went to the United Fund.

And Now — 1963

In June came the Biggest Event in the 20-year history of the Station. The visit of President John F. Kennedy. A never to be forgotten day in the lives of all NOTS residents.

Count Basie presented a concert at the theatre and in September the Cherry Creek Singers and the Beach Boys appeared.

A bright array of talent highlighted the United Fund Charity Ball in October. Kathy Young, Suzanna Hall, Terry & Ron, The Princetons, The Ramblers and The Minitores played to a huge crowd in Hangar 3 at NAF.

The past 20 years has brought many great names through the Station's Main Gate and the future looks just as bright.

NOTS is a "star" in its own right which will be depicted in a new TV series beginning in December, telling the story of this unique U. S. Naval Ordnance Test Station.

JUNE 7, 1963, went down in NOTS' history as one of its proudest days as President John F. Kennedy visited the Station, the first President ever to do so.

Capacity Crowd Awaits Concert Series Opener

BY MARY WICKENDEN

A capacity crowd—no doubt—of First Nighters eagerly awaits next Wednesday evening when actor Basil Rathbone stars in the opening performance of the 1963-64 NOTS Civic Concert season at the Station Theatre.

The show begins at 8:15 p.m.

Rathbone's program, "In and and Out of Character," will be essentially the same as the one he presented at the White House at the invitation of Mrs. John F. Kennedy for the state visit of the Grand Duchess Charlotte of Luxembourg.

It will include poems by Edgar Allen Poe, A. E. Housman, John McGee, Dylan Thomas and Robert Browning. Later will come the works of Shelley, Elizabeth Barrett Browning, Ogden Nash, and various characterizations from Shakespeare.

Rathbone will arrive here Tuesday evening and will spend Wednesday getting better acquainted with NOTS and the surrounding desert.

Following the concert, there will be a reception for him in the East Wing of the All Faith Chapel. All members of the Civic Concert Association are invited to attend.

NOTS Pasadena

A meeting will be held Thursday, Nov. 14, at noon in the Bldg. 7 Large Conference Room. All personnel who are interested in organizing a Christmas Choir should be present at this meeting. A schedule of rehearsals will be set up at this time.

The Naval Hospital has requested our choir's presence on Thursday, Dec. 19.

AMONG MANY distinguished visitors to NOTS in its early days were the late Adm. William "Bull" Halsey, Mark Murray and the late actor Alan Hale (l-r), in June, 1944.

THE BIGGEST NAMES in show business came to China Lake to entertain military personnel stationed in the lonely desert. Here, the late Dick Powell and Thelma Todd are greeted by then-Capt. S. E. Burroughs.

From _____

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TO _____

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PLACE STAMP HERE

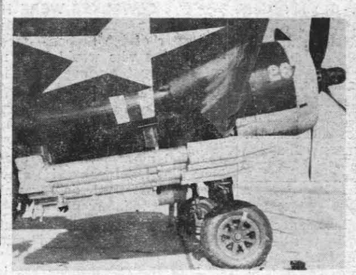
ROCKETEER (NOTS)
FROM UNDER THE SEA TO THE STARS
Vol. XVIII, No. 44 Naval Ordnance Test Station, China Lake, California Fri., Nov. 8, 1963

CAPT. S. E. BURROUGHS
NOTS' First CO, Now
Rear Admiral, USN (Ret.)

CAPT. C. BLENMAN JR.
NOTS' Current CO,
Since June, 1961

NOTS 20 YEARS

POLARIS



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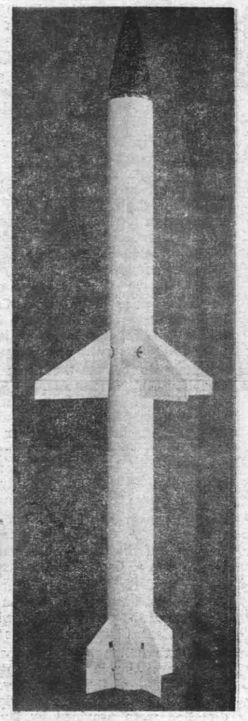

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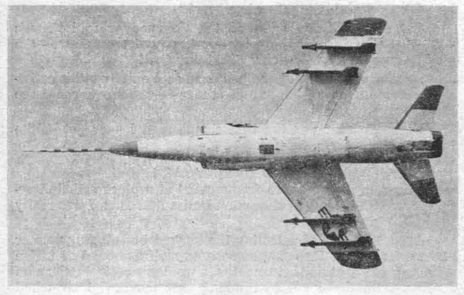

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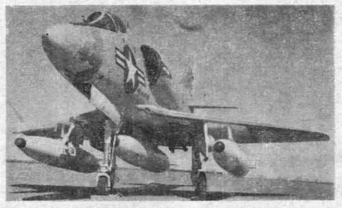

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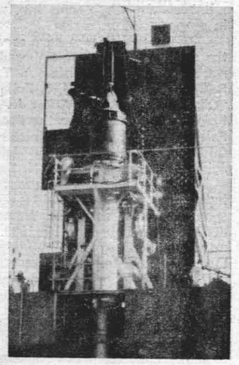


SKYTOP

1943 Naval Ordnance Through Science 1963

CHAPLAIN'S MESSAGE

Religion's Role In NOTS History

By CHAPLAIN ROBERT FENNING

A visitor riding down Blandy Street on an introductory tour of the Naval Ordnance Test Station, China Lake, will likely register surprise at seeing the imposing modernistic All Faith Chapel. The eye-catching structure, completed and dedicated on Sunday, November 3, 1957, stands as a sturdy symbol of deep religious concern in evidence since the earliest days of China Lake history.

The construction schedule was still in its embryonic stages when the Navy assigned Protestant Chaplain C. A. Reeves to establish a chapel program. A Crew's Recreation Hut behind the present Training Building first served as a place of worship for Station personnel—military and civilian alike. The Sunday School was organized in 1945.

In 1946, services were held in the old Movie Hut, then the present Station theatre, while the Movie Hut was being converted into the Station's first chapel, which is now the EM Club.

The records list a Joshua Bible Class, a Fidelis Fellowship and the establishment in those early days of the NOTS Community Church. This was an early venture in ecumenicity since the church established embraced 17 different denominations. The membership was about 300 by mid-1949.

However, with a maturing community the Protestant panorama here gradually took on the appearance it has everywhere in America; denominations established themselves, churches sprang up, and today every major denomination is represented in our Indian Wells Valley community.

The church structures are located on private property, outside the gate in Ridgecrest, but an estimated 90 percent of their members either live or work on the Station.

While the need for a Navy-sponsored church organization has unquestionably been affected by the natural development of denominational church groups, the All Faith Chapel continues to serve as the spiritual home of many civilian and military Protestant families not formally affiliated with a local congregation.

The history of the Roman Catholic activities at China Lake is in many respects similar to that of the Protestant groups. Military staff people and civilians in the construction forces were initially served by a priest whose parish was in Trona.

Records indicate that from November, 1945 to May, 1946, Chaplain Gerard John Clark, USNR, ministered to the Catholic population of the Station. Catholic Chaplain Harold Meade, USN, followed Father Clark and continued an active program until his detachment in October of 1948.

Civilian priests of the Monterey Diocese were designated by the Military Ordinariate to serve as auxiliary chaplains, since there was a shortage of regularly commissioned Roman Catholic Chaplains in the late forties and early fifties.

A pioneer of the civilian auxiliary chaplains was Monsignor John F. C. Ryan, who continued to function on Station in behalf of the Military Ordinariate until the arrival of Chaplain Joseph A. Costa, USN, this spring.

Within the past few years, St. Ann's Roman Catholic Church has been established in Ridgecrest. Monsignor Ryan is pastor of the parish church, which is identical in structure to the All Faith Chapel. St. Ann's has a parochial school.

Youth Fellowship programs have from the earliest days played a vital role in providing wholesome activities for the young people of the community. Though generally under the leadership of succeeding chaplains, continuity and dedicated direction were provided by laymen such as Harold Metcalf. Spirtually-oriented fellowship programs are still extensive in numbers of young people involved and are certainly ambitious in scope.

The chaplains who have served the religious needs through the years are well remembered. Following Chaplain Reeves were Protestant Chaplains A. T. Brewer, H. M. Carpenter, O. B. Salyer, W. L. Wolf, J. E. Zoller, J. L. Carter, J. D. Hester, R. "Q" Jones and F. W. Wicker Jr. Chaplains M. E. Fite and R. C. Fenning presently serve the Protestant congregation of the All Faith Chapel. Civilian ministers who served the Community Church were the Reverend John L. Reid Jr., the Reverend John N. Bunce and Mr. J. K. Egly.

Appropriations were granted for the construction of a building set aside for religious education and a place for Chapel-sponsored social activities. Named the East Wing, this unit was dedicated on February 15, 1959. It is our understanding that upon completion of the buildnig, a decision was made on the local level to equip the East Wing with a Hebrew Tabernacle and, in addition to its other uses, make it available to the Hebrew worshippers as a Synagogue on their regular days of worship and the high holy days.

Thus the Hebrew community has continued to use the building and, under the leadership of student rabbis who come to China Lake from Los Angeles, this group has from year to year carried on an active program. This has proven an excellent arrangement.

In accordance with current government requirements for religious groups using military facilities, Protestant, Catholic and Hebrew Chapel Funds have been established and are periodically audited by the Command.

The Christian Science Society and the Unitarian Fellowship meet weekly in a chapel annex and the Parish Hall. The Unitarian Fellowship has recently purchased property in the Ridgecrest area.

The evolvement of the religious life at China Lake is significant to the consideration of the total history of this Naval Ordnance Test Station.

PROMOTIONAL OPPORTUNITIES

Military Pay Clerk GS-3, Code 1752 — Learn the maintenance procedures for Navy pay accounts. Process all substantiating vouchers for the group of accounts. Compute pay twice monthly, close and reopen pay records twice annually, preparing the "rough drafts" of the pay rolls, and balancing the payrolls.

Voucher Examiner, GS-3, Code 1753 — The incumbent prepares and types all vouchers paid by the Branch and logs all travel claims received and paid. A completed list of vouchers paid, prepared and processed by the branch is found in the general discussion of the work of the Branch.

Supervisory Motion Picture Production Specialist, GS-10710-12, Code 7523 — Head, Documentary Film Branch. Position involves serving as producer of documentary films, supervision of the members of the Branch, and performance of photography, editing and similar tasks when required.

Housing Project Assistant, GS-5, Code 1132 — Assigns a segment of the Station's housing units, and serves as initial contact with tenants living in those units.

File applications for above with Janet Thomas, Bldg. 34, Room 28, Phone 71577.

Clerk-DMT, GS-5, PD 31750, Code 457 — As secretary for Propulsion Systems Division, provides secretarial-clerical services and related staff support duties. Experience in operation of and transcription from dictating machines required.

File applications for above with Pat Detling, Bldg. 34, Room 28, Phone 72723.

Architect, GS-808-12, PD 370013, Code 7037 — This position is located in the Public Works Dept. The incumbent must have a degree or its equivalent in Architecture and architecture demonstrated ability. He must have the ability to evaluate the scope and interrelationships of other portions of a major project in an integral unit for the satisfactory performance of this position.

File applications for above with Dora Childers, Bldg. 34, Room 32, 72032, 71393.

Deadline for filing applications is Nov. 15.

COMPETITIVE EXAM

Foreman Mechanic (Ground Structures), Guam. Application Card form NAVEXOS-4155AB and Standard Form 57 must be filed with the Board of U. S. Civil Service Examiners, Guam, M. I., not later than Dec. 2.

Facilities Open On Veterans Day Listed

Station business facilities which will be open on Veterans Day, Monday, Nov. 11, are listed below:

Theatre and Snack Bar, 6:45 p.m.; Bowling Alley No. 2 and Snack Bar, 1 p.m. - 11 p.m.; Golf Course, 6 a.m. - 6 p.m.; Golf Course Snack Bar, 8 a.m. - 6 p.m.; Station Restaurant, 6:30 a.m. - 1 p.m.

All businesses at Bennington Plaza will be closed, Navy Exchange facilities, the Commissary, the Bank of America, the Ice Cream Parlor, as well as the Station Library.

'Flu' Shots Here

Influenza vaccinations for Civil Service employees will be given at the Station Hospital, Friday, Nov. 14, from 8 to 11 a.m. and 1 to 4 p.m. The immunization is being given on a voluntary basis at a cost of $1.00 per shot.

The Rocketeer

Official Weekly Publication of the U. S. Naval Ordnance Test Station China Lake, California

Captain Charles Blenman Jr., USN, Station Commander

"J." "T." Bibby, Public Information Officer

Jack G. Broward, Editorial Advisor

Richard Grueneberg, Editor

Budd Gott, Associate Editor

Frederick L. Richards, Special Assignments

DEADLINES

News Stories ..... Tues., 4:30 p.m.
Photographs ..... Tues., 11:30 a.m.

The Rocketeer receives Armed Forces Press Service material. All are official U. S. Navy photos unless otherwise identified. Printed weekly with appropriated funds in compliance with NavExos P-35, Revised July 1950. Offices 500 King St., Bldg. 00929. Phones — 71354, 71655, 72082.

'DESERT PHILOSOPHER'

Memories of A Range Guard

By "POP" LOFINCK

The Navy has done an outstanding job of development — starting from zero 20 years ago. Look at some pictures of then and now. Amazing transformation.

There were no trees, except around isolated ranch reservoirs, like Sandquist Spa.

WIND THREW THE DESERT AT US

In those days sandstorms were terrific—I mean more so—because of the ground being cleared of sage brush and creosote bushes for buildings and roads. So the wind picked up the whole desert and threw it at us.

We got so used to the wind blowing in the spring time—we couldn't walk straight without it—so accustomed to leaning into the wind. If it stopped suddenly you might fall down. That's a slight exaggeration—but you get the idea.

Packs of coyotes would come in every night to the garbage dump in a big ditch—and howl at the moon after their bellies were full. It was music to me—but would give the creeps to some women.

POP RECALLS FIRST ASSIGNMENT

I came to China Lake from the Victorville Army Air Force Base—312th Sub Depot—Nov. 3, 1944—as an Inspector.

Parts were being made at what is now Salt Wells. We worked all night. Top secret. My job was to make sure certain parts went into certain boxes and crates which were sealed up with my signature inside. I guess I never made a mistake because there was never any kickback.

A truck would roll in at 2 a.m. bringing metal—bolts, etc. The boxes of parts were loaded into freight cars at China Lake The freight would take off for San Pedro and the boxes were put aboard a ship in the morning. I don't know yet what the parts were for or where they went to—it was that secret.

I worked as Inspector on various construction jobs for about a year and a half.

NEW JOB 'TOO GOOD TO BE TRUE'

After a year or so as Chief Dispatcher at Armitage Field, NAF, they wanted me to take over the Security Range Patrol of the boondocks in the north range—because I had prospected over the area in the Big Depression. The previous Range Guard, Mr. Carricart, got killed in an auto accident in L.A.

That was the most enjoyable job I ever had—and I got paid for it! I stayed on that job for 15 years.

Patroling a wilderness area half the size of Rhode Island isn't as difficult as it might seem. Every vehicle makes dust. Every vehicle or shod horse makes tracks. I would drag a bush across the road at strategic points to show fresh tracks better—and go up on a high point with my binoculars and look for dust.

There were very few roads or trails then. There are good roads all over the place now.

COWPOKES WERE HELPFUL CONTACTS

Another strategy was to make contacts all around the perimeter of the Station,—service stations—bars—restaurants—cowpokes who would keep me informed about trespassers going in or intending to go in—prospectors—hunters—rockhounds, etc.

One day a group of very important men came up from the city to hunt on the Station. That was before there was a ditch on the north and west boundary and gates in the canyons.

That night a cowpoke overheard their conversation in a Lone Pine hotel lobby. He drove out to my cabin to warn me. That's cooperation! So I was at the boundary in the morning at daylight to intercept them.

I was very sympathetic but firm. But they gave me an argument. This "headman" said he would telephone the Commander from Darwin. I said, "You use your own judgment, sir—but the Commander has issued an order, and now you want to wake him up at this early hour to ask him if he meant it? How do you think that will go over?"

But he called anyhow—and the Commander said "That's what that guard is out there for—to keep out trespassers—I'm glad to hear he's on the job." That was that!

As they were leaving, the headman said quietly to his assistant—referring to me—"He's a good man—he seems to acquiesce but never gives an inch."

I thought that was the best compliment I ever got—altho I wasn't supposed to hear it.

50-YEAR-OLD CABIN WAS HOME

I lived in a 50-year-old frame cabin at a place called Junction Ranch until I got an aluminum Dallas hut. Then I was really living.

After 15 years of patroling the rugged boondocks summer and winter with a Jeep that sometimes malfunctioned or broke a tie rod, and a radio that sometimes wouldn't come in clear on account of static—I got to thinking that maybe I'd stretched my luck far enough. I figure I've driven Jeeps over 800,000 miles.

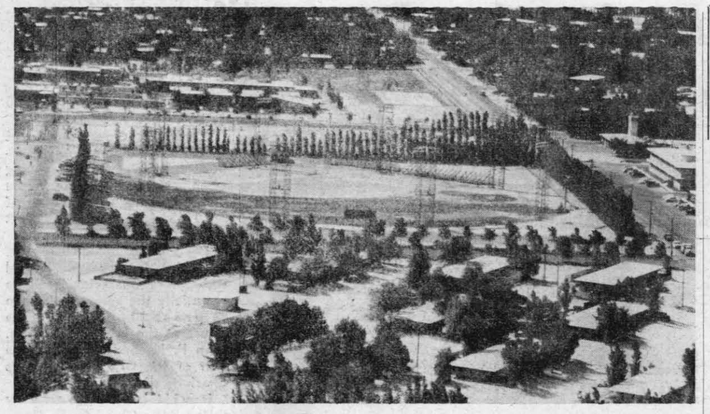
NOW HAS FUN WRITING COLUMN

Capt. Blenman had me transferred to the Public Information Office about a year and a half ago.

So here I am having fun writing these columns for the Rocketeer and occasionally escorting VIPs or VIPIs to the boondocks. (That means Very Important People Indeed—like yourself.)

So this is the 20th anniversary of the China Lake Naval Ordnance Test Station.

Wonder what the next 20 years will bring?



SCHOEFFEL FIELD, dedicated in 1952, gave baseball players a "big league" feeling.

Sports Grow From Crude To Best In 20-Year Period

Since the first aircraft rockets were fired in November, 1943, on the dry bottom of China Lake, sports have played a major role in recreation for residents of the community.

The Navy and the construction workers had no more than arrived until they were clearing an area for a baseball diamond.

Ed Dowd was reporting in the NOTS News that the baseball season was opening with a fever pitch with the Hut Nine aggregation tangling with Maintenance Wildcats on the local diamond.

During the basketball season, he was reporting that the Rockets basketball team trounced the C.I.T. Cagers for the Station championship.

On Aug. 16, 1944 he was reporting that 25 rounds of savage slug-fest was scheduled for that evening between ten fighters at the open-air-theater, Camp 160.

By 1945, recreation facilities on-Station and off-Station had greatly increased. Among facilities the Station boasted were the gymnasium, a bowling alley, a swimming pool, and the Beer Hut Diamond.

The Rockets championship All-Star softball team was drawing 3,000 in attendance at their games on the Beer Hut Diamond against some of the best teams in Central and Southern California.

When old timers get together today, they still talk about "the greats" of that area: John Dragovich, Al Novak, Tom Short, Ralph and Grant Gorman, Marine Sgt. Dick Shefferly, Bill Bessee, Bobby Kochman, and Ty Blair, who was the father of Junior Legion Baseball and Little League Baseball here.

Some are still Station employees. "Iron Horse" Bobby Kochman still continues to pitch for local nines.

During the late Forties, NOTS hardball team dominated the Sierra Nevada League.

Later were to come tennis and swim teams which held their own in area competition.

Then football teams from various Station units, Marine Barracks, VX-5, NAF, NOTS-GMU, and the Marine Guided Missile Units.

All-stars were selected from Marine units and Navy units to play in the annual Navy-Marine game played on Thanksgiving Day at Kelly Field. On two different occasions the game netted $900 and $1,000 for the United Fund.

Today the league has been reduced to three teams, NOTS-VX5, NAF, and the civilian Rockets.

Plans were made way back in 1948 to establish a golf course near Mirror Lake with Cottonseed hulls for the greens. Research failed to reveal if these plans ever materialized.

However, research did reveal that a sand course, "The Satellite," was established in 1950 off CLPP Road where the Archery Range is now. It was the forerunner of the first nine hole grass course opened on June 30, 1956 to which was added another nine holes in March of 1962.

Today, a Little League Baseball program has 500 participants, while adults participate in a well rounded sports program administered by the Special Services Division.

The TV Story: It'll Be Better Than Ever Soon

Soon—perhaps sooner than you think — is the word now out in reference to when the new television microwave relay station will be operating from B Mountain.

Up to 100 per cent better reception in the China Lake area is anticipated when the installation is completed.

A far cry it is from the long ago—well, about 10 years ago—when the first television repeater station was erected on Laurel Mountain.

But take nothing away from the efforts of the many who contributed to that effort. Face it: before that there was NO television.

By November of 1953, Channel 2 was already reflected to the Station area by experimental equipment, and other channels came in as more equipment was installed.

Close to 100 men had volunteered their time on Armistice Day (now Veterans Day) and many after-work-hours to work on that equipment.

They were from the Public Works Department's maintenance, metals, utilities, carpentry and transportation branches; from the Test Department, the old Rocket Department, bomb disposal personnel, Central Staff and military enlisted units.

George Sutherlen directed the work then, and is now.

SOON — Better TV Relay From B Mountain.

THEN — First parabolic "dish" ready for installation.

NOTS Milestones

1943 Station established by order of Secretary of the Navy Frank Knox, Nov. 8.
Operations begun at C-range on air-to-ground firings.

1944 Opening of temporary G-1 and G-2 ranges.
Construction begun on permanent Station facilities.
Opening of B-1 and B-2 ranges for air-to-ground firings.
Operations begun at China Lake Pilot Plant.

1945 Opening of K-2 range used in rocket terminal-ballistics studies.
Transfer of operations from California Institute of Technology to Station personnel.
Opening of LB range for high-altitude bomb tests.
Work on explosives begun at Salt Wells Pilot Plant.

1946 Dedication of Armitage Field at the Naval Air Facility.

1947 Opening of B-4 range for air-to-ground firings against moving targets.

1948 Dedication of the Variable-Angle Launcher used for for research and development at NOTS.
Dedication of the Variable-Angle Launcher used for testing underwater ordnance items at Morris Dam.
Activation of Station Advisory Board.

1950 First antitank aircraft rockets of project RAM shipped to Korea.

1951 Opening of T-range for rocket proof firing.
Opening of K-3 range for crosswind firing of rockets.

1952 Aircraft Fire-Control System Mk 16 released to the Fleet.
Opening of Randsburg Wash Test Activities for fuze-testing.
The 2.75-inch FFAR (Mighty Mouse) declared operational.

1953 Opening of Supersonic Naval Ordnance Research Track (SNORT) for captive testing of ordnance items.

1954 Opening of G-4 range for high-speed terminal-ballistics studies.

1955 Opening of permanent G-1 range for guided-missile free-flight testing.
Opening of permanent G-2 range for rocket free-flight testing.

1956 The Sidewinder guided-missile system declared operational.

1957 Development completed of the Zuni 5.0-inch rocket.
Dedication of the Station's new All Faith Chapel.

1958 The RAT antisubmarine weapon system declared operational.

1959 Development completed of the variable-thrust rocket engine.
The Skyline facility, for testing large solid-propellant motors, completed at China Lake Propulsion Laboratory.
Zuni rocket put into mass production.
Polaris static-test facility, Skytop, completed at China Lake Propulsion Laboratory.
RAPEC (rocket-assisted personnel-ejection catapult) released to the Fleet.

1960 Hangar No. 3 completed at the Naval Air Facility.
BuWeps and OpTEvFor evaluations of the ASROC anti-submarine weapon system successfully completed.
First successful Polaris firing after underwater launching.

1961 The Propulsion Applied Research Laboratory, first of its type in the nation, established.
Administrative command of San Clemente Island assumed.
Sixteen Cyclops silver iodide generators dropped into Hurricane Esther, destroying one-third of the cloud wall.
Dedication of Skytop II, one of the Navy's largest vertical nozzle-down facilities.

1962 Five hundred Capehart housing units completed.
First successful flight test of a hybrid propulsion system in this country.

1963 Balloon carries NOTS astronomer to 82,000 feet altitude in Stargazer gondola.
President John F. Kennedy, first President to visit Station, sees Naval aerial weaponry demonstration, June 7.
Gemini space capsule undergoes seat ejection tests.
HIPEG—"fastest gun"—firing 12,000 rounds per minute, in final checkout.
Marines leave after 18 years of sentry and range guard duty.
PROJECT STORMFURY — NOTS-developed silver iodide generators show effect on storm clouds and Hurricane Beulah.
Ozonesonde in record balloon ascent, 142,000 feet.
SHRIKE air-to-surface anti-radar missile in final development stages.

Sidewinder Operational With Fleet

(Continued from Page 9)

squadron, arrived in July. C-Special Test Range, Known as Charlie Range, affords development of special weapon delivery techniques and general evaluation of ordnance items or components. It is here, at Charlie Range, that VX-5 has made itself more well known than ever.

Also, in July, 1956, the first liquid-propelled rocket sled was fired at SNORT. Shortly before, a SNORT sled topped previous Station records with a 1,350 mile-per-hour run on July 6.

NOTS-Developed Sidewinder Operational with Fleet

Entirely developed at China Lake was Sidewinder, air-to-air guided missile, originally conceived by Dr. Wm. B. McLean, Technical Director, who, in December, 1956, received a $25,000 superior accomplishment award, the highest award ever made by the Government in recognition of an employee's superior service.

Sidewinder became operational with the fleet in mid-1956, and has since been adopted by the U.S. Air Force, and NATO Countries.

Early in 1957, the Navy announced development of the 5" high-velocity missile, Zuni, which made obsolete the slower "Holy Moses," used in World War II and during the Korean conflict.

$3 Million Hangar Built At Naval Air Facility

Ground-breaking ceremonies were held for the $3,500,000 Naval Air Facility hangar on December 30, 1957. This is the largest construction project on the Station in the last nine years.

FIRST CHEMISTRY LAB table all set up, ready for progress.

On February 14, 1958, RAT (Rocket-Assisted Torpedo) was unveiled. Developed by NOTS Pasadena personnel RAT greatly minimizes the effect of enemy submarines.

In 20-years NOTS Grows to Community of 12,000

In twenty years, the Naval Ordnance Test Station has grown from a desert wasteland to a community of some 12,000 people with recreational, educational and other activities almost as well developed as those in much larger cities.

China Lake is a modern community, a friendly one and a unique one. Built for the sole purpose of weapons development, China Lake is a highly integrated city of highly intelligent and highly trained people. Its history, like itself, is a unique one, and one that could scarcely be covered adequately in this short account.

NOTS Contributes Many Weapons Over 20-yr. Period

In a span of 20 years, NOTS has developed rockets and missiles with the beginning of Holy Moses, a 5-inch high velocity aircraft rocket, which broke the enemy's back in the Battle of the Bulge; Tiny Tim, a 11.75-inch aircraft rocket, with a Sunday punch that left the Korean Reds reeling; RAM, which could pierce 12 inches of tank armor; LARK, another spectacular weapon; and Mighty Mouse, a 2.75-inch folding fin aircraft rocket.

Others were Sidewinder, probably the most widely used air-to-air missile in military service today; Zuni, a 5.0-inch folding fin air-to-ground or air-to-air rocket; RAT, (Rocket Assisted Torpedo); ASROC, surface-launched antisubmarine weapon.

In addition NOTS contributed to Polaris, Caleb, High-Hoe, Terasca, SLV (Soft Landing Vehicle); porpoise studies; and most recently the development of SHRIKE, an anti-radar missile, and testing of Bullpup.

FROM 7000 FEET on April 21, 1945, the China Lake area looked like what a future astronaut may see when he approaches the moon. In center is G-1 Range.

NOTS Senior Officers in Vets Day Fetes

Veteran's Day activities in the area will include the participation this year of two senior NOTS officers.

Capt. Charles Blenman, Jr., ComNOTS, will give the main address at Death Valley this Monday, winding up the annual Death Valley encampment.

He is in the horseback contingent scheduled to reach Death Valley after a weeklong trek from Boron. The route traces that which was followed by the famous 20 Mule Team wagon trains.

Capt. Leon Grabowsky, who assumed Executive Officer duties here this week, will serve as Grand Marshal in the Ridgecrest Veterans' Day parade.

Scheduled to start from Al Adam's parking lot and move west on Ridgecrest blvd., at 10:00 a.m. Monday, the parade will include NAF's color guard and drill unit, Civil Air Patrol color guard, Elk's Club and veteran's groups.

Lecture on Lasers

The operation and behavior of junction lasers will be discussed and compared with that of other kinds of lasers in a technical lecture by Dr. R. N. Hall of the General Electric Research Lab, Schenectady, N. Y., Friday, Nov. 15, at 10 a.m. in Conference Room B of Michelson Lab.

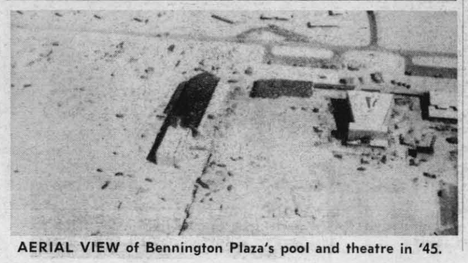
The lecture is sponsored by the Research Department.

HURRIEDLY BUILT huts were "home" to construction crews.

'Avalanche Control'

A technical lecture on "Avalanche Control" will be delivered by Monty Atwater of the U.S. Department of Agriculture Forest Service, in Conference Room A, Michelson Lab, at 10 a.m. Thursday, Nov. 4.

His lecture will be illustrated by 16 mm. movies and 35 mm. slides.



AERIAL VIEW of Bennington Plaza's pool and theatre in '45.

Name Winners Of Community Council Election

Five hundred and one votes were cast in last Tuesday's election of directors of the China Lake Community Council.

Following are the results by precincts:

Precinct 1 (one vacancy): Jules J. Deffes (2-year term).

Precinct 2 (two vacancies): William Blinkhorn (2-year) and Larry Buckley (1-year).

Precinct 3 (two vacancies): John Hensley (2-year) and Harold Washmuth (1-year).

Precinct 4 (one vacancy): Claude Hyten (2-year).

Precinct 5 (two vacancies): Joe Dorgan (2-year) and Henry Blecha (1-year).

Precinct 6 (two vacancies): Robert Glen (2-year) and Walter Schmick (1-year).

Precinct 7 (one vacancy): Ruth Schuyler (2-year).

Precinct 8 (one vacancy): Wallace Bruce (2-year).

Precinct 9 (one vacancy): Jim Fare (2-year).

Precinct 10 (one vacancy): John T. Murray (2-year).

Dick Hayes was elected senior member-at-large on Hearing Board, and Karl Masters was elected junior member as alternate to Hayes.

Aerojet Man to Speak To AIAA Section Here

"Launching Rockets from the Sea" will be the subject of Peter Mullin's talk to the China Lake Section of the American Institute of Aeronautics and Astronautics, Thursday, Nov. 14, at 8 p.m. in Conference Room A, Michelson Lab, according to Frank Knemeyer, section president.

Mullins is employed by Aerojet General Corp. of Sacramento.

SHOWBOAT

FRIDAY NOV. 8
"X, THE MAN WITH THE X-RAY EYES"
(74 Min.)
Ray Milland, Diana Van Der
7 p.m.

SATURDAY NOV. 9
— MATINEE —
"TORPEDO ALLEY" (84 Min.)
Marc Stevens
1 p.m.
— EVENING —
"KING KONG VS. GODZILLA" (90 Min.)
Michael Keith, James Yagi
7 p.m.

SUN.-MON. NOV. 10-11
"A NEW KIND OF LOVE" (110 Min.)
Paul Newman, Joanne Woodward
7 p.m.

TUESDAY NOV. 12
"CAPTAIN SINBAD" (88 Min.)
Guy Williams, Heidi Bruhl
7 p.m.

WEDNESDAY NOV. 13
COMMUNITY CONCERT
8 p.m.

THURS.-FRI. NOV. 14-15
"A TICKLISH AFFAIR" (89 Min.)
Shirley Jones, Gig Young, Red Buttons
7 p.m.

It All Began 20 Years Ago Today

Order Creating NOTS Signed On Nov. 8, 1943

Instead of the sharp crack of mule skinners' whips that once echoed up and down the 1200-square mile area of the U.S. Naval Ordnance Test Station that straddles the roads once trodden by the famous 20-mule teams, today the thunderous roar of high-powered rockets, missiles, and super-sonic jets rends the still air of the Mojave Desert.

This contrast between the old and the new is the product of 20 years of ordnance research and development by the Station since its official establishment on November 8, 1943.

NOTS was born out of the urgent need for air-craft rockets during World War II when the United States trailed by a poor fourth Germany, Russia, and England in the production of rocket-powered weapons.

Prior to autumn, 1943, the area now within the boundries of the Station was known to only a few hardy prospectors who traversed the shimmering sands of Indian Wells Valley to and from their mines and to the 26 who bravely filed homestead claims.

Started by CalTech During WW II Days at Goldstone

The wartime Office of Research and Development assigned the California Institute of Technology the task of overcoming Germany's lead in rocketry.

Dr. C. C. Lauritsen, a World War II rocket specialist, at the request of the Government returned from England to take charge of the CalTech program.

Serving primarily during the war years as an adjunct to CIT's rocket development and testing, the NOTS' mission was that of research, development and testing of weapons, with particular emphasis on aviation ordnance, and additionally, to furnish primary training in the use of these weapons.

Development and testing undertaken by the Institute from 1939 to 1942 was accomplished in the populated Pasadena area. In 1942, CalTech's test operations were moved to Goldstone Dry Lake, near Barstow, where the first actual rocket firing was on July 2. A rocketdriven retroacting depth-charge, it was known as a "retro-bomb."

Goldstone's area soon proved inadequate, and on November 8, 1943, the Naval Ordnance Test Station, Inyokern, was established by directive of the Secretary of the Navy Frank Knox as an activity of the 11th Naval District under cognizance of the Bureau of Ordnance.

Nine hundred square miles of level and comparitively mountainous desert were set aside for the permanent Navy rocket and related weapons research facility.

Most of this land was on public domain; a small part was owned by the State of California; another small parcel was under Army jurisdiction and an even smaller portion was privately owned by homesteaders.

First Operations From Harvey Field at Inyokern

The portion under Army responsibility was the Inyokern Airport — Harvey Field — which later became the first actual operations point of the NOTS organization.

Arrangements were made to transfer or trade the unclaimed land to the Navy, and that under State or Army control was "traded." Privately owned acreage was condemned and subsequently purchased under the Second War Powers Act.

In November, 1944, 338 square miles of land was added to the original 900.

The first construction was authorized in November, 1943, calling for $160,000 for erection of temporary housing at the air field and for an ordnance test area on the China Lake site, which was to include barracks, mess halls, storage facilities, shop buildings, recreation huts, dispensary, spotting towers and some roads.

By winter of 1943, the first rockets 3.5" modifications of an English weapon, were fired from the dry bottom of China Lake on what is now "C" Range. These tests used the CIT high velocity aircraft rocket (HVAR) and were flown by F.A.W. Squadron 14, an experimental squadron assigned to the rocket development program.

Eight Quonset Huts Start For Embryonic NOTS in '44

Still in its infancy, the Station, on February 29, 1944, was comprised of eight Quonset huts and the test ranges which were then being set up. Rocket development was speeding ahead.

The first permanent facilities were provided for, in contracts signed March 7, 1944, involving $25,932,140. Fifteen months later this contract was terminated by the Government, 93% complete, after an expenditure of $54,952,221, over twice as much as the contract had originally specified.

Several hundred specialized buildings, barracks, sewage disposal, telephone, electrical and water systems, runways and roads were provided. This construction project furnished facilities for about 8,000 persons (no family quarters) and included buildings still utilized today.

At the beginning of construction, no labor force was available; therefore, a nation-wide recruitment program was established. Some 4,500 workers traveled to NOTS via government-paid transportation, helping to swell the ranks of construction crews.

24 Thousand Hired 1st Year, Workforce Only 7 Thousand

The turnover was tremendous —during the first year, over 24,000 people were hired, yet the maximum working at any time was 7,000.

Those hardy souls surviving the demoralization effects of heat and the most primitive of civilized living accommodations laugh about the "old days" now.

Says one, "There were three kinds of people—those coming, those working and those leaving."

Another states, "Unless you had your own trailer, you had no family. Wives lived in the women's quarters; husbands stayed in the men' dorms and the kids, well, they stayed with Grandma!"

A third old-timer tells of a sandstorm in mid-summer. Trenches for water, sewer and other lines were dug, and hundreds of acres had been scraped of vegetation. A hot wind came up, sweeping up tons of silt-like sand, filling trenches, and causing a cessation of all activity while all workers ran for protection, only to find their barracks just as sand-filled as the area outdoors.

One Quonset Occupied by CO, Exec., Exper. Offcr.

First administrative offices of the embryonic Naval Ordnance Test Station was the Quonset hut at Harvey field, jointly occupied by Station Commander Capt. S. E. Burroughs, USN, and the Executive and Experimental Officers, as both living and working quarters.

Soon after the Station was established, a need was determined for technical aviation facilities and experiments. In December, 1943, Aviation Ordnance Development Group 1 was commissioned at Naval Air Station, San Diego, with LCdr. T. F. Pollock, U.S.N., as Officer-in-Charge.

First Technical Group Moves From Harvey to Armitage

The combined mission of the Group was to provide technical aviation facilities and equipment for development of aviation ordnance, to flight test such ordnance, armament, an experimental projects and to provide aircraft utility services. First based at Harvey Field, the unit, eight months later, moved to their permanent facilities — Armitage Field — on the China Lake site.

In fulfillment of its secondary mission of training, NOTS' first two-weeks course covering instruction on the latest rockets, their fuzes and handling proceedures began August 25, 1944. Studying the 5" HVAR ("Holy Moses") and the 11.75" AR

(Continued on Page 4)

Op13C-jc
Serial 232213

8 November 1943

R-1564-Naval Ordnance Test Station, Inyokern, California--
Establishment of.

ACTION: ALL SHIPS AND STATIONS

1. A station, having for its primary function the research, development, and testing of weapons, and having additional function of furnishing primary training in the use of such weapons, is hereby established and designated

U. S. Naval Ordnance Test Station,
Inyokern, California,

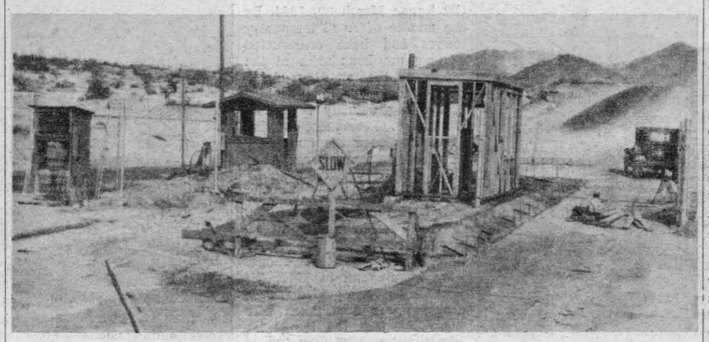
as an activity of the Eleventh Naval District.

2. Bureaus and offices concerned take necessary action.

FRANK KNOX
Secretary of the Navy

COPY of original order signed by SecNav Frank Knox on Nov. 8, 1943.

AS RUINS of an ancient city, concrete walls stand in Area L where they were ripped by rocket fire in 1944.



GUESS WHERE! — Picture was taken July 19, 1945. It's not the main gate sentry post, nor the one at the south entrance. But it is construction of guard gate leading to the Salt Wells Pilot Plant. Truly an historic shot. Road incline is the clue.

LABORERS level land around one of first buildings here.

WHEELED TRACK SLED, the first-known rocket-propelled sled, zips along NOTS' test track during an historic moment. Picture was taken on May 25, 1948.

Research and Development Boom

(Continued from Page 3)

("Tiny Tim"), some 150 officer and enlisted personnel received training before the course was decommissioned in May 1945.

CalTech's work was primarily concerned with the development and testing of rockets, propellants and launchers. When it was later decided that the Station should become a permanent, highly developed facility of the Bureau of Ordnance, it was also determined that the Navy, in order to house the expected thousands of personnel needed, would virtually create a city.

Between April and October, 1945, the Station took over most of the CalTech projects, and homes, schools, shopping facilities, Michelson Lab and other permanent buildings rose to transform the desert outpost into a community with a single purpose—to provide weapons.

Michelson Lab Dedication Takes Place on May 8, 1948

Its new concrete shining in the intense sunlight, Michelson Laboratory, was dedicated May 8, 1948. It is the focal point of NOTS' test activity. Built at a cost of $10,000,000, making this the largest, most completely equipped institution of its kind in this country.

It is composed of 16 units, joined in such a way as to minimize possible earthquake damage. The added expense involved was repaid in a 5-minute span in 1953 when the nearby Bear Mountain Fault slipped, leaving neighboring Tehachapi and Arvin in shambles.

Presently housed in the gigantic laboratory are five departmental organizations of the Naval Ordnance Test Station. Among them is the Test Department whose major function is to develop the means for testing, and to test propellants, explosives and products of other Department's research and development efforts. The Aviation Ordnance Department, the Weapons Development Department, the Research Department and the Engineering Department also occupy the huge structure.

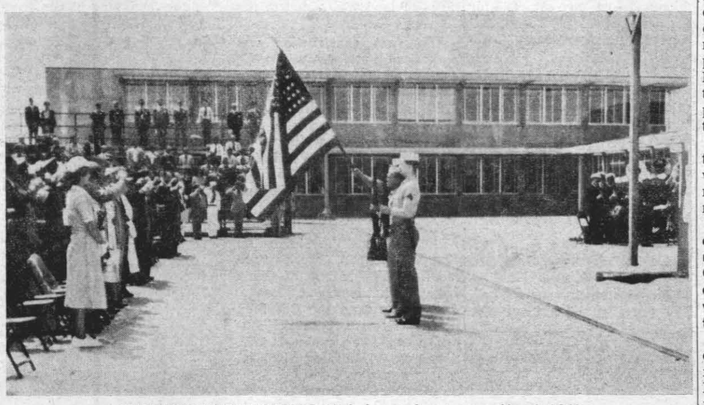
NOTS Pasadena, Once the Only Facility of Its Kind

Pasadena, once the only facility in the United States devoted to Navy rocket, aviation ordnance and underwater weapons development, is now primarily concerned with underwater weapons, such as torpedoes, and the now famous Polaris, the submarine-to-land missile, proving for the Navy that the missile could be airborne after an underwater launching.

When the Navy took over weapons development operations from CalTech in 1945, the existing scattered groups were combined into the single unit of NOTS, under the direction of Dr. L.T.E. Thompson, who later became the first Technical Director of the Station.

Some Pasadena projects were taken over by the General Tire and Rubber Company, under contract, and remained under jurisdiction of that company until 1948 when the 430 Pasadena personnel were transferred to Navy Civil Service. Personnel at the Pasadena Annex now number about 1000.

NOTS Pasadena consists today of the administrative Foothill Plant, Morris Dam Test Range, Long Beach Sea Range and the San Clemente Island search, developmental and test activity concerning all phases of underwater ordnance.



CEREMONIES DEDICATING Michelson Laboratory on May 8, 1948.

G-Ranges Developed in '43, First Rocket Fired March '44

During late 1943 and early 1944, temporary G-1 and G-2 ranges, for ground firings of rockets, had been laid out, and the first rockets were fired on G-2 Range March 30, 1944. By the middle of April temporary towers had been constructed along the boundaries of the ranges so that spotting of impacts could begin, and on May 1, spotting actually began on G-1 Range. Permanent spotting towers replaced the temporary structures in December, 1944.

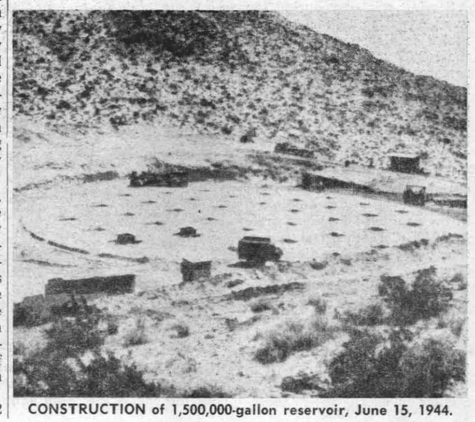
Launchers, range buildings, and other test facilities were added at these temporary ranges to meet the Station's immediate needs. In the meantime, the permanent ranges were begun, and in 1945, the first testing for a guided missile program was undertaken with the result that G-1 Range became the area for testing of guided missles rather than rockets.

By July, 1944, B-1 and B-2 Ranges were opened for Air-to-Ground firings of rockets.

Finally, after a year and a half of frenzied construction of buildings to carry out the mission of the Station, in 1944 and 1945, a number of homes were begun. In a short time, 1070 units — duplexes, apartment buildings, senior and junior officers' quarters, dormitories and prefabricated housing—rose to contain both construction people and scientists, engineers and other personnel engaged in

(Continued on Page 8)

ONE OF FIRST targets on range is riddled with shell fire.



CONSTRUCTION of 1,500,000-gallon reservoir, June 15, 1944.

Tells 18 Yr. Progress of TID Publishing Division

By LESLIE W. WALKER

The first technical report written, edited, and published under the U. S. Naval Ordnance Test Station imprint was issued on April 14, 1945. It bore the imposing title **Standardization of Aircraft Metric Photography Technique Using F-46 Torpedo Camera,** and was authored by R. V. Adams, Jr.

By the end of 1946 about 35 such technical reports had been published, a respectable number considering the small size of the editorial staff. Besides these early NOTS technical reports, a few ordnance pamphlets, and other technical manuals were written and edited, but the Bureau of Ordnance formally published them.

In the original organization of NOTS, the planners recognized that technical information derived from research, development, testing, and other programs had to be organized, distributed, and used. To meet this need, the nucleus of an editorial group and library was established on the Station between late 1944 and April 1945 as a part of the Research and Development Department.

In October 1945 this group, which began with one intrepid individual, soon grew to four paper pushers. At this time a Navy printing shop, located on the Station but not set up for handling technical reports, was devoting its efforts to the printing of administrative papers. Therefore, the Station arranged for the California Institute of Technology to continue the printing of NOTS reports until the end of December 1945

Formal Reports Begin

In 1946 the printing facilities of the Station began the processing of formal reports, but in the beginning these reports were merely bound collections of mimeograph, ozalid, and photostat copies.

From these humble beginnings the information group went through a series of reorganizations that would take a geneologist to unravel.

In January 1949 the information group, known since early 1947 as the Technical Library and Editorial Section of the Science Department, was again reorganized, this time as the Technical Information Division, and put under the new Design and Production Department. Simultaneously, the Printing and Reproduction Section was added to the main group.

One of the main problems of the old Technical Publishing Division was the geographic separation of its units between China Lake and Pasadena.

This was like operating a production line with the ends 150 mile apart. Material edited at China Lake was sent to Pasadena for composition and artwork, then back to China Lake for printing.

On July 1, 1954, the Technical Publishing Division with its functions was removed from the Design and Production Department and incorporated into the newly established Technical Information Department as the Publishing Division.

During the first 20 years of NOTS the publishing staff has grown from the original nucleus of one editorial clerk to 50 highly trained specialists, administrators and clerks.

Today the Publishing Division of the Technical Information Department consitutes one of the largest government publishing enterprises on the Pacific Coast and prints almost 300 completed reports annually. With its load of the Station's administrative material, it produces more than six million impressions annually.

Community Officially Named in '48

(Continued from Page 8)

nance items was begun in mid-1945. About this time, too, the Salt Wells Pilot Plant was opened for experimental work in the field of explosives.

Marines, for security, come to NOTS on July 17, and on July 31, the Station's allowance of Naval personnel was fixed at 149 officers and 1,838 enlisted men and women. Present strength of all military personnel is 150 officers and 1161 enlisted men.

The Marines were disestablished in June, 1963.

The NOTS community began to be a real community. A nursery school was opened in August, 1945; shopping facilities at Bennington Plaza were nearly as complete as they are today; in 1947, the old theater building was remodeled to become a small chapel, utilized by all faiths until November, 1957, when the new $350,000 All-Faith Chapel was dedicated.

In 1946 Dr. L.T.E. Thompson was formally named Technical director though he had come to the Station in 1945 as Director of Research, Development, & Tests from NOP, Indianapolis, Ind.

Later that same year, B-4 Range was put into operation for captive ordnance testing.

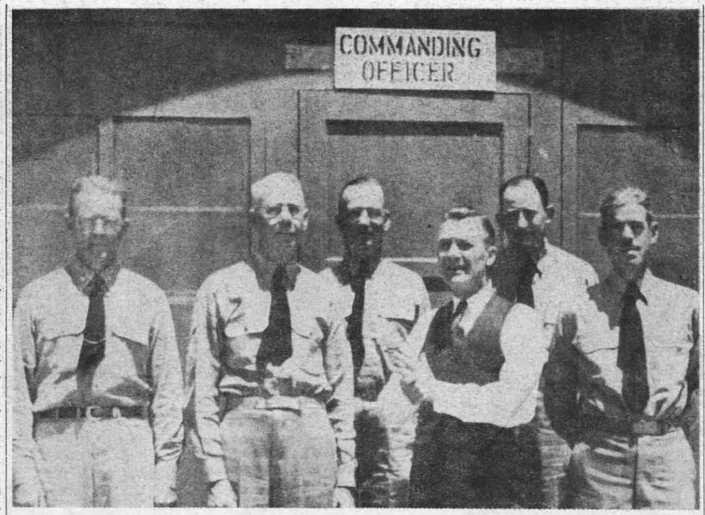
Named China Lake in 1948 By Post Office Department

China Lake became the official name of the NOTS community on January 16, 1948, when the Post Office Department designated it as the name of an independent post office and thereby ended the designation of the Station office as a branch of the Inyokern Post Office. Home delivery of mail was begun in June.

A second major technical facility was dedicated in 1948—the Variable-Angle Launcher at the Pasadena Annex on May 7. This Launcher is a $2,000,000 test facility for studying water-entry problems of torpedoes and other underwater missiles.

The Station Advisory Board was activated in December, 1948 to provide counsel by outstanding scientists, industralists, educators and administrators.

From 1948-1951 about 1000 family dwellings were added, as well as dormitories and trailer spaces to provide more housing for the ever increasing populace.



"MY QUONSET HUT at NOTS Inyokern" is the way then-Capt. S. E. Burroughs, NOTS' first commanding officer (right), captioned this photo from his personal album. He identifies others as (l-r) John Richmond, Admiral Friedell, Sandy, Congressman Sheperd and Bob Atkins. The exact date of the 1944 picture was not inscribed.

NOTS Delivers RAM to Korea in Record 26-days

The NOTS-developed RAM, an antitank rocket, was significantly utilized during the Korean conflict against enemy tanks. Fired from aircraft and capable of penetrating the heaviest armor, RAM was developed and delivered to Korea in only twenty-six days.

Two new ranges were added in 1951. One of them, T-Range, was opened in January for rocket proof firing. The other, K-3 Range, was opened in March for use in cross-wind rocket firings. The Projectile Range, at Randsburg Wash, 25 miles south east of the NOTS' headquarters, was opened during ceremonies on May 16, 1952. This Range, covering 320 square miles and including countless test facilities, greatly broadened the scope of the test and evaluation work accomplished here.

Laurel Mountain Repeater Brings TV to NOTS in 1953

Television came to China Lake in 1953 upon completion of the Laurel Mountain Repeater Station, the only one of its kind in the nation. Community recreation activities were enhanced in 1954 with the completion of the new Community Center.

LT. JACK ARMITAGE (center) is pictured at officers dance at NOTS Inyokern, with a pal, Lt. (jg) Furrer, and an unidentified girl. Four months after photo was taken on April 22, 1944, Lt. Armitage perished in crash while on a project flight. Armitage Field is named in his honor.

McLean Named Director

Dr. William B McLean assumed responsibilities as the Station's Technical Director in April, 1954.

Completed in mid-1954 was the Supersonic Naval Ordnance Research Track—SNORT—used in captive testing of ordnance items. SNORT recently gained further acclaim with the development of RAPEC (Rocket Assisted Personnel Ejection Catapult), the ejection seat capable of propelling pilots 225 feet into the air from their low-altitude flying craft, thus saving lives of jet pilots faced with low-altitude crash emergencies.

G-4 Range, for high-speed terminal ballistic studies with rockets and similar ordnance, was opened in December, 1954, and in February, 1955, the move was completed from the temporary G-1 to the permanent G-1 Range, putting into operation one of the nation's most up-to-date and most completely instrumented ranges for guided missiles. The move to the permanent G-2 Range was completed in August.

During the last five years, NOTS, concerned little with construction, has helped in the nation's giant strides toward more effective military weapons.

Mighty Mouse Highlights '56 Two Military Units Activated

In mid-1956, development of the 19-round Mighty Mouse Rocket Launcher was announced. Two military units joined NOTS during this year. The Marine Corps Guided Missile Test Unit was activated to test and evaluate selected missiles systems and components for the Corps and to assist NOTS in evaluation of the Terrier missile. MCGMTU continued the work begun by the 1st Terrier SAM Battalion.

VX-5 Arrives From Moffett Field to Make NOTS Home

Air Development Squadron 5 (VX-5), the Navy's top test

(Continued on Page 10)

ASST. SECNAV Ralph Bard watches through binoculars as he presses button setting off a test firing of TINY TIM 'way back in October, 1944, when he came out to inspect the new test station at Inyokern. At left is "Zimmie" Zimmerman.

Excerpts From Personal Log of Capt. Burroughs

(Following are some historic excerpts from the personal log of RAdm. S. E. Burroughs, USN (Ret.) who was a Captain when he became the first Commanding Officer of NOTS. Several of the photographs in this issue of the Rocketeer are from his scrapbook, too.)

—o—

"During the period 9 to 16 November 1943 conferences held at the California Institute (of Technology) among representatives of the Navy and the California Institute. The results of these meetings were compiled in a report entitled "Proposed Layout of Facilities for Naval Ordnance Test Station, Inyokern, California," dated 12 November 1943."

—o—

"Negotiations were begun early in December 1943 for the acquisition of a large portion of the territory known as the Indian Wells Valley situated in the counties of Kern, Inyo and San Bernardino and including the Inyokern Airport. This area consisted largely of undeveloped Public Domain, used principally for cattle grazing and marginal mining operations."

—o—

"In order that the Station might become immediately effective in the war effort, it was decided to proceed with the immediate construction of certain temporary facilities. These included temporary housing, air and ground range installations, roads, shops and warehouses."

—o—

"Thus, primary air training and aircraft test firing were begun early in January 1944, and ground firing, early in February."

—o—

"...It was deemed advisable to construct a manufacturing plant for the experimental production of rocket propellants, and the loading of rocket motors.

"...This plant, known as the China Lake Pilot Plant, was placed under construction 1 March 1944."

—o—

"Work was begun under contract NOY 9088 in early February in the China Lake area, the permanent headquarters of the Station."

—o—

"Although the period from February to July 1944 was marked primarily by advances in construction, many notable achievements were accomplished at the Station in connection with Rocket Weapons. Among these were the development and testing of the 5 inch HVAR rocket known as "Holy Moses."

—o—

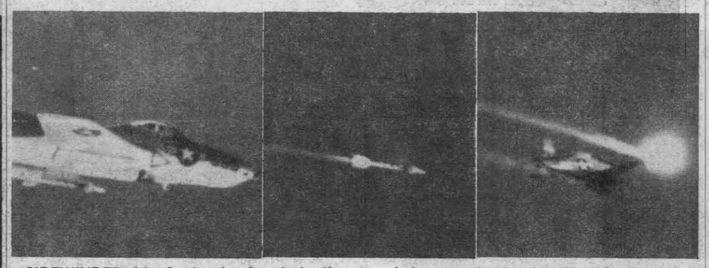
"A demand for a large airborne rocket brought forth the 11.75 inch Aircraft Rocket known as "Tiny Tim." Under "Project Tim" this rocket was developed and tested at the Naval Ordnance Test Station. The first round was fired 28 April 1944."

Capt. Grabowsky Now Exec Officer

Capt. Leon Grabowsky, USN, officially became Executive Officer, relieving Capt. John A. Quense, last Wednesday, Nov. 6, by NOTS Notice 1301 signed by Capt. Charles Blenman Jr., ComNOTS.

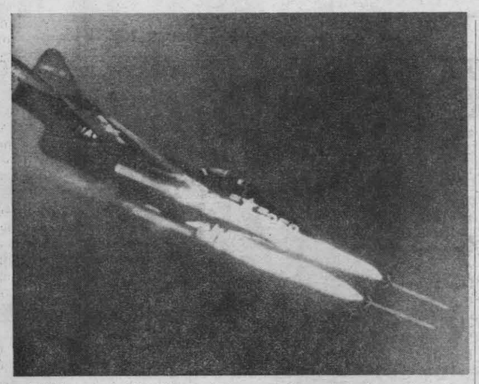
Station's Famous Missile

DR. L. T. E. THOMPSON
First Technical Director



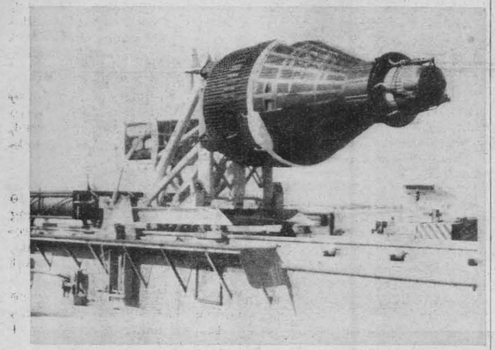
SIDEWINDER 1A, Station-developed deadly air-to-air guided missile, streaks away from an F9F-8, follows its prey, a F6F drone, and explodes on wingtip during early development here. President Kennedy viewed this type of intercept during his visit here June 7.

DR. WM. B. McLEAN
Present Technical Director



ZUNI, a versatile 5-inch air-to-ground or air-to-air rocket, is fired from an F9F during its early development here. It became operational with the Fleet in 1960.

BARRAGE ROCKETS are readied for firing from a Jeep launcher on Station's range during World War II. Men fired rockets by remote control from behind a crude bunker.



GEMINI, spacecraft mockup is ready to be fired down SNORT Track. Craft's seat-ejection system was tested here as Gordon Cooper was on his historic 22-orbit flight.

BULLPUP, an air-to-ground guided missile, is loaded aboard a FJ-4 fighter for flight testing on NOTS' ranges. Fleet pilots also train with the weapon on Charlie Range.

'BIG STOOP,' a two-stage surface-to-surface rocket, forerunner of today's Army's one-stage 'Honest John,' is fired from the Vantos I launcher on the old G-1 Range during 1950.

REDEYE, a joint Army-Marine Corps shoulder-fired, bazooka-type surface-to-air missile, is undergoing tests and evaluation here by four Marines and six Army personnel.

Schools Open, More Homes Constructed

(Continued from Page 4)

rocket and missile development.

Elementary Schools Open '44 Burroughs High in 1945

The first elementary school at China Lake was opened in eight Quonset huts in September, 1944. By the end of the term, 13 huts were in use. Prior to 1944, both high school and elementary school students traveled to schools in Ridgecrest, Trona, Randsburg and Johannesburg, up to 26 miles from the Station and 34 miles from Inyokern. The Sherman E. Burroughs High School was begun in 1945, and in November of that year, classes were started.

Today, Burroughs High School is housed in a new modern plant in Ridgecrest. The old building now houses the Murray Junior High School.

Contract Let for Salt Wells Pilot Plant January 30, 1945

On January 30, 1945, a contract was negotiated for the construction of the Salt Wells Pilot Plant. During this month the permanent Naval Dispensary was commissioned, then responsible for full medical care and hospital care of both Civil Service and CalTech employees, as well as for service personnel.

Families first occupied single-family dwellings in the fall of 1944, and as more and more housing was completed, they were immediately occupied. Last Hill Duplexes were completed in 1952, with an additional 500 Capeharts in 1961.

With the vital, immediate construction now almost finished, testing operations assumed an amazing urgency. In March, 1954, the K-2 Range was opened for use in rocket terminal ballistics studies.

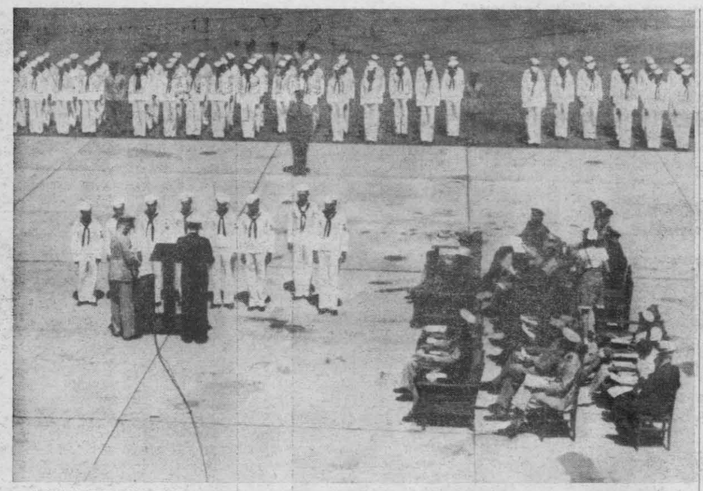
1945 NOTS Established As BuOrd Independent Activity

Then, in April, the Naval Ordnance Test Station was established as an independent activity to carry out the research and development program of the Bureau of Ordnance.

Since 1945, there has been continuing stress on conducting a fully integrated weapon program, utilizing the best tools and most competent engineering and scientific personnel available. Because of this emphasis, NOTS has been able to make significant contributions to the nation's defense arsenal and has prepared itself to undertake increasingly more complex weapon development tasks.

Ground firings of aviation ord-

(Continued on Page 9)



HARVEY FIELD DEDICATION, NOTS, Inyokern, was an impressive sight on June 28, 1944.

Remind Station Hunters to Use 4-Wheel Vehicles

Emphasis was placed on the requirement for FOUR-WHEEL vehicles to be used by those participating in chukar, quail and robbit hunting on the Station this and next weekend.

Hazardous road conditions in the area set aside for hunting by Station and State Fish and Game officials is the basis for the requirement, it was noted.

Nov. 9, 10, 16 and 17 are the dates set aside for hunting on the Station.

All hunters, including Station residents, must use access gates located at Centennial Canyon and Olancha to enter the designated areas.

Maps and special instructions issued by the Station will be distributed to hunters as they enter the area from those access gates.

THE ORIGINAL Michelson interferometer is examined by Dr. F. E. Roach of NOTS Pasadena in April, 1948. The interferometer established a new standard of precision in measurements of wave lengths of light.

Military Call Duty Here The 'Most Challenging'

BY JACK BROWARD

Add two more to the growing list of distinctions acquired by the Naval Ordnance Test Station over the 20-year period it observes today:

"The most unique shore installation in the Navy!

"The most challenging duty ashore!"

These claims come from nearly 1300 officers and enlisted men who comprise the military element at NOTS.

They serve here at China Lake, Pasadena and San Clemente Island facilities as members of four major units of the command: The Naval Air Facility, Air Development Squadron Five, NOTS Enlisted Personnel Division and NOTS Annex at Pasadena.

Wide Work Range

Basically, the "uniqueness" of the command, compared with other Navy installations, is the diverse character and wide range of work billets to which Navy men are assigned.

The predomination of its civilian work force also contributes to this claim. Regular Navy men seldom draw duties elsewhere that bring them into constant contact with civilian audiences.

"And, you could have bowled me over when I found out that China Lake didn't have any water in it!" lamented one career Navyman who towed his boat to his new duty station.

All of these factors add to the uniqueness.

Now, consider the "challenge" offered here.

Breeds Ingenuity

The Navy's highly trained technicians, fresh from schooling or shipboard duties, are exposed to an atmosphere at NOTS that breeds ingenuity.

The desert air crackles with inventiveness at its inception levels.

Typically, Navy personnel find themselves assigned to jobs which demand intelligent, individual judgment.

"A man can't avoid becoming a part of the work produced here," commented one officer attached to the Naval Air Facility. "We get so wrapped up in our jobs that we frequently cease to think in terms of normal regulated Navy life.

"Call me a victim of my environment, if you want."

His fellow officers and the enlisted men assigned duties at Capt. Jack W. Hough's Naval Air Facility bear a tremendous burden of responsibility in the total NOTS picture.

Though their primary task is to provide air facilities in support of ordnance research and development, the duties often range far afield from that broad, general mission.

Take It From Engineers

One group of officers, assigned to project pilot duties, takes up where drawing board engineers leave off. Because these men come from fleet operational duties, they test and evaluate experimental weapons undergoing development with operational conditions in mind.

Their plane handlers, mechanics, technicians and support personnel rapidly succumb to the mood.

Therein, lies the "challenge."

"No two days are the same," concludes the spokesman.

Always a Challenge

Aviation ordnancemen assigned to VX-5's crack unit of pilots are confronted daily with challenging, new problems related to weapon launch systems, mechanisms and procedures.

The squadron, under command of Cdr. Harry N. O'Connor, is responsible to NOTS for development of aircraft tactics, techniques and procedures for delivery of airborne weapons.

"It's like that one time in his life when a man feels that he can actually contribute something of his own to the job. The book didn't call for it," explained one VX-5 flyer.

"We know in advance, that if our delivery systems are acceptable, they'll be used someday by another flyer in the fleet.

"They must be right."

This 20th anniversary story wouldn't be complete without those whose jobs lack glamour, the ones filled by scores of "behind-the-scenes" military personnel.

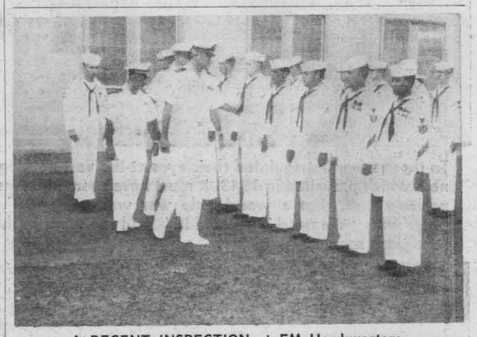
A room full of radiomen work daily in the basement of the Administration building at China Lake. They seldom rub elbows with science.

Messcooks at the serving lines read about the exploits of NOTS scientists but seldom witness the drama as it unfolds.

One of the largest contingents of non-technical military personnel — the Seaman Guard detachment at China Lake — is under the command of LCdr. L. B. Shults, a former enlisted man.

Responsible for range and gate security, these men stand today on the threshold of weapons development program that will be a part of operational use in the fleet in the tomorrows to come.

They witness history in the making.



A RECENT INSPECTION at EM Headquarters.

NOTS Pasadena's Part

The Pasadena NOTS Annex is represented by nearly 200 military personnel engaged in underwater ordnance. Its Morris Dam, Long Beach and San Clemente Island facilities — counterparts to the China Lake facilities — hold equal appeal for nuclear-age Navy men.

"There's so much to learn about our 'inner space' in terms of ordnance," explained one officer under the command of Capt. G. H. Lowe.

"Our people down here rate the duty as first class," he stated.

Few "outsiders" realize it, but the NOTS facility at San Clemente Island is rapidly gaining fame as the "diving capital of the world."

Crews of Navy divers, perhaps the most highly skilled technicians in the Navy today, rotate duties between the Polaris "pop-up" facility at San Clemente Island, the Morris Dam Variable Angle Torpedo Launch facility and the Long Beach installation.

It was the work of Navy divers engaged in the Polaris program at San Clemente that helped slice big chunks of time off the schedule in its initial development stage, thereby giving America an offensive weapon system that has since gained world-wide respect.

In a sense, this is the quality of the military who serve at NOTS today. They're performing jobs that become legacies for others to share in the future.

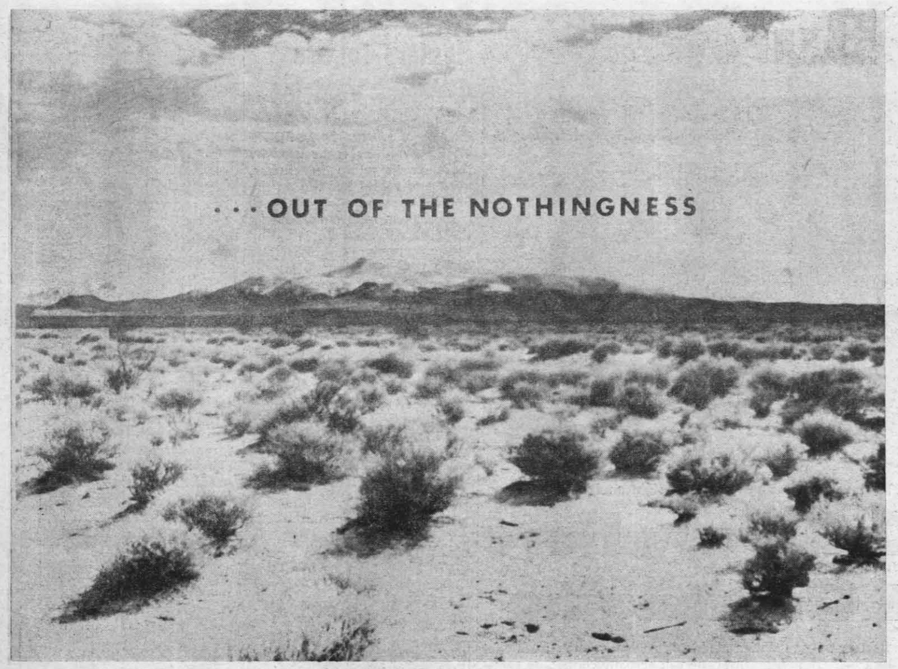
Thrift Shop Closed

The Thrift Shop will be closed for painting and repairs until Dec. 3 according to Helen Fletcher, chairman.

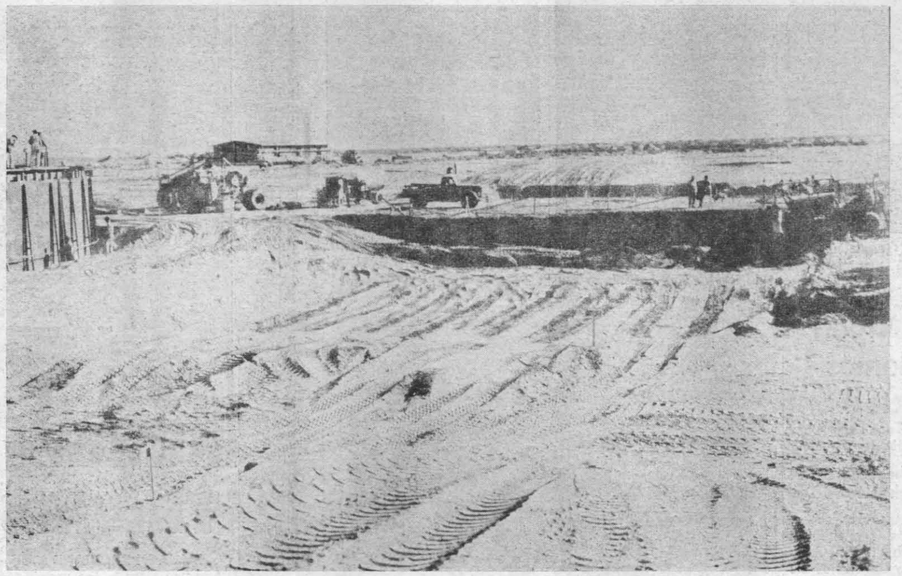
No more donations will be accepted until the reopening.

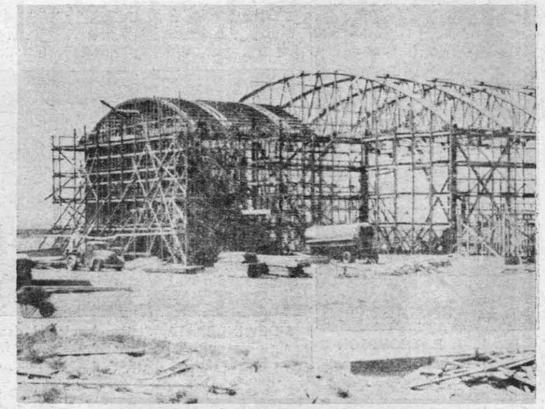
WAVES' contingent arrived July 18, 1944, was transferred to San Diego, Aug. 30, 1946.

They Dug and Built...



To those who first squinted their eyes at the vast nothingness which prevailed in 1943, it must have seemed an impossible task. But a world-wide war was on, and the order was: "We need it — build it." And the wind in the sagebrush seemed to snicker.



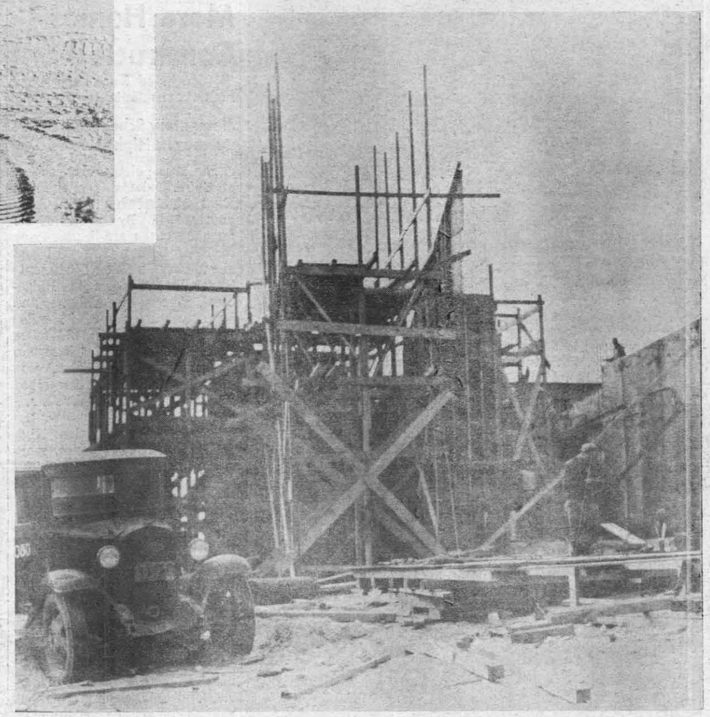


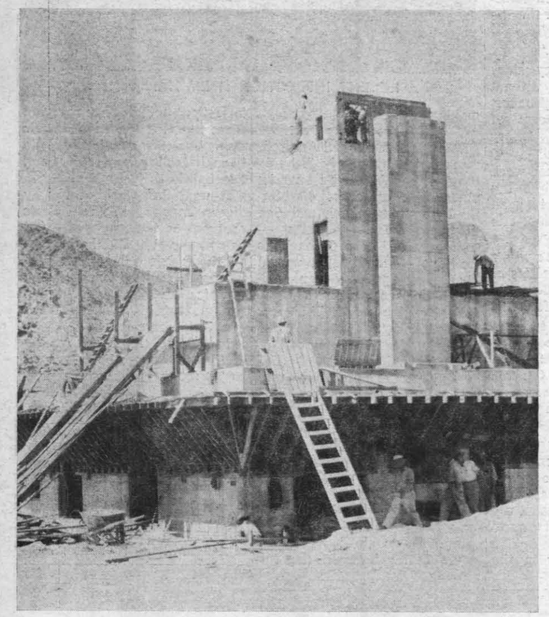
Kodiak Hangar, Harvey Field, June 15, 1944.

Soon the rumble of bulldozers, trucks and earthmovers overwhelmed the snickering in the sagebrush. In went the foundations, up went the lumber, gone was the word "impossible."

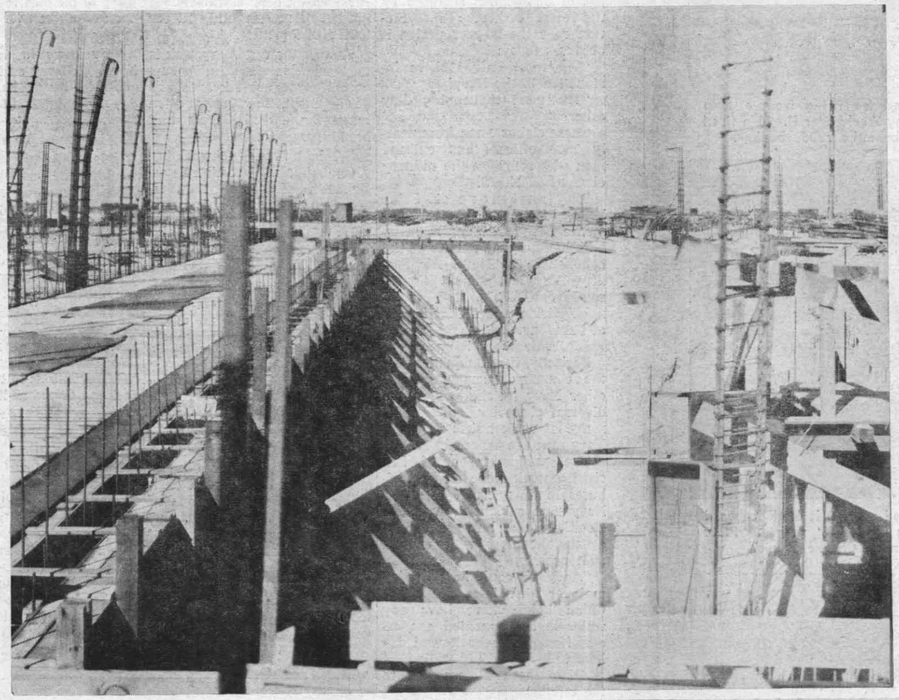
And It Grew..

By November 1, 1944, China Lake Propulsion Plant's Building No. 214 was a growing combo of timber, reinforcing steel and concrete.

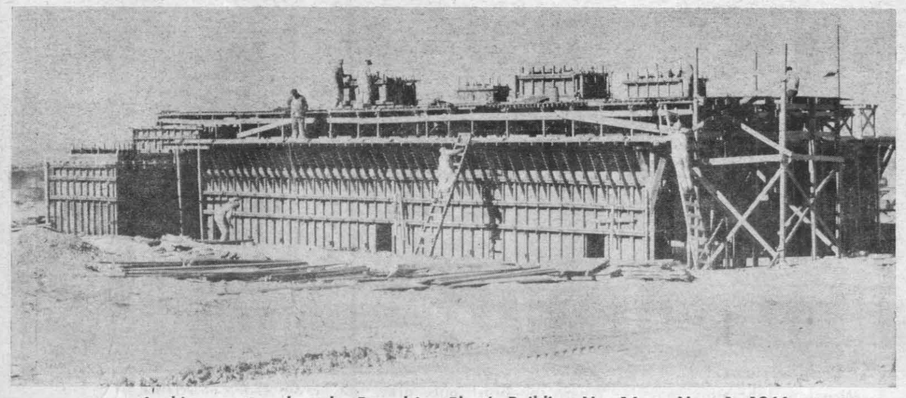




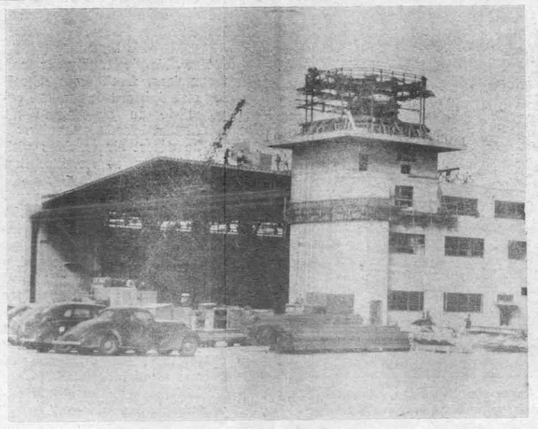
Building the Powder Plant, August 25, 1944.



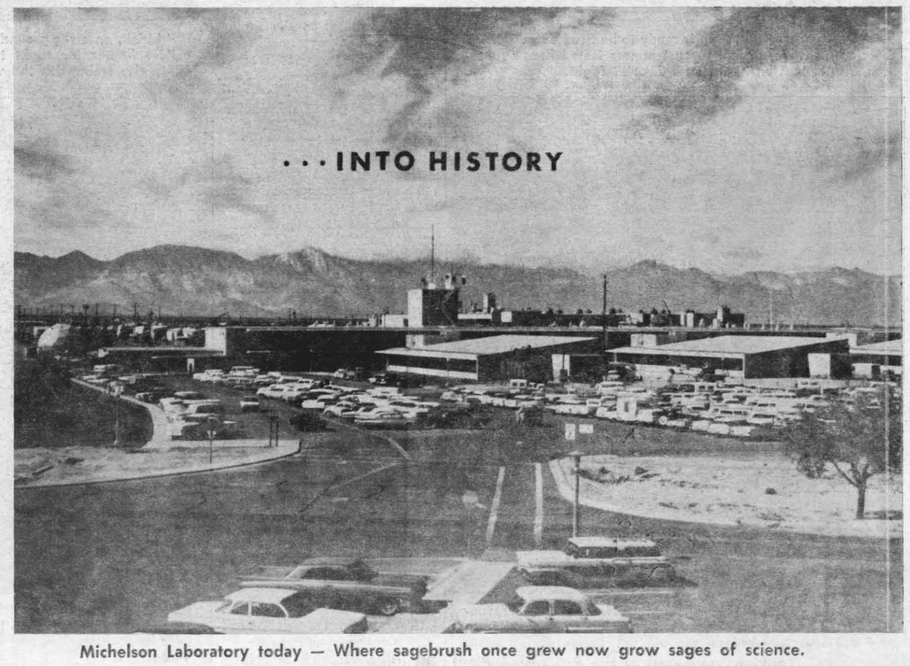
Mich Lab foundation, Feb. 14, 1945.



Looking westward at the Propulsion Plant's Building No. 16 on Nov. 1, 1944.



Dahlgren Hangar (No. 1) on January 30, 1945.



Michelson Laboratory today — Where sagebrush once grew now grow sages of science.