

# ARMED FORCES DAY

FRIDAY, MAY 14, 1965

## THE BLUE ANGELS



AND THE U.S. ARMY'S  
GOLDEN KNIGHTS



  
**ROCKETEER**  
NOTS  
FROM UNDER THE SEA TO THE STARS

Vol. XX, No. 19 Naval Ordnance Test Station, China Lake, Calif. Fri., May 14, 1965

# THE FAMED 'BLUE ANGELS' PILOTS



CDR. BOB AUMACK  
Flight Leader (Plane No. 1)



LT. BOB McDONOUGH  
Right Wing (Plane No. 2)



LT. CLARENCE HUBBARD  
Left Wing (Plane No. 3)



LT. FRANK MEZZADRI  
Solo (Plane No. 4)



LCDR. DICK OLIVER  
Solo (Plane No. 5)

## Army 'Golden Knights' 'Chute at 10:20 a. m.

China Lake today will be a "sky gawkers'" paradise as the Armed Forces Day program features the U. S. Navy's "Blue Angels" and the U. S. Army's "Golden Knights" aerobatic parachute team.

Captain John I. Hardy, USN, Station Commander, said the aerial demonstrations will provide a spectacular opening for the once-a-year "Open House" program designed to acquaint the public with phases of research and development techniques at the Navy's largest scientific laboratory.

Activities begin at 9 a. m. at the Naval Air Facility and Air Development Squadron Five with static displays of aircraft and equipment. Model aircraft will be displayed by the local Alkali Angels. The Burroughs High School Band will give a

concert prior to a demonstration by the NAF Precision Drill Team.

The Army's parachute team, Golden Knights, will make its first parachute jump at 10:20, and for the next half hour spectators will be watching the utmost in solo jumps, formation mass drops, baton passes and various other breath-taking chute events.

The Navy's Blue Angels take off in their swept-wing supersonic "Tigers" at 11:30 to perform a half-hour series of fantastic echelon rolls, barrel rolls, (Continued in Col. 3)



CAPT. FRED CRAIG  
Solo (Plane No. 6)



LCDR. BOB COWLES  
PIO (Plane No. 7)



LT. SCOTT ROSS  
Engineering Off. (Plane 8)

## 'Angels' Fly at 11:30 a. m.

loops, reverse Cuban Eights, a tight 360-degree turn, the beautiful "Fleur-de-lis" breakup and other unique passes.

The Supersonic Naval Ordnance Research Track (SNORT) will again this year, as in previous years, permit visitors to view track sleds and cameras beginning at 12:30 p. m. Then, at 2:30 the count-down will begin for a rocket sled firing on the 4.1-mile track — the same track where the NASA Gemini two-man spacecraft successfully underwent its first high-speed rocket sled test.

Mitchell Laboratory tours commence at 12:30 p. m. and continue until 4:00 p. m. and include selected areas for exhibits and demonstrations of scientific advancements in weapon development.

The new Weapons Exhibit Center, showing NOTS-developed weapons since the Station's inception in 1943, to the present, will be open to visitors throughout the day. Visitors are also to be conducted through the Maturango Museum where they will see countless displays of historical artifacts found in the Upper Mojave Desert, including examples of the famous petroglyphs.

For early arrivals at the Station, a Kiwanis Club Armed Forces Day pancake breakfast will be served outdoors at the

China Lake Community Center.

Military and civilian personnel assisting LCDR L. B. Shults, Armed Forces Day Project Officer, in the planning and administration of open house activities are LCDR Robert Clasen, ENS Marvin Clark, William Cooper, LTJG James Conway, William Davis, Charles Dye, LT John Frankel, William Hampton, LT Edward Kane, LCDR Loren Kinne, Alma Koch and LCDR William Lewis.

Also John Mentroulas, Milton Mollick, LCDR Little Player, Fred Richards, Ray Sinnott, William Seel, William Thomas, Eddie Valerio and Harold Varn-dell.

### Shuttle Bus Service

A shuttle bus will be available today for those who don't have cars or don't want to drive them to the Naval Air Facility. The bus will operate between the Maturango Museum and the Naval Air Facility, at 9 a. m., and will continue on an "as needed" basis.

The bus will run between the museum and the SNORT Track during the afternoon starting at 12:30 p. m. Ample parking is available at the museum area.

### Program and Map, Page 12

For the benefit of newcomers, particularly, to the Station, a map of the Armed Forces Day activities area and the program of events are printed on Page 12.

### Miniature Fleet At Weapon Center

A miniature U. S. Navy Task Force of surface ships is a special Armed Forces Day display in the NOTS Weapons Display Center.

The little fleet was assembled by George "Gunner" Schneider, Jr., under the sponsorship of the Maturango Museum.

Young Schneider and Richard Wolff, who helped him in preparing the display, will be present to answer questions of visitors and to distribute literature pertinent to the miniature warship display.

Also in the Weapons Display Center are many of the NOTS-conceived, built, researched, developed and tested items of ordnance.



LOOK OUT BELOW!—Fear not, the "Golden Knights" parachutists know their business, can land on a "dime." That's just what they did to win championship.

# AIRMED FORCES DAY

## President's Message

Our country today is stronger militarily than at any other time in our peacetime history. Our strength of arms is greater than that ever assembled by any other nation.

The successful execution of all our policies depends upon the ability to retain the talent and fitness of the outstanding men and women in the military services. Those who serve their country in the Army, Navy, Air Force, Marine Corps and Coast Guard, from whom we ask so much, are the cornerstone of our military might. Their contribution to our freedom and security is beyond measure.

As Commander-in-Chief, I join all of my fellow Americans in high tribute to our servicemen and women on Armed Forces Day, 1965.

—Lyndon B. Johnson  
President of the United States



CAPTAIN J. I. HARDY  
COMMANDER

## Welcome From Your Hosts

The Armed Forces Day open house at China Lake affords us the opportunity each year to acquaint you, the visiting public, with some of our weapon research and development programs and techniques unique in the fields of science and engineering.

It is an opportunity for us, too, the combined military-civilian organization, to pause and observe our achievements that reflect, in some way, everyone's part in carrying out the mission of the U.S. Naval Ordnance Test Station, and the security of our nation.

We greatly appreciate the generous cooperation of the U.S. Army's Parachute Team, the "Golden Knights" and our own Navy's Flight Demonstration Team, the "Blue Angels," in augmenting the Armed Forces Day program.



DR. WM. B. MCLEAN  
Technical Director

## Command NAF and VX-5



CAPT. ROBERT R. YOUNT  
CO of NAF



CDR. JACK MANHERZ  
CO of VX-5

An interest-packed program of static and action displays is on tap this Armed Forces Day at the Naval Air Facility, commanded by Captain Robert R. Yount, USN, and Air Development Squadron Five, CDR. Jack M. Manherz, USN, commanding.

The two units have arranged a display of Navy aircraft and space-age crew equipment, on view from 9:00 a.m. to 12:30 p.m. The aircraft are the AIG, A4E, DT-288, FAB, F8E, F9F, KD2R, Q2C, SA2, SH-34, TF-10B. Crew equipment includes a full-pressure high altitude suit and survival equipment.

The Naval Air Facility's award-winning precision drill team will show its skill at 10:30 a.m.

## SecNav AFD Message

Armed Forces Day finds units of the Navy-Marine Corps team employed in a multitude of varied tasks to which our country has committed itself in defense of freedom. This flexible, versatile and highly mobile team — together with other members

of the armed forces — demonstrates the tremendous military power available to our country in its efforts to fulfill its worldwide responsibilities.

—Paul H. Nitze  
Secretary of the Navy

## In Charge of Today's Program

Behind the varied and extensive displays, tours, exhibitions and performances for today's Armed Forces Day are a platoon of officers and department personnel working to make this observance the smoothest and sharpest yet.

### Officer in Charge

LCDR. Lewis B. Shults is officer in charge of the Armed Forces Day program for the Station. His wide-ranging Navy background gives him a complete view of the needs for and uses of NOTS' development and testing activities.

His previous experience included a tour as assistant personnel Fleet Readiness and Training Officer, CincPacFLT, Pearl Harbor, and Training Officer for PACOM military assistance program countries. Before that he was aide and flag secretary for Commander, Naval



LCDR L. B. SHULTS  
AFD Project Officer

Forces in Korea, headquartered in Seoul.

### NAF Supervision

Heading up the contributions from the Naval Air Facility is LCDR. Little D. Player, assistant operations officer. He arrived at NOTS in December, 1963, from duty in search and rescue operations at the Pacific Missile Range Facility at Kwajalein, in the Marshalls. Previously, he flew P2V Neptunes on photo missions over Antarctica as part of his duty with VX-6, headquartered at Quonset Pt., R.I.

### VX-5 Participation

Air Development Squadron Five's part of the Armed Forces Day activities is under the supervision of ENS. Marvin N. Clark, Jr., of its Administration Dept. He came to NOTS in January, 1965, from OCS training at Newport, R.I. ENS. Clark graduated from Bowling Green

State University at Bowling Green, Ohio, with a degree in personnel administration before entering the Navy in February, 1964.

### Other Chairmen

Chairmen for other activities and displays for the NOTS departments are the following:

LCDR. Loren Kinne, William E. Davis, Aviation Ordnance; Charles M. Dye, Weapons Development; Mrs. Alma L. Koch, Propulsion Development; William W. Steele, Research; William T. Cooper, Engineering; Ray A. Sinnott, Technical Information; LCDR. William W. Lewis, Jr., Command Administration; HMCA Harold J. Vardell, Medical; LT Edward F. Kane, Chaplain's office; Milton Mollick, Central Staff; William C. Thomas, Safety; LT James D. Conway, Supply; John G. Metroulas, Personnel; and Eddie J. Valerio, Navy Exchange.



LCDR. LITTLE PLAYER  
NAF Programmer



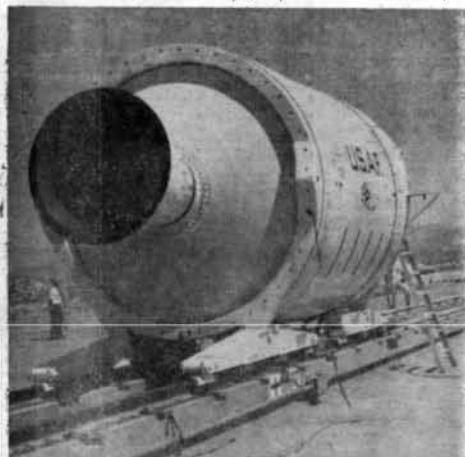
ENS. MARVIN CLARK  
Assisting at VX-5

# Some of NOTS People and



L. T. E. THOMPSON AWARDS, symbolic of the highest recognition for contributions toward fulfillment of the Station's mission, were presented last November to (l-r) Dr. Lohr A. Burkardt, Aresearch Dept.; Captain William J. Moran,

former Senior Experimental Officer here; Charles G. Beatty, Head of Pasadena Annex Torpedo Development Division of UOD, and Dr. William J. Finnegan (right). Congratulating them is Capt. John I. Hardy, Station Commander.



TITAN III space booster segment, loaded with solid propellant, roared down this Station's Supersonic Naval Ordnance Research Track last July and rammed into a specially-built barricade: steel reinforced concrete wall 20 feet long, 20 feet high and six feet thick, backed by solid steel plate three inches thick and hill of dirt. It demolished concrete wall, hurled buckled plate 200 yards. Test was conducted in conjunction with Air Force project.



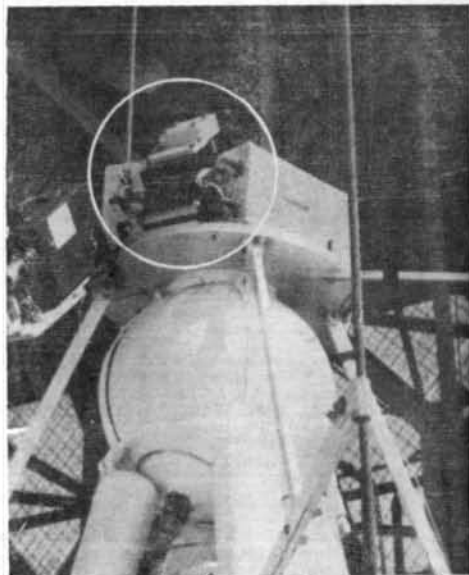
CHAPARAL, an air defense system employing four Sidewinder IC missiles developed here, is undergoing engineering design and evaluation test work under Army sponsor-

ship. Some of the Station personnel engaged in the project are Byron KinKennon, Don Herigstad, Ed Creer, Charles Fraderickson, Thomas Kelly and Leonard Soulsberg.



ATOP MT. ARARAT, George Silberberg (third from left) of NOTS Test Dept. takes part in flag-placing ceremony at the 17,000-foot summit in Turkey last August. Silberberg took leave to join the historic archaeological ex-

pedition which hoped to find remnants of Noah's Ark. Other climbers are Bud Crawford, Gordon Mansell, Dr. John Lunt and Roger Brown. Dick Pownall took picture.



MOON BOUND?—Patent for electro-optical scanner control guidance package (circle) atop Soft Landing Vehicle was granted to Aviation Ordnance Dept.'s Paul Driver and two former NOTS employees. Device could be utilized to soft-land a space vehicle on the moon.

SOUVENIR EDITION

ROCKETEER

# ARMED FORCES DAY



**U. S. NAVAL ORDNANCE TEST STATION**

PASADENA, CALIFORNIA

UNDERWATER ORDNANCE FOR DEFENSE

## Underwater Project



NAVY DIVERS are lauded for their perilous underwater assignments. Providing support to all NOTS projects at Long Beach, San Clemente Island, or Morris Dam, their work includes installation of facilities, evaluation of sound equipment and recovery of torpedoes. This diver carries a large wrench to make an adjustment.

## Review of Sea Cadets



PARTICIPATING to a great extent in civic affairs, NOTS Pasadena works closely with the Pasadena Council of the Navy League of the United States. Navy Day ceremonies at NOTS Pasadena included review of Navy League-sponsored Sea Cadets by (l-r) Cdr. H. M. Steeves, Executive Officer of ONR; Lt. M. Peals, Sea Cadet Commander; Cdr. J. P. Johnson, Commanding Officer of Naval Reserve Training Center, and Capt. G. H. Lowe, Officer in Charge, NOTS Pasadena.

## Navy's Newest Success Story

The Navy's newest success story was announced last December — the development of the MK 46-0 Torpedo, the Navy's "first" solid rocket propelled, deep diving, high speed, anti-submarine weapon.

### Navy-Industrial Partnership

Built around the Navy concept of industrial partnership, the U.S. Naval Ordnance Test Station, Pasadena, acted as technical director with Aerojet-General Corporation, Azusa, Calif., as the prime development contractor. Also engaged in this program were two principal sub-contractors — Bendix Corporation, North Hollywood, Calif., working on the guidance and control system, and Cleviste Corporation, Cleveland, Ohio, working on the engine.

This military-civilian-contractor relationship assures that weapons get into the Fleet in the shortest time possible from conception of idea. The Bureau of Naval Weapons lauded the Navy-Industrial team who worked diligently on this project for several years to perfect the system and furnish this country with another powerful deterrent to enemy submarines.

### Four Delivery Modes

The MK 46-0 may be launched from a torpedo tube on a surface craft, from ASROC (anti-submarine rocket), from helicopters, or fixed wing aircraft. Upon water entry, the torpedo propulsion system is activated within one-half second by means of a sea water battery and the torpedo commences a power dive to a preset initial search

The torpedo begins its search for the target following a programmed search pattern, either in an active (pinging) snake-like track or passive (listening) circle search mode. Upon locating the target, the torpedo commences the pursuit and attack program until it closes with and

## Another First in ASW



A DRONE HELICOPTER carries the MK 46-0 during test operation off Long Beach. The new weapon is capable of hunting, overtaking and killing today's modern conventional and nuclear submarines. NOTS Pasadena was program's technical development director.

destroys the target. If the target should be lost during pursuit, the torpedo commences a search program to relocate the target. The attack or search continues until the target is destroyed.

## Complement

Approximately 870 employees form the Pasadena employment roll of which half are in the Understar Ordnance Depart-

ment. Pasadena employees include 228 engineers, mathematicians, and scientists (153 engineers, 33 mathematicians and 42 scientists).

There are 150 military personnel stationed at NOTS, Pasadena, the majority at the NOTS Long Beach facility and at San Clemente Island ranges.



PORPOISE STUDY — In March this year, NOTS gained recognition through a television premiere of "The Dolphins That Joined The Navy," a documentary film produced by

the station. Tom Lang (shown above), Head of the Hydrodynamics Group at Pasadena, conducted porpoise studies in the areas of hydrodynamics.

# YOUR HOSTS WELCOME YOU



CAPT. G. H. LOWE  
Officer in Charge

## NOTS Pasadena

NOTS Pasadena was organized in 1945. Its personnel came from the wartime CalTech groups who had worked on torpedo and rocket projects sponsored by the Office of Scientific Research and Development. The Navy took over the OSRD activities

the various laboratories and test facilities in Pasadena and at Morris Dam became the Pasadena Annex of the new Naval Ordnance Test Station in the Mojave Desert.

The Pasadena Annex is headed by Captain G. H. Lowe as Officer in Charge and Douglas J. Wilcox as Assistant Technical Director for Development. D. J. Wilcox also heads the Underwater Ordnance Department, the only department of NOTS which is located entirely at Pasadena.

At the Foothill plant are unique test facilities. One of these is the hydrodynamic simulator for testing ASW missiles, torpedoes, and torpedo components under simulated hydrodynamic and acoustic conditions prevailing in the actual environment. Analysis of this information saves thousands of dollars involved in actual sea runs.

Pasadena encompasses a wide area of unique research and development activities — ranging from the Foothill laboratory to Morris Dam in the San Gabriel Canyon and research development test ranges at Seal Beach, Long Beach, and 60 miles off the Southern California Coast to San Clemente Island.

### Morris Dam

The Morris Dam facility consists of the Propulsion Laboratory and the Ballistic Range. The Propulsion Lab is used in the fundamental studies, applied research, development, and testing of hydropropulsion systems and their components. Facilities at the Ballistic Range are used in the acquisition and study of water entry data, underwater trajectory characteristics and structural damage information on underwater and air-to-water projectiles.

Each test area has available adequate instrumentation capabilities to allow the acquisition

We take great pride in welcoming you to the U.S. Naval Ordnance Test Station's Pasadena Laboratory.

Our mission is to conduct a program of research, analysis, development and test of underwater weapons and weapons systems.

As you tour the various laboratories, and view the weapons exhibits throughout the area, our personnel will tell you more about the work of NOTS Pasadena — work demonstrating our theme — Underwater Ordnance for Defense.

NOTS takes great pride in its people. Here is employed a civilian-military partnership — a

partnership of people trained in the physical sciences and people trained in the military sciences — making it possible for NOTS to keep its weapons development work practical and giving you the most for your tax dollars.

Military personnel provide operational know-how and bring to the attention of the Station the needs of the Fleet. Military personnel also aid in getting new weapons accepted by and introduced into the Fleet. The civilian-military team is concerned not only with immediate weapon requirements, but also with research on weapon systems that will be required many years from now.

The NOTS approach consists basically of being geared to carry on the entire spectrum of weapons development. With the ultimate objective of filling the needs of the Fleet, the military-civilian team has the ability to conceive the ideas for a new weapon, create the design, demonstrate its feasibility for Fleet use, develop the weapon, and carry it through the evaluation.

We hope that your visit is pleasant and informative. Remember, this is your Navy. The work done here by military personnel, civilian scientists, engineers, and technicians is for you, the citizens of our country. We must continue jointly to maintain "Power for Peace."



D. J. WILCOX, Head, Underwater Ordnance; Asst. Tech. Director for Dev. (Wpns. Systems).



THE MIGHTY ASROC (Anti-Submarine Rocket) marks the Foothill entrance to the U.S.

Naval Ordnance Test Station at Pasadena. The ASROC missile was developed by NOTS.

## Exhibits, Movies To Be Viewed

In observance of Armed Forces Day, the U.S. Naval Ordnance Test Station's Pasadena Laboratory opens its gates for the second consecutive year to view exhibits and movies depicting the vital work being done here for our nation's defense.

Some of the weapons now in the fleet that will be on display include Polaris, ASROC (Anti-Submarine Rocket), SUBROC (Submarine Rocket), and torpedoes MK 44 and MK 46.

Other exhibits will include a Drone Anti-Submarine Helicopter (DASH) deep sea diving equipment used by Navy Divers, tracking cameras used on the test ranges and training weapons.

Underwater sounds, such as those of a porpoise, will be featured.

There will be tours through a Computer Center, Simulation Laboratory, Environmental Laboratory and Hydroballistic Laboratory, plus many other areas of interest including a Laser Display.

Plan to arrive at the Porpoise Movie (item 12 on the program) a little early so you may view the lovely paintings exhibited in the room. Elmo Gillett a NOTS employee, and his wife, Arleen, are the artists. Both are accomplished painters.

In addition to "short order" service in the station Coffee Port, a refreshment stand is located in front of the Coffee Port and another on the west wall of Bldg. 3.

forces as long as may be necessary.

Full public support allowed the creation of these forces. Continued public support, based on awareness and determination, will ensure that we have them in the future. Armed Forces Day is set aside to give American citizens a close look at the preparedness they support.

—Robert S. McNamara  
Secretary of Defense

## Introducing Your Guides

In addition to station civilian and military personnel to guide and answer questions, there is a contingent of Navy League-sponsored Sea Cadets ready to assist you. These young men are members of a youth training program which has as its primary purpose the providing of "an opportunity for American youth to learn the Naval virtues of personal neatness, loyalty, obedience, courtesy, punctuality, dependability and a sense of responsibility and thoughtfulness for one's shipmates, thereby developing character, self discipline and an appreciation of our American heritage." The Pasadena Council of the Navy League inaugurated one of the early units of the United States Sea Cadet Corps in 1959.

of a maximum amount of data with a high degree of reliability.

### Sea Ranges

The primary purpose of the Long Beach Sea Range is the development testing and evaluation of underwater ordnance and ASW Systems. In addition, underwater acoustic studies are conducted and underwater detection methods and equipment are tested and evaluated. Explosive ordnance shipment facilities

are utilized at the Seal Beach location.

### San Clemente Island

NOTS maintains sea ranges at San Clemente Island for its work with anti-submarine weapons systems, torpedoes, and underwater rockets. Cameras and other instrumentation record the phases of missile launching and trajectories from aircraft, surface vessels, and a strategic shore location.

## SecDef. Message

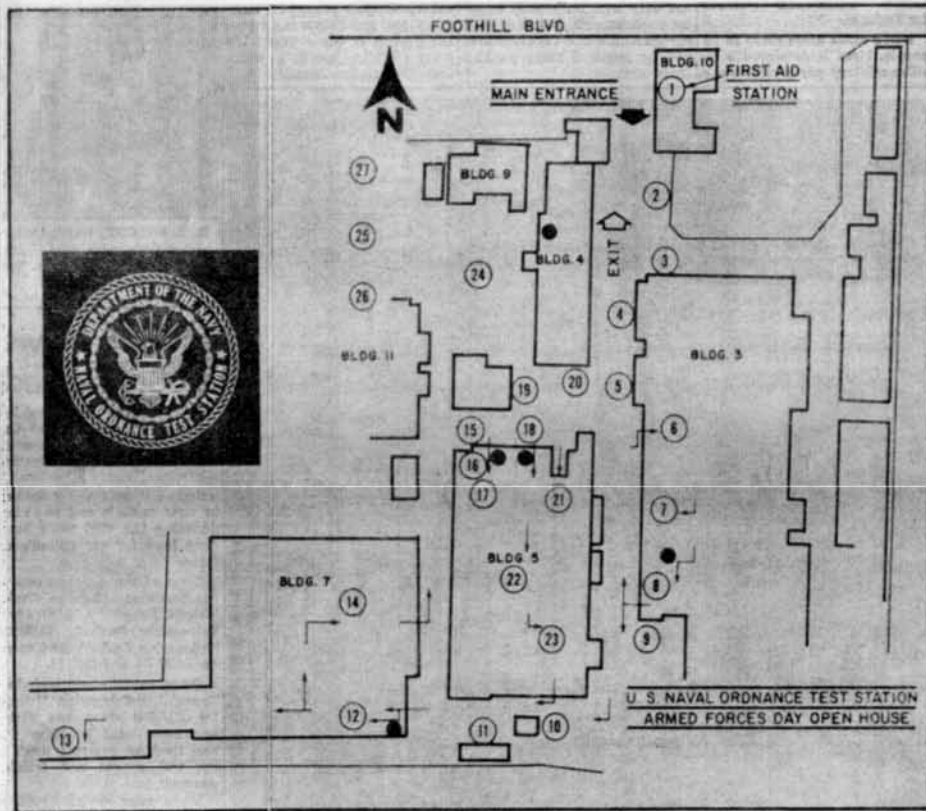
Never in our history has true military preparedness been more essential than it is today — and for the foreseeable future — so long as the Communists continue to pursue their objectives through force and violence.

True military preparedness means the ability to respond promptly and appropriately to any form of aggression. It means being prepared to support other nations directly exposed to attack. It means maintaining powerful, balanced and ready forces of our own. It means making those sacrifices which are necessary—but only those which are necessary—to preserve the ability for flexible response.

Today we have the military forces required for appropriate response to any threat. And we have programs to maintain these

# OPEN HOUSE SCHEDULE OF EVENTS

1. First Aid Station
2. Polaris
3. ASROC
4. Refreshments
5. Practice and Training Weapons
6. Patent Exhibit
7. Gage and Standards Lab
8. Chemistry Lab
9. Hydrofoil Boat
10. Hydrosatic Tank
11. Laser Display
12. Porpoise Movie (upstairs, begins 10:45 and every 45 minutes thereafter)
13. Environmental Lab
14. Displays: Weapons, Plastics, Structural Components, Metallurgy, Test Camera, Numerical Control
15. Range Model
16. Communications Center
17. Movie "Undersea Technology" (begins 10:30 and every 15 minutes thereafter)
18. Tracking Camera
19. Refreshments — Snacks
20. Hydrodynamics Exhibit
21. Hydroballistics Lab
22. Computer Center
23. Simulation Lab
24. Underwater Exhibits: Divers, CURV, Torpedoes MK 44 and 46, MK 32 Launcher, Parachute Exhibit, DASH, SUBROC
25. Helicopter
26. Exhibits, Public Works Role in Research and Development
27. Fairchild Tracking Camera



## 'Miss Navy'

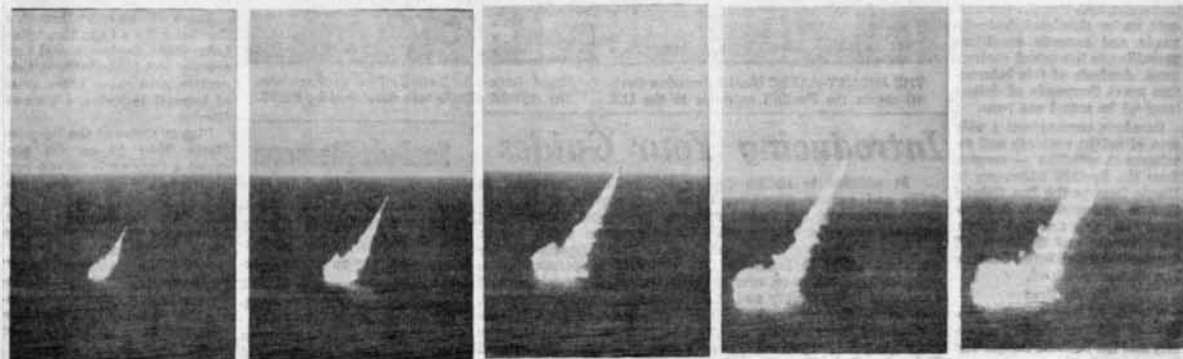


PENNY WARD

The lovely miss selected as "Miss Navy" is Penny Ward, 18 years old, a Pasadena High School Senior and an Adrian Model. In addition to being an "A" student, Peggy finds time to be a Song Leader, and to take part in many other extra curricular school activities.

In her young modeling career, Penny has reigned as Girl of the Golden West (representing the Western Harness Racing Association — Santa Anita); and Queen for the 1965 Sports, Travel and Vacation Show. She was on the Farmer's Insurance Co. Rose Parade float which honored Bob Hope and the Armed Forces; and most recently, she has appeared in the National Mobile Ads for the Economy Run.

Welcome, Penny, we are proud to have you aboard the USS NOTS.



SUBROC (Submarine Rocket) soars through the air from underwater launch at NOTS San Clemente Island Range.

## Sea Pay Boost, Overtime Pay Eyed by Navy

By JIM PARKER  
(Navy Times)

Washington — In its attempt to sweeten shipboard life, the Navy is seriously considering increasing sea pay, establishing blue and gold crews for attack aircraft carriers, paying men

extra for overtime hours, giving a better deal to engine-room, fireroom and radio shack watchstanders aboard attack carriers, and assigning LDOS to unrestricted line billets.

This was revealed by Navy Secretary Paul H. Nitze in a

speech at the National Convention of the Navy League here, during which he also told the delegates that the Navy is planning to ask for another nuclear carrier — its second — when the fiscal 1967 budget is submitted early next year.

## Insurers: Check for War Clause

WASHINGTON — Watch out for those insurance policy war clauses, the Army is telling its men being assigned to Vietnam. It's good advice for Sea Services too.

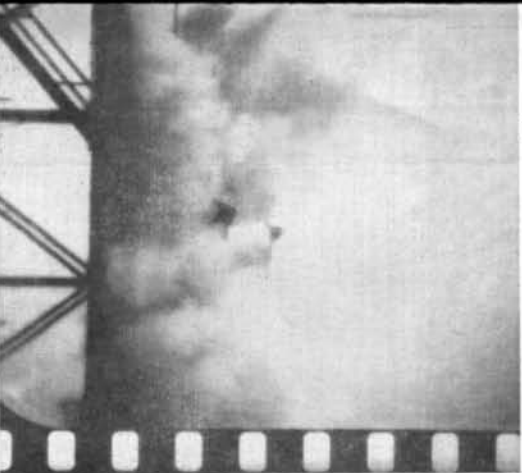
The Army said one of its soldiers was killed in Vietnam as a result of a hostile action and the company from which

he bought the policy denied liability for the face amount because the document contained a clause limiting coverage to a refund of premiums paid if death results "while engaged in military or naval service in time of war or as a consequence thereof."

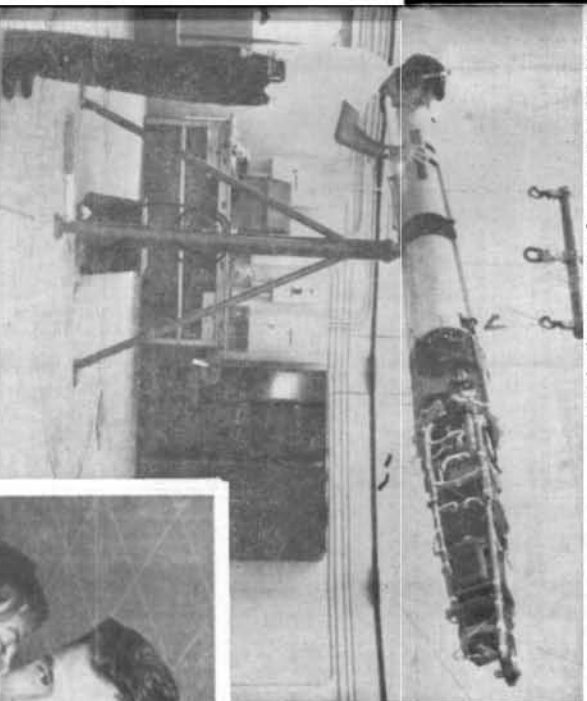
—Navy Times



# Projects That Made Headlines



GEMINI TWOMAN space capsule's escape ejection system was tested many times at the Randdaburg Wash tower facility here. Dummy's were catapulted by special rocket system, then, automatically parachuted safely to earth. A perfect launch last March made it unnecessary for astronauts Gus Grissom and John W. Young to use the escape system.



1250-POUND MISSILE was suspended in space using a stainless steel "air ball" tool to a tolerance of two microns. Here, Larry Ogan of Weapons Development Dept. activates infrared guidance system. "Air Ball" development is used to simulate "frictionless" altitude movement parallel "after burnout" conditions in space.



OZONESONDE instrument developed here was successfully rocketed over 200,000 feet above ocean surface off the west coast of South America in recent project to map the distribution of stratospheric ozone in that area. Project manager Arlin Krueger headed team of six researchers.



SNAKEY, which employs fins that "blissom out" to retard its trajectory speed, is another NOTS-conceived, designed, developed and tested weapon. Fin device fits either 250 or 500 - pound bombs which can be dropped singly or in multiples.



TESTING 'REDEYE' the world's smallest guided missile system which is fired from the shoulder, is another example of inter-service cooperation here at China Lake. The Joint Army-Marine Corps project has been coordinated here by Major W. D. Huddleston, USMC. Many tests have been witnessed by members of the U.S. Congress, NATO representatives, and scores of newspaper, magazine and television reporters and cameramen.



'BLUEJACKET OF THE YEAR' for 1964, selected from China Lake's 1200 enlisted men, was William L. Jenkins, Hospitalman first class. Wife Mary gives him kiss of love and pride at banquet where he was selected from 12 "Bluejackets of the Month."



## Savings Bond Campaign Gets Under Way May 28

On Friday, May 28 NOTS will start its 1965 campaign to encourage employees to participate in purchase of United States Savings Bonds through payroll deduction.

From the time of the origin of the program in 1941, United States Savings Bonds have provided for the investor a means of saving, safe and profitable. And secondly, the purchase of Savings Bonds, by spreading the national debt among the investors, gives every man the opportunity to share in the obligation of democratic government.

Series "E" bonds are the type most often purchased due to the fact that their purchase is within the range of all incomes and they mature in only seven years and nine months. These bonds accrue an interest of 3 3/4 per cent compounded semi-annually and are purchased at 3/4 of face value. They can be converted to cash at any time in any bank. These bonds can be bought in denominations of \$25, \$50, \$75, \$100 and up.

Series "H" bonds are mostly purchased by those desiring sound investments with constant interest payments. They are bought at par face value (\$500, \$1,000, \$5,000 or \$10,000) and an interest check is received every six months at an average of 3 3/4 per cent interest over a 10 year period. The beauty of Series "H" Savings Bonds is their use in conjunction with Series "E" bonds. Income Tax savings and a constant interest income in later years can be gained by the exchange of Series "E" bonds for Series "H."

So — when you are contacted by someone in your department between May 28 and June

4 — sign up — you can start on your way to a more secure and happy, worry free future, for as little as \$3.75 per pay period.

## COM Calendar

**TONIGHT ! ! "Those Lazy, Hazy, Crazy, Days of Summer"** with Dixieland on the lanai. This evening of pure enjoyment is being sponsored by our unattached stags and does and will star Ronnie Bartley and His Revue and The Gas House Six. The dress will be casual and there will be no extra charges. Not only will we have that great Dixieland sound but you will delight in the dancing of Maria Rome and the singing of Elaine Roberts. So we'll see you tonight on the lanai from 9 to 1. Happy Hour from 6 to 8 and dinner will be served from 6 to 9 in the dining room.

And for all of you "Tailhookers" . . . have a great time in Las Vegas!

Next Saturday, the 22nd, is Italian Night at your Club!

—Pat Shannon

## Navy Will Assist EM In No-Cost Duty Swaps

Washington — Sailors desiring to change billets to an opposite coast at no cost to the government may receive assistance from the Navy.

The Navy program is designed to put sailors in touch with others desiring a transfer, on the basis of geographical area and rating.

Actual transfers are governed by Chapter 16, Enlisted Transfer Manual. Further information is contained in BUPERS Notice 1306, dated April 13, 1965. — (AFPS).

## Ham Operators Worldwide Test Set for May 15

Washington (AFPS) — The 16th Annual Armed Forces Day communications tests for amateur radio operators throughout the world will be held tomorrow, May 15, the Department of Defense has announced.

The tests, held to encourage amateur radio activity, are a joint effort of the three Military Affiliate Radio System (MARS) chiefs for their respective services. Active duty and guest operators at participating military stations handle program operations.

**Award Certificates**  
"Hams" everywhere are invited to take part. As in the past, certificates will be awarded to any amateur for perfect copies of the continuous wave (CW) or radio amateur teletype (RATT) message from Secretary of Defense Robert S. McNamara. QSL cards (recognition of correct message reception) will be awarded only to licensed "hams" who establish a two-way contact with a station.

CW transmissions will be in International Morse Code at 25 words per minute. RATT transmissions will be at 60 words per minute.

The one-day event marks the only time of the year amateurs

with designated military stations. In a test of crossband operations, military stations will transmit crossband on spot frequencies outside the amateur bands, and establish radio contact with amateurs in appropriate sections of amateur bands. The test will consist of a brief exchange of locations and signal reports. No traffic handling will be permitted.

**Rules of Contest**  
Contestants should include their name, frequency, time, and call sign (if any) on the paper with the message's text. The message should be copied as received, with no attempt made to correct possible transmission errors. Entries should be mailed to Armed Forces Day Contest, Room 5H960, The Pentagon, Washington, D.C., postmarked not later than May 31.

## SHOWBOAT

FRIDAY MAY 14

**"THE CROOKED ROAD" (90 Min.)**  
Robert Ryan, Stewart Granger  
7 p.m.  
(Mystery) Reporter almost gets the goods on a ruthless Balkan dictator when his contact is killed and the proof disappears. A beautiful woman, some elusive photoasts and mounting intrigue make this an adventure special. (Adults, Mature Youth.)  
Shorts: "West of Pecos" (7 Min.)  
"Radio Roundup" (10 Min.)

SATURDAY MAY 15

**MATINEE—**  
**Little League Benefit**  
**"THE KID BROTHER"**  
Harold Lloyd  
1 p.m.  
**—EVENING—**  
**Little League Benefit**  
**"THE MARK OF ZORRO"**  
Douglas Fairbanks, Jr.  
8 p.m.

SUNDAY-MONDAY MAY 16-17

**"FATHER GOOSE" (116 Min.)**  
Cory Grant, Leslie Caron  
7 p.m.  
(Comedy) Take an unimpaired beachcomber, who loves booze. Add a pretty girl and seven younger girls whom he rescues. Place them all on a deserted South Pacific island in WW II and you've got spice, comedy and adventure. Don't miss. (Adults, Youth, Children.)

TUESDAY-WEDNESDAY MAY 18-19

**"THE OUTRAGE" (97 Min.)**  
Paul Newman, Claire Bloom  
7 p.m.  
(Drama) Hebrai moving in a small western town discuss the trial of a Mexican outlaw convicted of murder. Three witnesses tell different versions of murder and violation in the barren hills. It's different. It's stark raw drama. (Adults, Mature Children.)  
Shorts: "Cut Above, Mouse Below" (7 Min.)  
"Foghorn Lephorn" (7 Min.)

THURSDAY-FRIDAY MAY 20-21

**"QUICK BEFORE IT MELTS" (99 Min.)**  
George Maharis, Anjanette Comer  
7 p.m.  
(Comedy) A Cuban newspaper editor in a story reminiscent of Little America where his character turns the Naval Base into a party so he can be friendly Russian into becoming a defector, brings in a plenitude of girls, etc. Short Yant! (Adults.)  
Short: "People Are Boney" (7 Min.)

## A/C Work Begins At Michelson Lab

Work on the Michelson Laboratory air conditioning project began May 10. The base of operations is located in the area between wings 3 and 4 which are fenced off.

Because of the potential hazard to Lab personnel, the double exit doors on the second floor between Wings 3 and 4 and the east gates to the parking lot will be secured to traffic except in case of emergency beginning May 17 and continuing through March 1966.

## Community News

### RED CROSS ANNUAL MEETING

The local Red Cross Branch will hold its annual meeting at 8 p.m. Wednesday, May 19, in the East Wing of the All Faith Chapel. Two films will be shown at the meeting which is open to the public. They are: "Memory of Solsferino," the story of how the Red Cross began, and a color film on "Deep Sea Fishing" which includes the catching of Montauk Blue Fish, Acapulco Sail Fish, and San Diego Albacore.

### ACEY-DEUCEY CLUB DANCE FRIDAY, SATURDAY NITES

"The Versatiles," a trio with "Red" Simpson on lead guitar, Johnny Barnett on rhythm guitar, and Frankie Lemon on drums, will play for the Acey-Deucey Club dance tonight and tomorrow night. The fun begins at 9 p.m. and lasts until 1 a.m. each night.

### FRENCH CERCLE TO MEET

The CERCLE de la LANGUE FRANCAISE will meet on Thursday, May 20, at 8 p.m. in Room B of the Community Center. The program for the evening will feature Madame Ingrid Heiberg, who will lecture on "Paul Claudel, the Greatest Dramatist of Our Times."

Madame Heiberg is the wife of the Norwegian Consul-General to Los Angeles. Anyone who wishes further information is asked to contact Doris Stirton at NOTS ext. 77524. **REQUEST PONY-COLT PLAYERS TO TURN IN EQUIPMENT**

Last year's Pony-Colt League players are requested to turn in their uniforms and equipment to Bob Brown at 304-B Tyler, Ext. 77012. Uniforms and equipment must be re-issued for the season. Registration is still open for boys 13-16 who wish to play, emphasized Bill Besse, league president.

### MARGE MCCOY NEW PRESIDENT OF 'SWEET ADELINES'

Marjory A. McCoy was installed recently as new president of the China Lake chapter of the Sweet Adelines by Vi Smythe, president of the Bakersfield chapter, in a ceremony at the home of Mr. and Mrs. Harry Willis here.

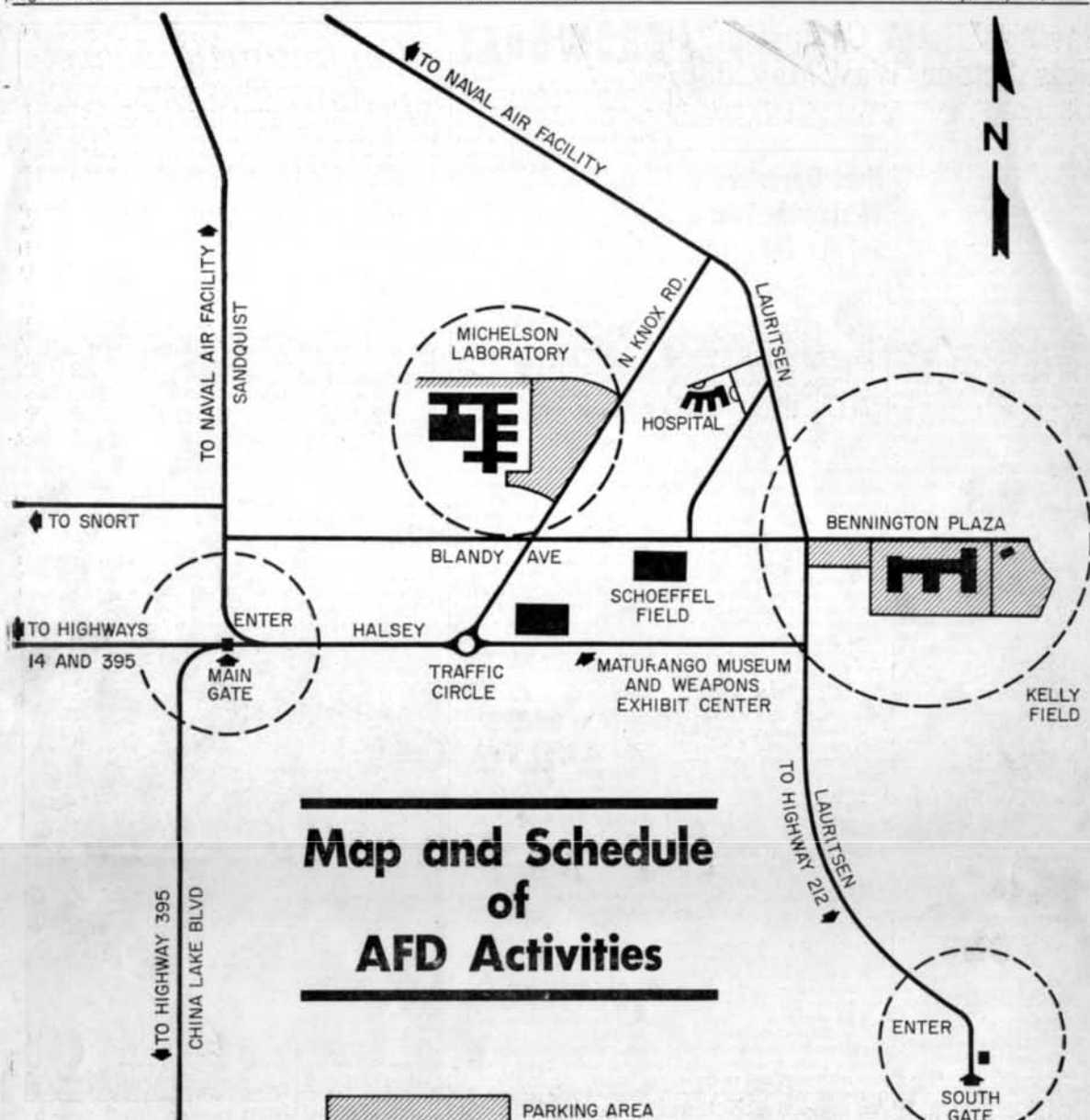


**CITED BY BUWEPs**—NOTS Pasadena's Jack H. Slaton is congratulated after being presented a BuWep's Superior Civilian Service Award by RADM. E. E. Fawkes, BuWep's Asst. Chief for RDT&E. The award, signed by BuWep's Chief, RADM. A. M. Shinn, cited Slaton for his technical leadership in the development of an acoustic homing system for use with the Mark 46 torpedo. Presentation was made at the NOTS Advisory Board luncheon last Friday.



**NOTS ADVISORY BOARD**—Members attending annual spring meet here May 6-7 (seated, l-r) were Dr. C. C. Lauritsen, Dr. J. E. Henderson, visitor RADM. E. E. Fawkes, BuWep's Asst. Chief for RDT&E; Dr. Wm. B. McLean, Station Technical Director; Capt. John I. Hardy, Station Commander; RADM. F. S. Withington (Ret.), Dr. H. L. Anderson, H. G. Wilson, Assoc.

Technical Director. Standing (l-r) are Capt. Leon Grabowsky, Station Executive Officer; Adm. J. H. Sides (Ret.), RADM. Rawson Bennett (Ret.), R. L. Biggers, Dr. L. W. Alvarez, F. G. Jameson, E. H. Heinemann, Dr. W. A. Noyes Jr., Dr. J. H. Wakelin Jr. Highlight of Advisory meet was presentation of BuWep's Civilian Service Award to Jack H. Slaton.



# Map and Schedule of AFD Activities

PARKING AREA

- | TIME                | EVENT  |
|---------------------|--|
| 7 a.m. - 4 p.m. . . | OPEN HOUSE Main Gates of NOTS open to public NAVAL AIR FACILITY AND VX-5   |
| 9 a.m. - 12:30 p.m. | Static display of aircraft and equipment:<br>A1G F4B K2R SH-34 FULL PRESSURE<br>A4E F8E Q2C TF-104 SUIT SURVIVAL<br>DT-38B F7F SA2 EQUIPMENT   |
| 9 a.m. - 12:30 p.m. | Model Aircraft display by Alkali Angels  |
| 9:15 a.m. . . . .   | Concert - Burroughs High School Band   |
| 9:30 a.m. . . . .   | GOLDEN KNIGHTS (U.S. Army Parachute team) airborne   |
| 10:15 a.m. . . . .  | GOLDEN KNIGHTS Narration   |
| 10:20 a.m. . . . .  | First parachute jump   |
| 10:50 a.m. . . . .  | GOLDEN KNIGHTS Demonstration completed   |
| 10:50 a.m. . . . .  | NAF Precision Drill Team demonstration   |
| 11:30 a.m. . . . .  | BLUE ANGELS (U.S. Navy Aerial Demonstration Team) airborne   |
| 11:30 a.m. . . . .  | BLUE ANGELS Narration  |
| Noon . . . . .      | BLUE ANGELS Demonstration completed  |
| 12:30 p.m. . . . .  | NAF - VX-5 Closed to Public  |
| 8 a.m. - 4 p.m. . . | Weapons Exhibit with related movies (in Maturango Museum Bldg.)  |
| 8 a.m. - 4 p.m. . . | Maturango Museum - Desert Exhibits   |
| 12:30 - 4 p.m. . .  | Michelson Laboratory (Selected areas of Laboratory open to public with displays):<br>LASER Machine Shop Environmental Test Lab<br>Film Reader Plastic Displays Calibration Lab<br>Photo Lab Tour Michelson Displays Spacemetal Display<br>Parabolic Camera Closed-Circuit TV Demo Automated Machine Tool<br>Structural Test Facility SIDEWINDER Heat Treat Lab<br>X-Ray Lab Meteorology Display IBM Computer |
| 12:30 p.m. . . . .  | <b>SNORT AREA</b><br>Snort area open to public with displays including various track sleds and cameras   |

- |                            |  |
|----------------------------|--|
| 1:00 p.m. . . . .          | Snort movies every half-hour until 3:30 p.m.   |
| 2:30 p.m. . . . .          | Snort Demonstration Firing   |
| 4:00 p.m. . . . .          | Snort area closed to public  |
| <b>CIVIC PARTICIPATION</b> |  |
| 7 a.m. - 10 a.m. . .       | Kiwanis Club of Ridgecrest, Pancake Breakfast, East end of Community Center  |
| 9 a.m. - 4 p.m. . . .      | Refreshment stands operated by and for the benefit of local civic organizations  |
| 1 p.m. - 4 p.m. . . .      | Members of Alkali Angels will fly radio controlled aircraft models at Mirror Lake (southwest of B-Mountain)                            |
| 3:00 p.m. . . . .          | <b>BASEBALL GAME - (Varsity)</b><br>Burroughs High School (China Lake) vs. Antelope Valley High School (Lancaster) at Schoeffel Field. |
- NOTE:** . . . . . Main Gates open at 7 a.m. to accommodate those attending the Elwanis Club Pancake Breakfast. The Main Program commences at 9 a.m. However, the Weapons Exhibit and the Maturango Museum will open at 8 a.m. for the benefit of visitors completing breakfast prior to the main program.

From \_\_\_\_\_

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TO \_\_\_\_\_

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**PLACE STAMP HERE**